

# 2008 Annual Water Quality Report



## A Message from Kathy Pape, President

As a trusted leader in the industry, Pennsylvania American Water places a strong emphasis on sharing information with customers about the quality of the water service we provide.

One way we do this is by providing annual reports with the results of the tests that we perform on the water delivered to your home. Please review this Consumer Confidence Report (CCR), which outlines information that is applicable to your local water system for tests completed through December 2008. You'll find that we provide water that surpasses or meets all federal and state water quality regulations. In fact, we often address regulations well before they go into effect.

Just as important, Pennsylvania American Water makes the necessary investments to maintain and upgrade its facilities, so that we can deliver quality water directly to your tap 24 hours a day, seven days a week.

Our customers are our top priority, and we are committed to providing you with the highest quality drinking water and service possible now and in the years to come. In addition to this written report, you can view information about Pennsylvania American Water and your water system on our website at [www.pennsylvaniaamwater.com](http://www.pennsylvaniaamwater.com). For more information or if you have any questions about this report, please contact Pennsylvania American Water's Customer Service Center at (800) 565-7292.

Sincerely,

## Our Mark of Excellence

Founded in 1886, American Water is the largest investor-owned U.S. water and wastewater utility company. With headquarters in Voorhees, N.J., the company employs more than 7,000 dedicated professionals who provide drinking water, wastewater and other related services to approximately 15 million people in 32 states and Ontario, Canada.

We are once again proud to present our annual water quality report. This edition covers all testing completed from January through December 2008. Over the years, we have dedicated ourselves to producing drinking water that meets or surpasses all state and federal drinking water standards. We continually strive to adopt new and better methods of delivering the best quality drinking water to you. As regulations and drinking water standards change, it is our commitment to you to incorporate these changes system-wide in an expeditious and cost-effective manner, while maintaining our objective of providing quality drinking water at an affordable price.

We are pleased to tell you that our compliance with all state and federal drinking water laws remains exemplary. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the need of all our water users.

For more information about this report, or for any questions relating to your drinking water, please feel free to call our Customer Service Department at 1-800-565-7292.

## Source Water Information

The Yellow Breeches and Conodoguinet Creeks are the sources of supply for the Greater Mechanicsburg service area. Pennsylvania American Water maintains one treatment facility utilizing the Yellow Breeches Creek and one treatment facility utilizing the Conodoguinet Creek. Combined, these treatment facilities are capable of producing a maximum of 20 million gallons of water per day (MGD). The water supply is distributed for residential, commercial, and industrial use.

## Protecting Your Water Source

The Pennsylvania Department of Environmental Protection (DEP) and Pennsylvania American Water completed an assessment for the drinking water sources for the Greater Mechanicsburg System in June 2003. The water sources are considered most vulnerable to the following activities (although not associated with any detected chemicals): developed lands and agricultural activities. Storm water runoff contributes significantly to sediment, nutrients and chemical contaminants.

A copy of the completed Source Water Assessment may be obtained by calling Pennsylvania DEP at 717-705-4732, or via website at: [www.dep.state.pa.us](http://www.dep.state.pa.us) and entering keyword "Source Water". Pennsylvania American Water encourages you to take an active part in protecting your water supply by participating in activities as they occur in your local area.

## Other Water Quality Parameters of Interest

### Is there lead in your water?

Although we regularly test lead levels in your drinking water, it is possible that lead and/or copper levels at your home are higher because of materials used in your plumbing. If you are concerned about elevated levels, run your faucet for 30 seconds to 2 minutes before using your water; use cold water for cooking, drinking, or making baby formula; use low lead containing faucets; and when replacing or working on pipes, use lead-free solder. Lead-based solders are illegal in Pennsylvania. Pennsylvania American Water remains in full compliance with all of the requirements dealing with lead in drinking water.

### How hard is your water?

Hardness is a measure of the concentration of two minerals naturally present in water – calcium and magnesium. High hardness levels cause soap not to foam as easily as it would at lower levels. Hardness levels range from 60 ppm to 254 ppm, or 4 to 15 grains per gallon of water.

### How much sodium is in your water?

The sodium level is approximately 22 ppm.

### What is the pH (acidity) range of your water?

Water in the distribution system averages 7.5 pH units. A pH of 7.0 is considered neutral, neither acidic nor basic.

### Is there fluoride in your water?

Pennsylvania American Water adds fluoride to a level of near 1 ppm to assist in the prevention of dental cavities.

