

2011 ANNUAL DRINKING WATER QUALITY REPORT

PWSID #: 7360118 NAME: Strasburg Borough Municipal Water Authority

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda. (This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.)

WATER SYSTEM INFORMATION:

This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please contact Lisa M. Boyd, Borough Manager, at 717-687-7732. We want you to be informed about your water supply. If you want to learn more, please attend any of our regularly scheduled Authority meetings. They are held the third Thursday of each month at 9 a.m.

SOURCE(S) OF WATER:

Our water sources are:

Fisher Well, King Well, Rohrer Well, Old Springs, New Springs, and Mowrer Springs, located in Strasburg, Eden and Paradise Townships.

A *Source Water Assessment* of our source(s) was completed by the PA Department of Environmental Protection (Pa. DEP). Overall, our source(s) have little risk of significant contamination. Complete reports were distributed to municipalities, water suppliers, local planning agencies and PADEP offices. Copies of the complete report are available for review at the Pa. DEP South Central Regional Office, Records Management Unit at (717) 705-4732.

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 microbial contaminants are available from the *Safe Drinking Water Hotline* (800-426-4791).

MONITORING YOUR WATER:

We routinely monitor for contaminants 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, 2011. 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 date has been noted on the sampling results table.

DEFINITIONS:

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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.

Maximum Contaminant Level Goal (MCLG) - 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 contaminants.

Minimum Residual Disinfectant Level (MinRDL) - The minimum level of residual disinfectant required at the entry point to the distribution system.

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

Mrem/year = millirems per year (a measure of radiation absorbed by the body)

ppm = parts per millions, or milligrams per liter (mg/L)

pCi/L = picocuries per liter (a measure of radioactivity)

ppq = parts per quadrillion, or pictograms per liter

ppb = parts per billion, or micrograms per liter (µg/L)

ppt = parts per trillion, or nanograms per liter

DETECTED SAMPLE RESULTS:

Microbial					
Contaminants	MCL	MCLG	Highest # or % of Positive Samples	Violation Y/N	Sources of Contamination
Total Coliform Bacteria	For systems that collect <40 samples/month: <ul style="list-style-type: none"> More than 1 positive monthly sample For systems that collect ≥ 40 samples/month: <ul style="list-style-type: none"> 5% of monthly samples are positive 	0	1	N	Naturally present in the environment.
Fecal Coliform Bacteria or E. coli (Before Disinfection)		0	0	N	Human and animal fecal waste.

Lead and Copper							
Contaminant	Action Level (AL)	MCLG	90th Percentile Value	Units	# of Sites Above AL of Total Sites	Violation Y/N	Sources of Contamination
Lead (2010)	15	0	2	ppb	0	N	Corrosion of household plumbing.
Copper (2010)	1.3	1.3	0.618	ppm	0	N	Corrosion of household plumbing.

Chemical Contaminants								
Contaminant	MCL in CCR Units	MCLG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
BARIUM	2000	2000	114	82 - 114	ppb	2010	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
CHLORINE (Distribution)	4.0	4.0	1.1	0.9 - 1.1	ppm	2011	N	Water additive used to control microbes.
BROMATE	10	0	6.4	0 - 6.4	ppb	2011	N	By-product of drinking water chlorination.
FLUORIDE	2000	2000	35	0 - 35	ppb	2010	N	Erosion of natural deposits; Discharge from fertilizer and aluminum factories.
NICKEL	100	100	2.7	0 - 2.7	ppb	2010	N	Erosion of natural deposits.
NITRATE	10	10	7.3	2.4 - 7.3	ppm	2011	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
DALAPON	200	200	6.3	0 - 6.3	ppb	2011	N	Runoff from herbicide used on rights of way.
HALOACETIC ACIDS (FIVE)	60	N/A	1.6	0 - 1.6	ppb	2010	N	By-product of drinking water chlorination.
TRIHALOMETHANES	80	N/A	2.9	0 - 2.9	ppb	2010	N	By-product of drinking water chlorination.
XYLENES	10000	10000	0.5	0 - 0.5	ppb	2011	N	Discharge from petroleum factories; Discharge from chemical factories.
DICHLOROMETHANE	5	0	2.1	0 - 2.1	ppb	2011	N	Discharge from pharmaceutical and chemical factories.
RADIUM 226	5**	0	1.35	0 - 1.35	pCi/L	2011	N	Erosion of natural deposits.
RADIUM 228	5**	0	3.33	0 - 3.33	pCi/L	2011	N	Erosion of natural deposits.
GROSS ALPHA	15	0	5.86	0 - 5.86	pCi/L	2011	N	Erosion of natural deposits.
GROSS BETA	N/A	N/A	6.36	N/A	pCi/L	2010	N	Erosion of natural deposits.

