

2019 Annual Drinking Water Quality Report Williamsburg Municipal Authority

As your public drinking water supplier (Public Water Supply ID Number 4070022), the Williamsburg Municipal Authority (WMA) is pleased to present to you our Consumer Confidence Report for the 2019 operating year. This report provides you with information about the quality of water and the services we deliver to you every day. We constantly strive to provide you with a safe and dependable supply of drinking water. We want you to understand the constant effort we make to continually protect our water sources and improve the quality of water supplied to you. We are committed to ensuring the quality and consistency of your water.

THE SOURCE of water for our public water supply is groundwater which is drawn from three (3) production wells located along Briarwood Lane south of the intersection of Sage Hill Drive and Taylor Street in Woodbury Township. The WMA water system consists of the three production wells, a water treatment/control building that houses water treatment and monitoring equipment, two treated water storage tanks, approximately 18 miles of water transmission and distribution lines and a booster station. Well No. 1 and No. 2 each have permitted pumping capacities of 475,200 gallons per day, while Well No. 3 has a permitted capacity of 828,000 gallons per day. The two storage tanks have capacities of 508,000 and 512,000 gallons respectively. Water supplied by the wells is drawn from the Gatesburg Aquifer and is of high quality. The only required treatment of the source water is disinfection, which is accomplished through the addition of chlorine.

In combination, the three production wells and treatment system are currently permitted to supply up to 1,440,000 gallons per day to the water distribution system. During 2019, the WMA water source provided an average of 141,375 gallons per day (51,602,000 total gallons in 2019) to its 703 customers located in Williamsburg Borough and portions of Catherine and Woodbury Townships.

SOURCE WATER ASSESSMENT: A Source Water Assessment has not yet been completed by the PA Department of Environmental Protection (PA DEP) for the Williamsburg Municipal Authority water supply. However, information on the PA DEP source water assessment program and the current status of assessments being conducted is available from the PA DEP website at <http://www.depgreenport.state.pa.us/elibrary/GetFolder?FolderID=4490>.

WATER QUALITY was monitored during the operating period between January 1, and December 31, 2019. The Authority routinely monitors for contaminants in your drinking water according to Federal and State laws.

“Water Is a Valuable Resource - Please Use It Wisely”



2019 Water Quality Report

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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 storm water 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 storm water runoff and residential uses.
- **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive Contaminants**, which can be naturally-occurring or be 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 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*: (1-800-426-4791).

DRINKING WATER, INCLUDING BOTTLED WATER, may reasonably be expected to contain at least small amounts of some contaminants. The presence of some 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 EPA's *Safe Drinking Water Hotline* (1-800-426-4791).

IN ORDER TO ENSURE THAT TAP WATER IS SAFE TO DRINK, EPA and DEP prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration and DEP regulations establish limits for contaminants in bottled water which must provide the same protection for public health. The following table shows the results of our water quality monitoring for the period of January 1st through December 31, 2019. In reviewing this table, it should be noted that the State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of the data may be from previous years in accordance with the Safe Drinking Water Act. The date of sampling has been noted on the following sampling results table. Only those contaminants detected in the Authority's water are listed in the table.

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2019 Water Quality Report – Williamsburg Municipal Authority Detected Regulated Contaminant Table

Contaminant (Unit of Measure)	MCL	MCLG	Highest Level Detected	Range	Sample Period	Violation? (Yes-No)	Likely Source of Contamination
Disinfectant Residuals and Disinfection By-Products							
Chlorine (ppm) <i>Distribution System</i>	MRDL = 4	MRDL = 4	1.62	1.04 to 1.62	2019 <i>(highest avg Nov 2019)</i>	No	Water additive used to control microbes
Chlorine (ppm) <i>Entry Point</i>	Minimum required residual = 0.4	MRDL = 4	Lowest residual recorded = 0.97	0.97 to 2.0	2019 <i>(lowest 2/21/19)</i>	No	Water additive used to control microbes
Total Trihalomethanes (ppb) <i>Distribution System</i>	80	NA	11.4	NA – one sample analyzed	3 rd Quarter 2019	No	By-product of drinking water disinfection
Inorganic Contaminants (Entry Point)							
Nitrate (ppm) <i>Entry Point</i>	10	10	1.35	NA - one sample analyzed	3 rd Quarter 2018	No	Fertilizer Run-off, leaching from septic tanks and sewage, erosion of natural deposits
Barium (ppm)	2	2	0.0278	NA - one sample analyzed	2018	No	Discharge of drilling waste: discharge from metal refineries; erosion of natural deposits
Arsenic (ppb)	10	0	1.03	NA - one sample analyzed	2018	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Selenium (ppb)	50	50	4.26	NA - one sample analyzed	2018	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Lead and Copper (Distribution System)							
Contaminant	Action Level (AL)	MCLG	90 th Percentile Value	# Sites Above AL of Total Sites	Sample Date	Violation? (Yes/No)	Source of Contamination
Lead (ppb)	15	0	6.64	No sites were above the AL out of 11 sites tested	3 rd Quarter 2019	No	Corrosion of household plumbing systems, Erosion of natural deposits
Copper (ppm)	1.3	1.3	0.124	No sites were above AL out of 11 sites tested	3 rd Quarter 2019	No	Corrosion of household plumbing systems, Erosion of natural deposits; Leaching from wood preservatives

