

Annual Drinking Water Quality Report 2013
LVALETTE PUBLIC SERVICE DISTRICT
5308 Rt. 152
Lavalette, WV 25535
PWS# WV3305006
PWS# WV33005012 - Eastern District
May 21, 2014

Why am I receiving this report?

In compliance with the Safe Drinking Water Act Amendments, the **Lavalette PSD** is providing its customers with this annual water quality report. This report explains where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. The information in this report shows the results of our monitoring for the period of January 1st to December 31st, 2013 or earlier if not on a yearly schedule.

If you have any questions concerning this report, you may contact **Richard Smith, General Manager, (Monday through Friday 8:00AM-4:00PM), 304-525-3771**. If you have any further questions, comments or suggestions, please attend any of our regularly scheduled water board meetings held on the **3rd Tuesday** of every month at **8:30AM** in the **District Office, 5308 Rt. 152 Dickson, WV**.

Where does my water come from?

Your drinking water is **purchased** from the WV American Water Company which uses **surface** water from the Ohio River.

Source Water Assessment

A Source Water Assessment was conducted by the West Virginia Bureau for Public Health (WVBPH). The intake that supplies drinking water to the **WV American Water Company** has a higher susceptibility to contamination, due to the sensitive nature of surface water supplies and the potential contaminant sources identified within the area. This does not mean that this intake will become contaminated only that conditions are such that the surface water could be impacted by a potential contaminant source. Future contamination may be avoided by implementing protective measures. The source water assessment report which contains more information is available for review or a copy will be provided to you at our office during business hours or from the WVBPH 304-558-2981.

Why must water be treated?

All drinking water contains various amounts and kinds of contaminants. Federal and state regulations establish limits, controls, and treatment practices to minimize these contaminants and to reduce any subsequent health effects.

Contaminants in Water

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. FDA regulations establish limits of 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 these 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).

The source of drinking water (both tap and bottled water) includes rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

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

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

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 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).

Water Quality Data Table

Definitions of terms and abbreviations used in the table or report:

- **MCLG - Maximum Contaminant Level Goal**, or 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**, or 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 technique.
- **MRDLG - Maximum Residual Disinfectant Level Goal**, or the level of drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect benefits of use of disinfectants to control microbial contaminants.
- **MRDL - Maximum Residual Disinfectant Level**, or the highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of disinfectant is necessary to control microbial contaminants.
- **AL - Action Level**, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **TT –Treatment Technique**, or a required process intended to reduce the level of a contaminant in drinking water

Abbreviations that may be found in the table:

- **ppm** - parts per million or milligrams per liter
- **ppb** - parts per billion or micrograms per liter
- **MRL** – minimum reporting level
- **NA** – not applicable
- **NE** - not established

- NTU –Nephelometric Turbidity Unit, used to measure cloudiness in water

The **WV American Water Company and Lavalette PSD** routinely monitor for contaminants in your drinking water according to federal and state laws. The tables below show the results of our monitoring for contaminants.

Regulated Substances – WV American Water Company

Substance (units)	Year Sampled	MCLG	MCL	Amount Detected	Range Low-High ²	Compliance Achieved	Typical Source
Barium (ppm)	2013	2	2	0.04	NA	Yes	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2013	MRDLG=4	MRDL=4	2.10	0.2 – 3.3	Yes	Water additive to control microbes
Gross Alpha Particle Activity	2011	0	15	0.3	NA	Yes	Radioactive decay of natural deposits
Fluoride (ppm)	2013	4	4	0.9	0.7 – 1.0	Yes	Water additive that promotes strong teeth
Haloacetic Acids (HAAs) (ppb) ¹	2013	0	60	25	13 - 40	Yes	By-product of drinking water chlorination
Nitrate (ppm)	2013	10	10	0.92	NA	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Trihalomethanes (TTHMs) (ppb) ¹	2013	0	80	48	15 - 105	Yes	By-product of drinking water chlorination
Total Organic Carbon (Removal Ratio) ³	2013	NA	TT	1.4	1.1 – 1.6	Yes	Naturally present in the environment
Turbidity (NTU) ⁴	2013	NA	TT	0.11	0.05 – 0.11	Yes	Soil runoff

¹Highest localized running average for individual sample points.

²Range represents sampling at individual sample points.

³The treatment Technique (TT) is met if the TOC Removal Ratio (based on a four quarter running annual average) is greater than or equal to 1.0.

⁴Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration. A minimum of 100% of all samples taken to measure turbidity met the treatment technique requirement.

Bacterial Results – (from the Distribution System)

Substance (units)	Year Sampled	MCLG	MCL	Highest Percentage Detected	Compliance Achieved	Typical Source
Total coliform (% Positive samples)	2013	0	5% Positive samples	0%	Yes	Bacteria naturally present in the environment

Regulated Substances – Lead and Copper Results

Substance (units)	Year Sampled	MCLG	Action Level	Amount Detected 90 th Percentile	Number of Samples	Homes Above Action Level	Compliance Achieved	Typical Source
Copper (ppm)*	2012	1.3	1.3	0.21	30	0	Yes	Corrosion of household plumbing
Lead (ppb)*	2012	0	15	2	30	0	Yes	Corrosion of household plumbing

*Copper and lead samples were collected from 30 area residences on 6-15-12. Only the 90th percentile is reported. None of the samples exceeded the MCL.