## Partnership for Safe Drinking Water Program

In 2000 the Greater Mechanicsburg system was awarded the prestigious Director's Award under the Partnership for Safe Water program administered by the U.S. Environmental Protection Agency (EPA), the Pennsylvania Department of Environmental Protection, and other water-related organizations. The award honors water utilities for achieving operational excellence, by voluntarily optimizing their treatment facility operations and adopting more stringent performance goals than those required by federal and state drinking water standards. We are proud to report that we have maintained those standards throughout 2008.



## How to Contact Us

Additional copies of this report can be obtained by calling our Customer Service Department at 1-800-565-7292. Electronic copies of this document can be obtained by visiting our website, [www.pennsylvaniaamwater.com](http://www.pennsylvaniaamwater.com), selecting the 'Ensuring Water Quality' tab, then selecting 'Water Quality Reports' and choosing the report for your service area. Added information can be gathered by calling your local Water Quality Supervisor listed below or by viewing the following information on the Internet:

### Pennsylvania American Water

[www.pennsylvaniaamwater.com](http://www.pennsylvaniaamwater.com)

### Local Water Quality Supervisor for the Greater Mechanicsburg System

Jon Prawdzik (717) 774-1404

### Pennsylvania Department of Environmental Protection

[www.dep.state.pa.us](http://www.dep.state.pa.us)

### United States Environmental Protection Agency

[www.epa.gov/safewater](http://www.epa.gov/safewater)

**Safe Drinking Water Hotline:** 1-800-426-4791

### Centers for Disease Control and Prevention

[www.cdc.gov](http://www.cdc.gov)

### American Water Works Association

[www.awwa.org](http://www.awwa.org)

## Water Quality Statement

We are pleased to report that during the past year, the water delivered to your home or business complied with all state and federal drinking water requirements. For your information, we have compiled a list in the table below showing what substances were detected in your drinking water during 2008. The Pennsylvania DEP allows us to monitor for some contaminants less than once per year because the concentration of the contaminants does not change frequently. Some of our data, though representative, is more than one year old. Although all of the substances listed below are under the Maximum Contaminant Levels (MCL) set by U.S. Environmental Protection Agency and the Pennsylvania DEP, we feel it is important that you know exactly what was detected and how much of each substance was present in the water.

## Water Quality Results

Turbidity – A Measure of the Clarity of the Water at the Treatment Facility								
Plant	Substance (units)	Year Sam-pled	MCL	MCLG	Highest Single Measurement	Compliance Achieved	Typical Source	
Silver Spring	Turbidity (NTU) <sup>1</sup>	2008	TT	NA	0.09	Yes	Soil runoff	
West Shore Regional	Turbidity (NTU) <sup>1</sup>	2008	TT	NA	0.09	Yes	Soil runoff	
<sup>1</sup> All turbidity readings were below the treatment technique requirement of 0.3 NTU in 95% of all samples taken for compliance on a monthly basis.								
Regulated Substances (Measured on the Water Leaving the Treatment Facility)								
Substance (units)	Year Sam-pled	MCL	MCLG	Maximum Amount Detected	Range Low - High	Compliance Achieved	Typical Source	
Barium (ppm)	2008	2	2	0.04	SS	Yes	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
Nitrate (ppm)	2008	10	10	3.84	1.94 - 3.84	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Fluoride (ppm)	2008	2	2	1.54	0.70 - 1.54	Yes	Added to water to promote healthy teeth	
Substance (units)	Year Sam-pled	MCL	MCLG	Lowest Amount Detected	Range Low - High	Compliance Achieved	Typical Source	
Chlorine (ppm)	2008	4	4	0.37	0.37 - 2.55	Yes	Water additive used to control microbes	
Total Organic Carbon Removal								
Plant	Substance (units)	Year Sam-pled	TT	Range of Percent Removal Required	Range of Percent Removal Achieved	Compliance Achieved	Typical Source	
Silver Spring	Total Organic Carbon (TOC) (% removal) *	2008	Meet EPA Removal Requirements	0 - 35	34 - 69	Yes	Naturally decaying vegetation	
West Shore Regional	Total Organic Carbon (TOC) (% removal) *	2008	Meet EPA Removal Requirements	0 - 35	36 - 59	Yes	Naturally decaying vegetation	
* Adequate removal of TOC may be necessary to control the unwanted formation of chlorinated by-products. Naturally occurring organic matter present in the source water can react with the disinfectants used at the treatment facility to form these by-products.								
Bacterial Results (from the Distribution System)								
Substance (units)	Year Sam-pled	MCL	MCLG	Highest Percentage Detected	Compliance Achieved	Typical Source		
Total Coliforms (% of positive samples)	2008	No more than 5.0% of the monthly samples can be positive	Zero bacteria	0	Yes	Naturally present in the environment		
Tap Water Samples: Lead and Copper Results								
Substance (units)	Year Sam-pled	Action Level	MCLG	Number of Samples	90th Per-centage	Number of Samples Above Action Level	Compliance Achieved	Typical Source
Lead (ppb)	2007	15	0	30	3	0	Yes	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	2007	1.3	1.3	30	0.46	0	Yes	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Other Compounds (Measured in the Distribution System)								
Substance (units)	Year Sam-pled	MCL	MCLG/ MRDL	Results	Range Low - High	Compliance Achieved	Typical Source	
Total Trihalomethanes (ppb) <sup>2</sup>	2008	80	NA	52	22 - 167	Yes	By-product of drinking water chlorination	
Haloacetic Acids (HAA5) <sup>2</sup> (ppb)	2008	60	NA	20	6 - 52	Yes	By-product of drinking water disinfection	
Total Chlorine Residual (ppm) <sup>3</sup>	2008	NA	4	2.07	1.62 - 2.07	Yes	Added as a disinfectant to the treatment process	
<sup>2</sup> Range represents sampling at individual sample points.								
<sup>3</sup> MRDL (maximum residual disinfectant level) applies.								