Information about Lead – Although no water samples tested for lead exceeded the Action Limit, lead was present at detectable levels in two samples collected from the WMA distribution system in 2019. 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 WMA 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 the potential for 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>.

VIOLATIONS – None

Additional testing – Many additional contaminants are regulated and are also routinely tested for, but were not found to be present at detectable levels within the source water or distribution system. Additional contaminants that were tested for in 2019, or in previous years, but were **not detected** in the WMA water system included:

- **Microbial Contaminants** (2019-Distribution System) – Total coliform bacteria
- **Disinfection by-products** (2019-Distribution System) – Haloacetic acids
- **Inorganic Contaminants** (2019-Entry Point) Nitrite, Cadmium, Chromium, Cyanide (free), Fluoride, Mercury, Nickel, Antimony, Beryllium, Thallium.
- **Volatile Organic Compounds** (2017- Entry Point) – cis-1,2-Dichloroethylene; trans-1,2-Dichloroethylene; Dichloromethane; 1,2-Dichloropropane; Ethylbenzene; Styrene; Tetrachloroethylene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethylene; Toluene; Xylenes (total); Benzene; Carbon tetrachloride; Chlorobenzene; o-Dichlorobenzene; para-Dichlorobenzene; 1-2-Dichloroethane; 1,1-Dichloroethylene; 1,2,4-Trichlorobenzene; Xylenes and Vinyl Chloride
- **Synthetic Organic Compounds** (2017-Entry Point) Endrine; Lindane; Methoxychlor, Toxaphene; Dalpon; Diquat; Endothall; Glyphosate; Di(2-ethylhexyl) Adipate; Oxymal; Simazine; Di(2-ethylhexyl) Phthalate; Atrazine, Piclorem; 2,4-D; Dinoseb; Hexachlorocyclopentadiene; Carbofuran; Alachlor; 2,4,5-TP Silvex; Hexachlorobenzene; Benzo(a)pyrene; Pentachlorophenol; PCBs; 1,2-Dibromo, 3-chloropropene; Ethylene Dibromide; Heptachlor; Heptachlor Epoxide; Dioxin, and Chlordane
- **Radioactive contaminants** (2018-Entry Point) – Combined Uranium; (2015) Gross alpha, Radium 226 and Radium 228

Glossary

In the preceding Table, and throughout this report, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

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

CDC – Centers for Disease Control

DEP – Pennsylvania Department of Environmental Protection;

EPA – US Environmental Protection Agency

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 contamination.

NA – Not Applicable **ND** – Not Detected

ppb - Parts per billion or micrograms per liter **ppm** - Parts per million or milligrams per liter

WMA – Williamsburg Municipal Authority

- PLEASE CONSERVE OUR WATER RESOURCES -

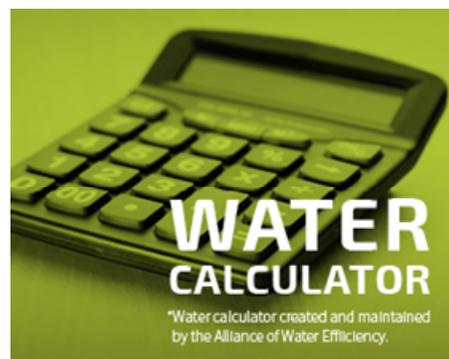
The Williamsburg Municipal Authority requests that customers conserve our water resources by conserving water in the home and at places of work. Efficient water use can have major environmental, public health, and economic benefits by helping to improve water quality, maintain aquatic ecosystems, and protect drinking water resources. Efficient water use can have major environmental, public health, and economic benefits by helping to improve water quality, maintain aquatic ecosystems, and protect drinking water resources. Efficient use of water, through behavioral, operational, or equipment changes, if practiced broadly can help mitigate the effects of drought. Efficiency measures can also save the homeowner money on their water and energy bills. The following facts, tips and suggestions were obtained from **Think2now** and the EPA **Watersense** websites and can help you conserve water, save money and protect and preserve our water resources. For many more water saving tips and water conservation resources, please visit their websites at www.think2now.com or www.epa.gov/watersense.

