

To learn more about PWSA, please attend our regularly scheduled board meetings. They are held on the second Friday of every month at 9:00 a.m. in our downtown office at:

The Pittsburgh Water & Sewer Authority
441 Smithfield Street • Pittsburgh, PA 15222
Phone: (412) 255-8935 • Fax: (412) 255-2475 • www.pgh2o.com

Prepared by The Pittsburgh Water & Sewer Authority, in keeping with its vision to provide water and wastewater services that meet or exceed regulations and customer expectations at the lowest possible cost.



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2003 Annual Drinking Water Quality Report

This report shows our water quality and what it means.

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo o hable con alguien que lo entienda bien. (This report contains very important information about your drinking water. Translate it, or speak to someone who understands it.)

Special Information for Immuno-compromised Individuals

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those 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 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 at (800-426-4791).

2003 Annual Drinking Water Quality Report

We're pleased to present to you PWSA's 2003 Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. We are committed to ensuring the quality of your water.

Where does your water come from and how is it treated?

PWSA draws its water from the Allegheny River. No ground or well water is used. Approximately 70 million gallons of water is treated each day at our water treatment plant. The plant is capable of producing over 100 million gallons per day. The treatment process takes three full days and consists of three separate stages:

Stage 1 – Clarification - River water passes through a process called “clarification,” in which silts and clays are removed. This stage involves chemical formation of clumped particles called “floc” which are then physically removed by gravity sedimentation.

Stage 2 – Filtration - The clarified water next passes slowly through sand and gravel filters in order to remove fine particles and microorganisms.

Stage 3 – Disinfection - The filtered water is finally treated with chlorine (over an eight hour period) in order to ensure removal of any harmful microorganisms.

During the process, several chemicals are added to complete treatment. These include activated carbon, which sweetens the taste of the water, and fluoride to prevent cavities in children’s teeth.

Source Water Protection

PWSA has worked with the Pennsylvania Department of Environmental Protection (PADEP) and the Allegheny County Health Department in preparing a Source Water Assessment Report for our source water, the Allegheny River. The report identifies the most likely sources of pollution affecting this river. These include accidental release of contaminants from industrial processes and terminals; cumulative impact of discharge from power plants; cumulative release of petroleum products from pipeline ruptures; and stormwater, and CSO runoff from lands adjacent to the river. A summary of the Source Water Assessment is available on the PADEP website at www.dep.state.pa.us.

Who monitors and ensures the quality of water?

PWSA monitors for constituents in your drinking water (on a continuous basis - 365 days per year) according to federal and state laws. Table #1 (which appears on pages 4 & 5) shows the results of our monitoring for the period of January 1, 2003 to December 31, 2003.

While we have conducted more than 100,000 analyses for approximately 100 different chemical and microbial constituents last year, we only found detectable levels of the contaminants listed in the water quality table. It should be noted that none of the test results exceeded federal or state maximum contaminant levels (MCLs).

What does PWSA test for?

In general, the sources of all drinking water (both tap 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. Water can also absorb or dissolve substances resulting from the presence of animal or human activity.

Contaminants that may be present in source or raw water include:

Microbial contaminants such as disease causing viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic chemical contaminants such as salts and metals, which can be naturally occurring or 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, stormwater runoff, and residential uses.

Organic chemical contaminants including synthetic and volatile organic chemicals which are by-products of industrial processes such as petroleum production, mining activity, and can also come from gas stations, urban stormwater runoff and septic systems.

If you have questions or want additional information

If you have any questions about this report, please contact Dr. Stanley States, Water Quality Manager of PWSA at (412) 782-7553. We want our valued customers to be informed about their water.

This water quality report and additional information are available on PWSA's website: www.pgh2o.com. Additional copies can be obtained by calling the Communications Department at (412) 255-0767.

Monitoring requirements not met for PWSA

Important information about your drinking water

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

Our water system violated several drinking water testing/reporting standards over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 2003 we did not collect two samples during the required period and therefore cannot be sure of the quality of our drinking water during that time.

What should I do?

There is nothing you need to do at this time.

The table below lists the contaminants we did not properly test for during the last year, how often we are supposed to sample for these contaminants, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were taken.

Contaminant	Required sampling frequency	Number of samples taken	When all should have been taken	When samples were taken
GROSS BETA RADIATION	1 sample every 4 yrs.	0	June 24, 1999 - June 24, 2003	Feb. 1999 - Sept. 17, 2003
TOC / ALKALINITY	Monthly	0	August 2003	N/A

What happened? What was done?

The Gross Beta sample was collected immediately upon discovery of the missed deadline. The TOC/Alkalinity sample was lost in shipping. We have since taken the required samples. The results showed that we are meeting drinking water standards.

For more information, please contact Dr. Stanley States, Water Quality Manager of PWSA, at (412) 782-7553 or by mail at: **900 Freeport Road, Pittsburgh, PA 15238**. Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

(Definitions continued from page 3)

- MRDL:** **Maximum Residual Disinfectant Level** - 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.
- NA:** **Non-Applicable** - Does not apply.
- pCi/L:** **Picocuries Per Liter** - A measure of radioactivity in water.
- mrem/yr:** **Millirems Per Year** - A measure of radiation absorbed by the body.

