City of Peabody

Water Quality Report
2008 Water Quality Report

June 2009

The Quality of Your Drinking Water

The Peabody Department of Public Services (Public Water Supply No. 3229000) is committed to providing our customers with high quality drinking water that meets or surpasses state and federal standards for quality and safety. To ensure delivery of a quality product, we have made significant investments in treatment facilities, water quality monitoring, and our distribution system. We are pleased to report the results of our 2008 water testing to inform you about your drinking water. We will be mailing you a report each year with information about annual water quality.

Any Questions?

Do you want to know more about the Peabody water system? Please call Peter Smyrnios, Water Superintendent, at 978-536-5069 with any questions, comments, or concerns. Due to security concerns, only general data can be provided.

Peabody's Water System

This section formerly contained information on Peabody's water system. Due to security concerns raised after the September 11, 2001 terrorist attacks, this data has been deleted in its entirety.

The Department of Public Services has been systematically upgrading our water system physical plant and operational procedures to ensure that we can provide a continuous, safe water supply to our customers in all situations (natural disasters, vandalism, power loss, etc.). Residents can help us ensure the safety of our water supply by reporting any suspicious activities near any water tank, reservoir, hydrants, etc. to the police (dial 911) or the Department of Public Works at 978-536-0600 (press 0 to reach an operator 24 hours a day).

If you want to know more about our actions to ensure the safety of our water supply, please contact Peter Smyrnios, Water Superintendent at 978-536-5069. Due to security concerns only general data can be provided.

The Substances Found in Your Tap Water

In nature, all water contains some impurities. As water flows in streams, sits in lakes, and filters through layers of soil and rock in the ground, it dissolves or absorbs the substances that it touches. Some of these substances are harmless. In fact, some people prefer mineral water precisely because minerals give the water an appealing taste. However, at certain levels, minerals, just like man-made chemicals, are considered contaminants that can make water unpalatable or even unsafe. 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.

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 (800-426-4791).

What does this table tell me?

Only 15 of the over 100 substances we test for from Peabody's drinking water were found. ***All are below allowed levels.*** The table also shows the amount (Highest Level Detected) of each substances found in the water compared to the highest level allowed by law. We have also included information on substances found in MWRA drinking water, which made up about 6% of the water delivered to your homes in 2008. ***Not listed are 100 +other substances for which both we and MWRA tests, but were not detected.***

Samples Collected from the Coolidge Avenue WTP

Compound	Units	Highest Level Detected	Range of Detection	Highest Level Allowed (EPA's MCLs)	Ideal Goals (EPA MCLGs)	How It Gets In The Water
INORGANIC CHEMICALS						
Fluoride	ppm	1.30	0.12 - 1.30	4	4	Water additive, promotes strong teeth
Nitrate	ppm	0.27	N/A	10	10	Runoff from fertilizer use
Sodium[1]	ppm	51	N/A	NR	NR	Naturally present in the environment
Sulfate[2]	ppm	14	NR	NR	NR	Naturally present in the environment
MICROBIOLOGY						
Turbidity[3]	NTU	0.22	0.06 - 0.22	TT = 0.3	0	Soil runoff
		100% of samples were below the TT of 0.3 NTU				
RADIONUCLIDES						
Alpha Emitters[4]	pCi/L	2.2	N/A	15	0	Decay of natural and man-made deposits

Samples Collected from the Winona WTP

INORGANIC CHEMICALS						
Fluoride	ppm	1.38	0.56- 1.38	4	4	Water additive, promotes strong teeth
Nitrate	ppm	0.31	N/A	10	10	Runoff from fertilizer use
Sodium[1]	ppm	53	N/A	NR	NR	Naturally present in the environment
Sulfate[2]	ppm	42	NR	NR	NR	Naturally present in the environment
MICROBIOLOGY						
Turbidity[3]	NTU	0.21	0.05 - 0.21	TT = 0.3	0	Soil runoff
		100% of samples were below the TT of 0.3 NTU				
RADIONUCLIDES						
Alpha Emitters[4]	pCi/L	1.5	N/A	15	0	Decay of natural and man-made deposits

Samples Collected from the MWRA

INORGANIC CHEMICALS						
Barium	ppm	0.011	0.009 - 0.011	2	2	Commonly occurring mineral in nature
Fluoride	ppm	1.22	0.55 - 1.22	4	4	Water additive, promotes strong teeth
Nitrate	ppm	0.16	0.02 - 0.16	10	10	From atmosphere
Nitrite	ppm	0.007	0.005-0.007	1	1	Formed from the breakdown of disinfectants
MICROBIOLOGY						
Turbidity[3]	NTU	1.17	0.20-1.17	5	0	Soil runoff
RADIONUCLIDES						
Alpha Emitters	pCi/L	ND	ND	15	0	Erosion of natural mineral deposits
Combined Radium	pCi/L	ND	ND	5	0	Erosion of natural mineral deposits
ORGANIC CHEMICALS						
Haloacetic Acids	ppb	5.7 (Average)	ND-10.5	60	0	Byproducts of water disinfection
Trihalomethanes	ppb	3.7 (Average)	0.7- 7.5	80	0	Byproducts of water disinfection

