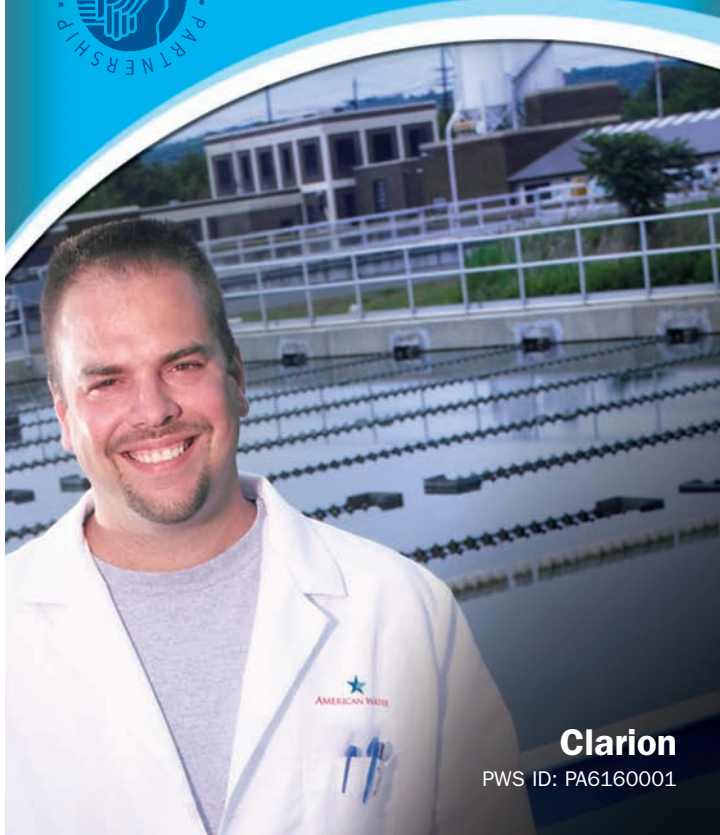


# 2008 Annual Water Quality Report



**Clarion**

PWS ID: PA6160001

## Management's Message to Customers

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 Clarion River is the sole source of supply for the Clarion service area. Pennsylvania American Water maintains a treatment facility on the Clarion River capable of processing a maximum of 4 million gallons of water per day (MGD). The water supply is distributed for residential, commercial, and industrial use.

## Protecting Your Water Source

In February of 2003, the Pennsylvania Department of Environmental Protection (DEP) and PAW completed an assessment for the drinking water sources for the Clarion System. The water sources are considered most vulnerable to the following activities (although not associated with any detected chemicals): Accidental release of known or unknown contaminants along the major transportation corridors, bridges and railroads; Accidental release of petroleum products from auto repair and storage facilities or cumulative release of fuel products from boating; Storm water runoff from transportation corridors and residential developments near the intake carrying multiple contaminants; Accidental release from upstream paper mills.

A copy of the completed Source Water Assessment may be viewed by calling the local office of the Pennsylvania DEP at 814-797-1191. PAW encourages you to take an active part in protecting your water supply by participating in local activities as they occur in your local area.

## Other Water Quality Parameters of Interest

### Is there lead in your water?

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>.

## Does your water contain nitrates?

PAW's normal range of nitrate levels is below the MCL of 10 ppm. Nitrate enters the water supply from fertilizers used on farms and natural erosion of deposits in the watershed. Levels above 10 ppm are a health risk for infants under six months of age and can cause blue baby syndrome. Check with your physician if you have questions.

## 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 28 ppm to 110 ppm, or 2 to 6 grains per gallon of water.

## How much sodium is in your water?

The sodium level is approximately 12 ppm.

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

Water in the distribution system averages 7.3 pH units. A pH of 7.0 is considered neutral, neither acidic nor basic.

## Is there fluoride in your water?

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

## Partnership for Safe Drinking Water Program

In 2008 the Clarion system was awarded the prestigious "Five-Year Director's Award" under the Partnership for Safe Water program administered by the U.S. EPA, Pennsylvania Department for 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.