What does the test result information mean?

As you can see in Table 1, our system had no violations. We are proud that your drinking water meets or exceeds all federal and state requirements. We have learned through our monitoring and testing that some constituents have been detected.

Should you be concerned 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 in your home may be higher than 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, and would like to have your water tested for lead **free of charge**, please call PWSA at (412) 782-7553. Additional information is available from the EPA's Safe Drinking Water Hotline at (800-426-4791).

Although there have been recent media reports of elevated lead levels in the water supplies of some American cities, this is not the case for Pittsburgh. PWSA has maintained a rigorous monitoring and treatment program over the past 15 years to ensure that our drinking water is not a source of lead contamination for the community.

If you are concerned about elevated lead levels, run your faucet for 30 seconds to two minutes before using your water. Always use cold water for cooking, drinking and making baby formula.

Additionally, it is important to point out that the use of lead solders or pipes in drinking water plumbing systems is illegal. **Never** use lead solders when repairing drinking water lines.

In General

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. 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 EPA's Safe Drinking Water Hotline at (800-426-4791) or www.epa.gov.

Radioactive contaminants which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that the tap water is safe to drink, the USEPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water. PWSA tests for contaminants that may be present in the source water prior to treatment. Results of the tests enable us to adjust the treatment process in order to maximize the reduction and removal of contaminants. Tests are also conducted during the treatment process and on the finished or treated water. Additional samples for testing are collected from storage facilities, various points in the distribution network, and customers' taps.

Abbreviations and Definitions

In the Water Quality Table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we have provided the following definitions:

- ND:** **Non-Detect** - Laboratory analysis indicates that the contaminant is not present at a detectable level.
- ppm or mg/l:** **Parts Per Million or Milligrams Per Liter** - One part per million corresponds to one minute in two years or a single penny in \$10,000.
- ppb or ug/l:** **Parts Per Billion or Micrograms Per Liter** - One part per billion corresponds to one minute in 2000 years or a single penny in \$10,000,000.
- NTU:** **Nephelometric Turbidity Unit** - Measurement of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- AL:** **Action Level** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- TT:** **Treatment Technique** - A required process intended to reduce the level of a contaminant in drinking water.
- MCLG:** **Maximum Contaminant Level Goal** - 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.
- MCL:** **Maximum Contaminant Level** - 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.
- 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.

(Definitions continued on page 6)

2003 Water Quality Table Table #1: Test results for regulated contaminants

	Contaminant (Unit of measurement)	Violation Y/N	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants	TURBIDITY	N	0.13 NTU (a) 100%	N/A N/A	N/A	TT=1 NTU TT=% of samples <0.3 NTU	Soil runoff
	TOTAL COLIFORM BACTERIA	N	<1%	ND to <1%	0	Presence of coliform bacteria in 5% of monthly samples	Naturally present in environment
	TOTAL CHLORINE RESIDUAL IN DISTRIBUTION SYSTEM (PPM)	N	0.64	<0.02 to 2.2	(b) 4	(c) 4	Water additive used to control microbes
Disinfection By-products	TOTAL TRIHALOMETHANES (PPB)	N	64	28 to 97	N/A	80	By-product of drinking water chlorination
	TOTAL HALOACETIC ACIDS (PPB)	N	21	10 to 39	N/A	60	By-product of drinking water chlorination
Organic Chemical Contaminants	DALAPON (PPB)	N	1	(d)	200	200	Runoff from herbicide used on right of way
Radioactive Contaminants	BETA PHOTON EMITTERS (pCi/L) (e)	N	2.19	(d)	0	(f) 50	Decay of natural and man-made products
Lead and Copper Rule	LEAD (PPB) (g)	N	90th percentile =6	1 site above AL out of 50 sites sampled	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
	COPPER (PPM) (g)	N	90th percentile =0.052	No sites above AL out of 50 sites sampled	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits
Inorganic Chemical Contaminants	ARSENIC (PPB)	N	1	<1 to 3	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
	BARIUM (PPM)	N	0.044	<0.021 to 0.079	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
	CHROMIUM (PPB)	N	<1	<1 to 2	100	100	Discharge from steel and pulp mills; erosion of natural deposits
	FLUORIDE (PPM)	N	1.09	0.57 to 1.46	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
	NITRATE (PPM)	N	0.6	(d)	10	10	Runoff from fertilizers; leaching from sewage; natural deposits
	SELENIUM (PPB)	N	<2	<2 to 4	50	50	Discharges from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Total Organic Carbon Removal	TOTAL ORGANIC CARBON (TOC) (% REMOVAL) (h)	N	Mean= 40	20-54	N/A	TT= 35%	Naturally decaying vegetation
Footnotes: (a) All turbidity samples met the turbidity limit of 0.3 NTU. (b) MRDLG (c) MRDL (d) Only one sample required. (e) USEPA considers 50 pCi/L to be the level of concern for beta particles. (f) The MCL for beta particles is 4 mrem/yr. (g) Data from year 2001. (h) Adequate removal of TOC may be necessary to control unwanted formation of disinfection by-products.							