Samples Collected from Your Faucets

Compound	Units	90th Percentile	Range of Detection	Action Level (EPA's MCLs)	Ideal Goals (EPA MCLGs)	How It Gets In The Water
INORGANIC CHEMICALS						
Copper[4,5]	ppm	0.0950	ND - 0 .020	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead[4,5]	ppm	0.0140	ND - 0.001	0.015	0	Corrosion of household plumbing systems

Samples Collected from Your Faucet (continued)

Compound	Units	Average	Range of Detection	Action Level EPA'S MCLS	Ideal Goals EPA'S MCLGs	How It Gets In The Water
ORGANIC CHEMICALS						
Haloacetic acids	ppb	20	1 - 74	60	0	Byproducts of water disinfection
Trihalomethanes	ppb	73	4 - 118	80	0	Byproducts of water disinfection
Initial Distribution System Evaluation (IDSE)						
Haloacetic acids	ppb		1-74	60	0	Byproducts of water disinfection
Trihalomethanes	ppb		4-118	80	0	Byproducts of water disinfection

Definitions **Maximum Contaminant Level Goal (MGLG)** - The level of a contaminant in drinking water below which there is now known or expected risk to health. MCLGs allow for a margin of safety. **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. **TT (Treatment Technique)** - A required process intended to reduce the level of a contaminant in drinking water. **NTU**—Nephelometric Turbidity Units, a measure of the suspended material in water. **Action Level**—The concentration of a contaminant, which, if exceeded, triggers a treatment or other requirements that a water system must follow. The action level for lead and copper is the 90th percentile of all samples taken at one time. **Maximum Residual Disinfectant Level (MRDL)** - the highest level of a disinfectant (Chlorine) 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 (Chlorine) below which there is no known risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

ppm -One part per million; one part per million is equivalent to $1 in $1,000,000.
ppb - One part per billion; one part per billion is equivalent to $1 in $1,000,000,000.
ND - Substance not detected in the sample.
NR - Not regulated. Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted.
pCi/L—Picocuries per liter is a measure of the radioactivity in water.
N/A—not applicable
MWRA-MASS Water Resources Authority

Notes:

[1] The Massachusetts Office of Research and Standards has set a guideline concentration of 20 ppm for sodium

[2] Massachusetts has set a secondary maximum contaminant level of 250 ppm for sulfate. This level was established to protect the aesthetic quality of drinking water and is not health based.

[3] Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality and effectiveness of filtration.

[4] 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, though representative, are more than one year old. Samples for alpha emitters were collected in December 2002. Samples for lead and copper were collected in June 2006.

[5] Two samples of 31 exceeded the lead action level;. No samples of 31 exceeded the copper action level.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women & young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Peabody 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.

WATER DEPARTMENT — NOTES OF INTEREST — 2008

The Source Water Assessment Program (SWAP) and the final Surface Water Supply Protection Plan reports are available for viewing at the Department of Public Services office at 50 Farm Ave. The DEP has characterized our groundwater and surface water sources susceptibility as moderate to high. For more information call Peter Smyrnios, Water Superintendent at (978) 536-5069.

My water is discolored sometimes. Can I drink it?

You can safety drink, cook with, and bathe in this water. Old iron pipes can cause a red, brown, or yellow color in water. A red or brown color is caused by very small specks of iron. These specks of iron can enter the water if there is quick change in water speed or direction in your local pipes. Such changes can result from main breaks, valve repair, flushing the system, or the testing or use of fire hydrants. Running the water for 15 to 20 minutes should clear this up. Wait until the water clears before doing laundry to avoid staining. You should also flush your hot water heater every year to remove accumulated sediment.

My water has a "funny" taste or odor sometimes. Can I drink it?

You can safely drink, cook with, and bathe in this water. Sometimes algae can cause a "fishy" or "grassy" odor. Algae are normal, harmless plants that appear in our reservoirs at certain times of the year. On occasion, customers may also taste or small the low levels of chlorine compounds added to disinfect the water. Fill a jug with tap water and put it in the refrigerator to get rid of the taste and odor.

Is Our Water Safe For Everyone?

Some people may be more vulnerable to contaminants in drinking water than the general populations. Immuno-compromised persons such as person 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).