Other Compounds-Measured in the Treatment Facility

Substance (units)	Year Sampled	MCLG	MCL	Average Results	Range Low--High	Typical Source
Sulfate (ppm)	2013	250	250	44	NA	Mineral that occurs naturally in the soil
Zinc (ppm)	2013	NE	5	0.33	0.32 – 0.38	Element that occurs naturally in the water; Constituent of corrosion control additive
Chloride (ppm)	2013	NE	500	33	NA	Mineral that occurs naturally in the soil, road salt, water softeners
Magnesium (ppm)	2013	NE	NE	7	NA	Mineral that occurs naturally in the soil

Strontium (ppb)	2013	NE	MRL 0.3	0.1	NA	Mineral that occurs naturally in the soil
-----------------	------	----	------------	-----	----	---

Unregulated Contaminants (Measured on the Water Leaving the Treatment Facility and in the Distribution System) UCMR3

Substance (units)	Year Sampled	MCL/MGLG	Sample Location	Average Results	Range Low-High	Typical Source
Strontium (ppm)	2013	Not Regulated	Treatment Facility	154	135.8-171.6	Naturally-occurring element; Historically, commercial use of strontium has been in the Faceplate glass of cathode-ray tube televisions to block x-ray emissions.
			Distribution System	158	133.5-182.0	
Molybdenum (ppb)	2013	Not Regulated	Treatment Facility	1.9	NA	Naturally-occurring element found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide used as a chemical reagent
			Distribution System	1.6	NA	
Chromium 6 or Hexavalent Chromium (ppb)	2013	Not Regulated	Treatment Facility	0.08	0.06-0.10	Naturally occurring element; used in making steel and Other alloys; chromium-3or-6 forms are used for chrome plating, dyes and pigments, leather tanning and wood preservation
			Distribution System	0.11	NA	
Chlorate (ppb)	2013	Not Regulated	Treatment Facility	62	56-68	Agricultural defoliant or desiccant; disinfection byproduct; And used in production of chlorine dioxide
			Distribution System	60	54-66	
1, 4-Dioxane (ppb)	2013	Not Regulated	Treatment Facility	0.99	NA	Synthetic industrial chemical that is completely miscible in water

Additional Water Quality Parameters of Interest

This table shows average levels of additional water quality parameters which are often of interest to consumers. Values shown here are averages of operating data for 2013. Values may vary from day to day. There are no health-based limits for these substances in drinking water.

Additional Constituents

Substance (units)	Year Sampled	Average Amount Detected	Range Low-High
Alkalinity, Total (ppm)	2013	56	39 - 71
Hardness, Total (ppm)	2013	114	44 - 156
pH (standard)	2013	7.3	7.0 – 7.4

Regulated Contaminants– Lavalette PSD – PWSID# 3305006

Substance (units)	Year Sampled	MCLG	MCL	Amount Detected	Range Low-High ²	Compliance Achieved	Typical Source
Chlorine (ppm)	2013	MRDLG=4	MRDL=4	1.44	0.2 – 2.9	Yes	Water additive to control microbes
Haloacetic Acids (HAAs) (ppb) ¹	2013	NA	60	35.3	20. – 63.5	Yes	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) (ppb) ¹	2013	NA	80	55.4	22.9 – 116.4	Yes	By-product of drinking water chlorination

¹Highest localized running average for individual sample points.

²Range represents sampling at individual sample points.

Regulated Contaminants – Lead and Copper Results – PWSID# 3305006

Substance (units)	Year Sampled	MCLG	Action Level	Amount Detected 90 th Percentile	Number of Samples	Homes Above Action Level	Compliance Achieved	Typical Source
Copper (ppm)*	2013	1.3	1.3	0.181	20	0	Yes	Corrosion of household plumbing
Lead (ppb)*	2013	0	15	1.2	20	0	Yes	Corrosion of household plumbing

*Copper and lead samples were collected from 20 area residences on 8-7-13. Only the 90th percentile is reported. None of the samples exceeded the MCL.

Table of Test Results - Regulated Contaminants – Lavalette PSD – Eastern District – PWSID# 3305012

Substance (units)	Year Sampled	MCLG	MCL	Amount Detected	Range Low-High ²	Compliance Achieved	Typical Source
Chlorine (ppm)	2013	MRDLG=4	MRDL=4	1.34	0.2 – 2.8	Yes	Water additive to control microbes*

Haloacetic Acids (HAAs) (ppb) ¹	2013	NA	60	19.6	1.5 – 52.2	Yes	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) (ppb) ¹	2013	NA	80	90	77.3 – 114.3	Yes	By-product of drinking water chlorination

Regulated Contaminants – Lead and Copper Results – Lavalette PSD – Eastern District - PWSID# 3305012

Substance (units)	Year Sampled	MCLG	Action Level	Amount Detected 90 th Percentile	Number of Samples	Homes Above Action Level	Compliance Achieved	Typical Source
Copper (ppm)	2012	1.3	1.3	0.21	30	0	Yes	Corrosion of household plumbing
Lead (ppb)	2012	0	15	2	30	0	Yes	Corrosion of household plumbing

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or nervous system, and may have an increased risk of getting cancer.

WE ARE PLEASED TO REPORT THAT THE LAVALETTE PSD MET ALL FEDERAL AND STATE WATER STANDARDS FOR THE REPORTING YEAR 2013.

Additional Information

All other water test results for the reporting year 2013 were all non-detects.

Turbidity is a measure of the cloudiness in water. We monitor it because it is a good indicator of the effectiveness of our filters.

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 **Lavalette PSD** 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 drinking 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>.

This report will not be mailed. A copy will be provided to you upon request at our office during regular business hours.