*EPA's MCL for fluoride is 4000 ppb. However, Pennsylvania has set a lower MCL to better protect human health.

**The MCL for Radium 226 & 228 combined is 5 pCi/L

Entry Point Disinfectant Residual							
Contaminant	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine (Water Plant)	0.40	0.08*	0.08 - 1.7	ppm	10/04/2011	N	Water additive used to control microbes.
Chlorine (Old Spring)	0.70	0.9	0.9 - 1.4	ppm	01/12/2011	N	Water additive used to control microbes.
Chlorine (New Spring)	0.70	0.9	0.9 - 1.5	ppm	01/03/2011	N	Water additive used to control microbes.

* Chlorine dropped below the minimum level requires for less than 4 hours, so no violation was incurred.

Violations

Our water system violated a drinking water standard during 2011. Even though this was not an emergency, 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 2011 all the required testing was not done and therefore we 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 contaminant(s) we did not properly test for during 2011, how often we are supposed to sample for this/these contaminant(s), and 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 or will be taken.

Contaminant	Required Sampling Frequency	Number of Samples Taken	When samples should have been taken	When samples will or were taken
Bromate	One Sample / Month	12	All samples taken	March reported late
Nitrate	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Nitrite	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Gross Alpha	One Sample / Quarter	1 st ,2 nd ,3 rd quarters	Missed 4 th quarter	Quarterly 2011
Combined Uranium	One Sample / Quarter	1 st ,2 nd ,3 rd quarters	Missed 4 th quarter	Quarterly 2011
Radium 226	One Sample / Quarter	1 st ,2 nd ,3 rd quarters	Missed 4 th quarter	Quarterly 2011
Radium 228	One Sample / Quarter	1 st ,2 nd ,3 rd quarters	Missed 4 th quarter	Quarterly 2011
Carbofuran	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
2,4-D	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
1,2,4-Trichlorobenzene	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
1,2-Dichlorobenzene	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Xylenes	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Dichloromethane	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Dichlorobenzene	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Para- Dichlorobenzene	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
1,1-Dichloroethylene	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
1,2-Dichloroethane	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
1,1,1-Trichloroethane	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Carbon Tetrachloride	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
1,2-Dichloropropane	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Trichloroethylene	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
1,1,2-Trichloroethane	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Tetrachloroethylene	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Chlorobenzene	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Benzene	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Toluene	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Ethylbenzene	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011
Styrene	One Sample / Quarter	1 st ,2 nd ,4 th quarters	Missed 3 rd quarter	Quarterly 2011

What happened? What is being done?

Although our test results are consistently below acceptable levels, we inadvertently missed having the drinking water tested for the listed contaminants and we cannot be sure of the quality of our drinking water during that time. The tests were done in 2011 & 2012 with no violations.

HEALTH EFFECTS:

About 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.

Information about 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. The Strasburg Borough Authority 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>

EDUCATIONAL INFORMATION:

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. 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 result from urban stormwater run-off, 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 can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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

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 Environmental Protection Agency's *Safe Drinking Water Hotline* (800-426-4791).