

**2013 ANNUAL DRINKING WATER QUALITY REPORT**

**PWSID #: 5300005 The Municipal Authority of the Borough of Carmichaels**

*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 Lloyd Richard at 724-966-2250. We want you to be informed about your water supply. If you want to learn more, please attend any of our regularly scheduled meetings. They are held at 4:30 the second Monday of each month at the Authority office, 104 N. Pine St.

**SOURCE OF WATER:**

Our water source is the Monongahela River which is a surface water type of source. The intake is located at river mile 75 approximately 3 miles east of Carmichaels near the end of Browns Ferry Road.

A *Source Water Assessment* of our source was completed by the PA Department of Environmental Protection (Pa. DEP). The Assessment has found that our source of is potentially most susceptible to mine drainage, sewage discharges, chemical spills from industry, railroad spills, barge spills, and road spills. There can also be contamination from farming, logging, recreational activities, underground storage tanks, and terrorism. Overall, our source has a high risk of significant contamination. A summary report of the Assessment is available on the *Source Water Assessment & Protection web page* at (<http://www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/SrceProt/SourceAssessment/default.htm>).

Complete reports were distributed to municipalities, water supplier, local planning agencies and PADEP offices. Copies of the complete report are available for review at the Pa. DEP Southwest \_\_\_\_\_ Regional Office, Records Management Unit at (412) 442-4000.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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, 2013. 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)

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

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

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

**ppq** = parts per quadrillion, or picograms per liter

**ppt** = parts per trillion, or nanograms per liter

**DETECTED SAMPLE RESULTS:**

<b>Chemical Contaminants</b>								
<b>Contaminant</b>	<b>MCL in CCR Units</b>	<b>MCLG</b>	<b>Level Detected</b>	<b>Range of Detections</b>	<b>Units</b>	<b>Sample Date</b>	<b>Violation Y/N</b>	<b>Sources of Contamination</b>
Chlorine	4.0	4.0	1.95	0.79-1.95	Ppm	3/8/13	N	Water additive to control microbes
Nitrate	10	10	0.460	-	Ppm	9/10/13	N	Run off from fertilizer use
Nitrite	1	1	0.01	-	Ppm	9/10/13	N	Run off from fertilizer use
Sulfate	NA	NA	106	-	Ppm	2/21/12	N	Municipal, industrial, and household discharges
Barium	2	2	0.036	-	Ppm	7/8/13	N	Industrial discharges and erosion of natural deposits
Fluoride	2	2	0	-	Ppm	7/8/13	N	Drinking water additive and erosion of natural deposits
Trihalomethane	80	NA	62.8	14.7-62.8	CCR	8/14/13	N	By product of drinking water chlorination
Haloacetic acids	60	NA	39.4	16-39.4	CCR	5/15/13	N	By product of drinking water chlorination

\*EPA's MCL for fluoride is 4 ppm. However, Pennsylvania has set a lower MCL to better protect human health.

<b>Entry Point Disinfectant Residual</b>							
Contaminant	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine	0.2	.24	.24-1.43	ppm	9/19/13	N	Water additive used to control microbes.

<b>Lead and Copper</b>							
Contaminant	Action Level (AL)	MCLG	90 <sup>th</sup> Percentile Value	Units	# of Sites Above AL of Total Sites	Violation Y/N	Sources of Contamination
Lead	15	0	0.005	Ppm	0	N	Corrosion of household plumbing.
Copper	1.3	1.3	0.2	Ppm	0	N	Corrosion of household plumbing.

<b>Microbial</b>						
Contaminant	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"> <li>More than 1 positive monthly sample</li> </ul> For systems that collect ≥ 40 samples/month: <ul style="list-style-type: none"> <li>5% of monthly samples are positive</li> </ul>	0	0	N	Naturally present in the environment.	
Fecal Coliform Bacteria or <i>E. coli</i>	0	0	0	0	Human and animal fecal waste	

<b>Turbidity</b>						
Contaminant	MCL	MCLG	Level Detected	Sample Date	Violation Y/N	Source of Contamination
Turbidity	TT=1 NTU for a single measurement	0	.055	2/25/13	N	Soil runoff.
	TT= at least 95% of monthly samples ≤0.3 NTU		100%	-	N	

<b>Total Organic Carbon (TOC)</b>					
Contaminant	Range of % Removal Required	Range of percent removal achieved	Number of quarters out of compliance	Violation Y/N	Sources of Contamination
TOC	35-45	39.1-60	1	N	Naturally present in the environment.

## ***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).

### **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 Municipal Authority of Carmichaels 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>.

**OTHER INFORMATION:**

Radiological sampling was conducted in 2011 and did not exceed the MCL. Next sample period is 2017.

DEP requested sampling of Bromide, Chloride, Sulfates, and Total Dissolved Solids from April 2011 to March 2012. All results were below recommended levels.

Drought Contingency Plan was updated in 2012.

Source Water Assessment Plan was updated in 2012 with help from Pa Rural Water Association.

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