

**Presented By
Ambridge Water
Authority**

ANNUAL
**WATER
QUALITY
REPORT**

WATER TESTING PERFORMED IN 2017

Quality First

Once again we are pleased to present our annual water quality report covering the period between January 1, 2017, and December 31, 2017. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us the opportunity to serve you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



Where Does My Water Come From?

Ambridge Water Authority (AWA) customers are fortunate because they enjoy an abundant water supply from an outstanding source. The water treatment plant draws water from Service Creek Reservoir, a spring-fed, surface-water-influenced, upland reservoir containing 3.5 billion gallons of water, which may well be the highest quality source water in western Pennsylvania. This lake was created by AWA and built in the early 1950s. It is dedicated exclusively to providing water for the residents within our service area and our other customers. The water is piped over seven miles to the treatment plant. Here, the water propels a turbine that produces about 25 percent of the electricity needed to operate the plant in an efficient manner. During 2017, our treatment facility provided an average of 4.3 million gallons per day of clean drinking water. Water is pumped to service Ambridge, Harmony Township, Economy, Bell Acres, Baden, and parts of New Sewickley Township, as well as to Edgeworth Municipal Authority (which also serves Leet Township and Leetsdale), with our service population being almost 30,000 individuals. Interconnects with West View Water Authority provide a backup supply of water for emergencies. To learn more about our watershed on the Internet, go to the U.S. EPA's Surf Your Watershed at www.epa.gov/surf.

Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water;
- Monitoring and inspecting machinery, meters, gauges, and operating conditions;
- Conducting tests and inspections on water and evaluating the results;
- Maintaining optimal water chemistry;
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels;
- Documenting and reporting test results and system operations to regulatory agencies; and
- Serving our community through customer support, education, and outreach.

So, the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

Source Water Assessment

Spotts, Stevens, and McCoy, Inc., an environmental Spots company under contract with the Pennsylvania Department of Environmental Protection (PA DEP), performed a source water assessment in accordance with the Source Water Assessment Plan in 2002. This assessment was done in accordance with requirements under the Safe Drinking Water Act. Land use is an important consideration in identifying potential point and nonpoint sources of contamination. Point sources are those that emanate from known discharge locations such as an industrial outfall. Nonpoint sources are the runoff that occurs naturally through rainfall and snowmelt, picking up potential contaminants, such as herbicides, or farming by-products, such as manure. In addition to point and nonpoint sources, accidental spills and known or unknown sources of contamination may occur, such as a spill during delivery of home heating oil or leaking from pipelines or gas or oil wells. These contamination sources are unlikely to occur because of the relatively undeveloped nature of the watershed. Watershed criteria that result in a high risk of contamination are transportation corridors, residential development, agriculture, and pipelines. For more information, access the PA DEP Web site at www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/SourceProt/SourceAssessment/default.htm for a summary of this report or for information regarding the Source Water Protection Program. You may also contact the PA DEP regional office at (412) 442-4000.

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 www.epa.gov/lead.



In the News

TOC Violation from 2016

In last year's report (2016), we were required to post information about this violation. However, in 2017, after working closely with the DEP, we determined we were never in violation. The DEP issued a rescind notice for this violation. AWA is very grateful to be able to work together with the DEP to resolve issues like this, and provide the best quality of water possible to our customers. For more information, go to <http://www.ambwater.org/wp-content/uploads/2018/06/DEP-Rescind-Notice-TOC-Violation.pdf>



Water treatment is a complex, time-consuming process.

Lead & Copper Testing in 2016

Our most recent Lead and Copper tests (performed 2016 and reported in last year's CCR) were determined, early in 2018, to have been invalid. We received correspondence from our testing lab, the Environmental Service Lab (ESL), and from the PA DEP stating that ESL's testing method performed on these samples was not in compliance with DEP regulations. The Ambridge Water Authority did everything correctly. This was solely an error at ESL with the testing/reporting method they used. At no time was public safety compromised. Because of this error, AWA's 2016 sample results are now invalid for these substances, and we have to provide the most recent valid sample results, which are from 2013. In 2018, ESL will be providing everything necessary to AWA in order to gather another round of Lead & Copper sampling. For more information, go to <http://www.ambwater.org/wp-content/uploads/2018/06/ESL-DEP-Letters-Copper-and-Lead-2016.pdf>

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the 3rd Tuesday of each month, beginning at 6 p.m., in Council Chambers, 600 11th Street, Ambridge PA.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA and Pennsylvania DEP prescribe regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration and PA DEP regulations establish limits for contaminants in bottled water that 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 the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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, 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 may also come from gas stations, urban stormwater runoff, and septic systems; Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

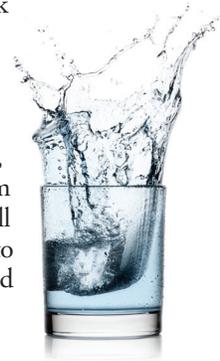
For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Michael Dominick, General Manager, at (724) 266-4847.

Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from Service Creek Reservoir, pretreated with a disinfectant, and sent to the water purification plant. The water goes into a mixing tank where a coagulant is added, causing small particles in the water to adhere to one another (called floc), making them heavy enough to settle to the bottom of sedimentation basins for removal. Caustic soda is added to adjust pH, and chlorine is added for disinfection. The water is filtered through layers of fine coal and filter-grade sand. As this process is completed, turbidity is reduced and clear water emerges. A corrosion inhibitor (to protect distribution system pipes) is added. Finally, chlorine is added again as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, using the smallest amount necessary to protect the safety of your water without compromising taste.) The water is then pumped to sanitized underground reservoirs, water towers, and into your home or business.



BY THE NUMBERS

The number of gallons of water produced daily by public water systems in the U.S. **34** BILLION

1 MILLION The number of miles of drinking water distribution mains in the U.S.

The amount of money spent annually on maintaining the public water infrastructure in the U.S. **135** BILLION

300 MILLION The number of Americans who receive water from a public water system.



Test Results

Our water is monitored for many different kinds of contaminants on a very strict sampling schedule. The information in the data tables represents only those substances that were detected; our goal is always to keep all detects below their respective maximum allowed levels. Remember that detecting a substance does not necessarily mean the water is unsafe to drink. The State recommends monitoring for certain contaminants less often than once per year because the concentrations of these contaminants do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We continued our participation in the 3rd stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2017	2	2	0.029	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine [Distribution] (ppm)	2017	[4]	[4]	0.71	0.56–0.71	No	Water additive used to control microbes
Chlorine [Entry Point] ¹ (ppm)	2017	MinRDL=0.2	NA	0.9	0.9–1.4	No	Water additive used to control microbes
<i>Cryptosporidium</i>	2017	TT	0	0	NA	No	Naturally present in the environment
Fluoride ² (ppm)	2017	4	4	0.098	0–0.098	No	Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2017	60	NA	37.6	20.9–46.1	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2017	80	NA	55.7	36.0–76.8	No	By-product of drinking water disinfection
Total Coliform Bacteria (Positive samples)	2017	TT	NA	0	NA	No	Naturally present in the environment
Total Organic Carbon (% removal)	2017	TT	NA	NA	-16–43 ³	No	Naturally present in the environment
Turbidity ⁴ (NTU)	2017	TT	NA	0.52	0.05–0.52	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2017	TT = 95% of samples meet the limit	NA	99.7	NA	No	Soil runoff
Tap water samples were collected for lead and copper analyses from sample sites throughout the community. ⁵							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2013	1.3	1.3	0.234	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2013	15	0	9	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED CONTAMINANT MONITORING RULE - PART 3 (UCMR3)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Chlorate–Distribution	2013	14.93	ND–31
Chlorate–Entry Point	2013	16.25	ND–22.5
Chromium, Hexavalent–Distribution	2013	0.05	ND–0.09
Chromium, Hexavalent–Entry Point	2013	0.04	ND–0.07
Chromium, Total–Distribution	2013	0.12	ND–0.24
Chromium, Total–Entry Point	2013	0.05	ND–0.2
Strontium–Distribution	2013	84.63	83.3–86.3
Strontium–Entry Point	2013	84.25	80.9–90.8

OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	RANGE LOW-HIGH
DOC ⁵ (ppm)	2017	0.994–2.03
SUVA ⁶ (ppm)	2017	1.37–2.53
UV254 ⁷ (ppm)	2017	1.62–3.47

¹The amount-detected value for chlorine [entry point] represents the lowest level that was detected. Average for the year: 1.17 ppm.

²AWA does not add fluoride to our water.

³AWA's source water can have a lower amount of TOC than treated water, thus creating a negative removal percentage at the low end of the range. AWA uses the SUVA method as an alternative method for TOC compliance.

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 system.

⁵Dissolved organic carbon (DOC) is the accumulation of broken-down organic matter. We test it for the purpose of using it in the SUVA calculation.

⁶Specific Ultra-Violet Absorbance (SUVA) at 254 nm wavelengths (DOC/UV254 x 100 = ppm). This parameter is an alternate method for determining total organic carbon (TOC).

⁷Ultra-Violet Absorbance at 254 nm wavelengths. We test it for the purpose of using it in the SUVA calculation.

Definitions

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

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

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

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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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