## How to Read This Table

Starting with a **Substance**, read across. **Year Sampled** is usually in 2008 or year prior. **MCL** shows the highest level of substance (contaminant) allowed. **MCLG** is the goal level for that substance (goal may be set lower than what is allowed). **Maximum Amount Detected** represents the measured amount (less is better). **Range** shows the highest and lowest amounts measured. A **Yes** under **Compliance Achieved** means the amount of the substance met government requirements. **Typical Source** shows where the substance usually originates.

Non-regulated substances are measured, but maximum allowed contaminant levels have not been established by the government. These contaminants are shown for your information.

## Definitions of Terms Used in This Report

- **AL (Action Level):** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
- **MCL (Maximum Contaminant Level):** 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.
- **MCLG (Maximum Contaminant Level Goal):** 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.
- **MRDL (Maximum Residual Disinfectant Level):** The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **MRDLG (Maximum Residual Disinfectant Level Goal):** The level of 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.
- **NA:** Not applicable
- **ND:** Not detected
- **NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of the water.
- **pCi/L (picocuries per liter):** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).
- **ppm (parts per million):** One part substance per million parts water, or milligrams per liter.
- **ppb (parts per billion):** One part substance per billion parts water, or micrograms per liter.
- **SS:** Single sample
- **TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.
- **%:** means percent

## Substances Expected to be in Drinking Water

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. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must

provide the same protection for public health. Pennsylvania American Water's treatment processes are designed to reduce any such substances to levels well below any health concern and the processes are controlled to provide maximum protection against microbial and viral pathogens which could be naturally present in surface and groundwater. 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 call the U.S. Environmental Protection Agency's Safe Drinking Water Hotline 1-800-426-4791.

**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 may 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 EPA's Safe Drinking Water Hotline 1-800-426-4791.**

The source of drinking water (both tap water and bottled water) includes 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 may result from urban stormwater runoff, 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 also may come from gas stations, urban stormwater runoff, and septic systems.

**Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

## IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

### Availability of Monitoring Data for Unregulated Contaminants for the Greater Mechanicsburg System

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by the U.S. Environmental Protection Agency (EPA). The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that this data is available. If you are interested in learning more about this required testing, please contact your local Water Quality Supervisor, Jon Prawdzik, at (717) 774-1404. Monitoring conducted during 2008 did not detect the presence of any of the unregulated compounds.

### Cryptosporidium

*Cryptosporidium* is a microbial pathogen found in surface water throughout the US. Although *Cryptosporidium* can be removed through commonly-used filtration methods, US EPA issued a new rule in January 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. The Greater Mechanicsburg System monitored for *Cryptosporidium* in its raw water in 2007 and sample results do not show a need to provide additional treatment.

### 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.

### 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. Pennsylvania American Water 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>.



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Este informe contiene  
información muy importante  
sobre su agua potable.  
Tradúzcalo o hable con  
alguien que lo entienda bien.