## 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, are more than one year old. Although all of the substances listed below are under the Maximum Contaminant Levels (MCL) set by the 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 Sampled	MCL	MCLG	Highest Single Measurement	Compliance Achieved	Typical Source
Clarion Plant	Turbidity (NTU) <sup>1</sup>	2008	TT	NA	0.08	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 Sampled	MCL	MCLG	Highest Amount Detected	Range Low - High	Compliance Achieved	Typical Source
Nitrate at Nitrogen (ppm)	2008	10	10	0.24	SS	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Barium (ppm)	2008	2	2	0.030	SS	Yes	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	2008	2	2	1.2	0.8 to 1.2	Yes	Added to your water to promote healthy teeth
Substance (units)	Year Sampled	MRDL	MRDLG	Highest Amount Detected	Range Low - High	Compliance Achieved	Typical Source
Chloramines (ppm)	2008	4	4	2.6	1.9 to 2.6	Yes	Added as a disinfectant to the treatment process
Total Organic Carbon Removal							
Substance (units)	Year Sampled	TT	Range of Percent Removal Required	Range of Percent Removal Achieved	Compliance Achieved	Typical Source	
Total Organic Carbon (TOC) (% removal) *	2008	Meet EPA Removal Requirements	0 to 35	33 to 41	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 Sampled	MCL	MCLG	Highest Number of Positive Samples	Compliance Achieved	Typical Source	
Total Coliforms (number of positive samples)	2008	No more than 5% of the monthly samples can be positive	Zero bacteria	2 positive samples	Yes	Naturally present in the environment	
Tap Water Samples: Lead and Copper Results							
Substance (units)	Year Sampled	Action Level	MCLG	Number of Samples	90th Percentile	Number of Samples Above Action Level	Typical Source
Lead (ppb)	2007	15	0	30	3	0	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	2007	1.3	1.3	30	0.18	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Other Compounds (Measured in the Distribution System)							
Substance (units)	Year Sampled	MCL/MRDL	MCLG/MRDLG	Results	Range Low - High	Compliance Achieved	Typical Source
Alpha Emitters (pCi/L)	2002	15	0	0.44	SS	Yes	Erosion of natural deposits
Combined Radium (pCi/L)	2002	5	0	0.34	SS	Yes	Erosion of natural deposits
Total Trihalomethanes (TTHMs) (ppb) <sup>2</sup>	2008	80	NA	55	23 to 89	Yes	By-product of drinking water chlorination
Haloacetic Acids (HAA5) <sup>2</sup> (ppb)	2008	60	NA	22	9 to 53	Yes	By-product of drinking water chlorination
Total Chlorine Residual (ppm)	2008	4	4	2.0	0.3 to 2.9	Yes	Added as a disinfectant to the treatment process
<sup>2</sup> Range represents sampling at individual sample points.							

## 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 each substance (contaminant) allowed. **MCLG** is the goal level for that substance (goal may be set lower than what is allowed). **Highest Amount Detected** represents the measured amount (less is better). **Range** tells the highest and lowest amounts measured. A **Yes** under **Compliance Achieved** means the amount of the substance met government requirements. **Typical Source** tells 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.
- **>:** means greater than.
- **<:** means less than.

## Substances Expected to be in Drinking Water

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations also 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 calling the EPA's Safe Drinking Water Hotline at (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 (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 may also, 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.

## How to Contact Us

Additional copies of this report can be obtained by calling our Customer Service Department at 800-565-7292. Electronic copies of this document can be obtained by logging on to our website [www.pawc.com](http://www.pawc.com). Added information can be gathered by calling our Customer Service Department or by viewing the following information on the Internet:

### **Pennsylvania American Water**

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

### **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:** (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)

## Cryptosporidium

*Cryptosporidium* is a microbial pathogen found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly-used filtration methods cannot guarantee 100 percent removal. If the organism was detected, current test methods do not allow us to 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 within a few weeks.

US EPA issued a new rule in January 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. In anticipation of this rule, PAW-Clarion monitored for *Cryptosporidium* in its source water for 24 consecutive months starting in July of 2005 and concluding in June of 2007. Based on the results of our *Cryptosporidium* monitoring, no additional treatment will be required by the new US EPA regulations.

## Chloramine Statement

Chloramines are a PA DEP and federally-approved alternative to free chlorine for water disinfection. Chloramines minimize disinfection by-product formation. Another benefit of chloramines is improved taste of the water as compared with free chlorine. Clarion has successfully used chloramines in its system supplied by our treatment facilities since 2002. Chloramines are also used by many other water utilities nationally. Chloramines have the same effect as chlorine for typical water uses with the exception that chloramines must be removed from water used in kidney dialysis and fish tanks or aquariums. Treatments to remove chloramines are different than treatments for removing chlorine. Please contact your physician or dialysis specialist for questions pertaining to kidney dialysis water treatment. Contact your pet store or veterinarian for questions regarding water used for fish and other aquatic life.



800 W. Hershey Park Drive  
Hershey, PA 17033

This report contains important information about your drinking water. If you do not understand it, please have someone translate it for you.

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