Water Conservation Facts

1. Less than 2% of the Earth's water supply is fresh water.
2. Of all the earth's water, 97% is salt water found in oceans and seas.
3. Only 1% of the earth's water is available for drinking water. Two percent is frozen.
4. The human body is about 75% water.
5. A person can survive about a month without food, but only 5 to 7 days without water.
6. Every day in the United States, we drink about 110 million gallons of water.
7. Showering and bathing are the largest indoor uses (27%) of water domestically.
8. If every household in America had a faucet that dripped once each second, 928 million gallons of water a day would leak away.
9. A leaky faucet can waste 100 gallons a day.
10. One flush of the toilet uses 3 ½ gallons of water (on average).
11. An average bath requires 37 gallons of water.
12. An average family of four uses 881 gallons of water per week just by flushing the toilet.
13. The average 5-minute shower takes 15-25 gallons of water--around 40 gallons are used in 10 minutes.
14. You use about 5 gallons of water if you leave the water running while brushing your teeth.
15. If you water your grass and trees more heavily, but less often, this saves water and builds stronger roots.
16. An automatic dishwasher uses 9 to 12 gallons of water while hand washing dishes can use up to 20 gallons.
17. Approximately 1 million miles of pipelines and aqueducts carry water in the U.S. & Canada. That's enough pipe to circle the earth 40 times.
18. About 800,000 water wells are drilled each year in the United States for domestic, farming, commercial, and water testing purposes.
19. You can refill an 8-oz glass of water approximately 15,000 times for the same cost as a six-pack of soda pop.
20. A dairy cow must drink four gallons of water to produce one gallon of milk.
21. 300 million gallons of water are needed to produce a single day's supply of U.S. newsprint.
22. One inch of rainfall drops 7,000 gallons or nearly 30 tons of water on a 60' by 180' piece of land.
23. A gallon of gasoline takes nearly 13 gallons of water to produce. Combine your errands, car pool to work, or take public transportation to reduce both your energy and water use.
24. A cross-country airplane trip (about 6,000 miles) could be worth more than 1,700 standard toilet flushes.
25. According to recent reports, nearly 5% of all U.S. water withdrawals are used to fuel industry and the production of many of the material goods we stock up on weekly, monthly, and yearly.
26. It takes about 100 gallons of water to grow and process a single pound of cotton, and the average American goes through about 35 pounds of new cotton material each year.
27. Try <http://www.home-water-works.org/calculator>

Other Resources:

- [American Water Works Association](http://www.awwa.org/) (http://www.awwa.org/)
- [Green Plumbers](http://www.greenplumbersusa.com/) (http://www.greenplumbersusa.com/)
- [Earth Easy](http://eartheasy.com/water-conservation) (http://eartheasy.com/water-conservation)
- [Alliance for Water Efficiency](http://www.allianceforwaterefficiency.org/) (http://www.allianceforwaterefficiency.org/)
- [EPA Water Sense](http://www.epa.gov/watersense/) (http://www.epa.gov/watersense/)
- [USGS Water](http://www.usgs.gov/water/) (http://www.usgs.gov/water/)



Save Indoors



You've purchased some [WaterSense labeled products](#) and started down the road to savings, but don't stop there. There are lots of things you can do in your own home to reduce water use and get more from less. Just follow our simple tips below to get started!

Fix a leak:

Small household leaks can add up to gallons of water lost every day. That's why WaterSense reminds Americans to check their plumbing fixtures and irrigation systems each year in March during [Fix a Leak Week](#).

In the bathroom—where over half of all water use inside a home takes place:

- Turn off the tap while shaving or brushing teeth.
- Showers use less water than baths, as long as you keep an eye on how long you've been lathering up. Learn tips on how to [Shower Better](#).
- If you're dreaming of a [Better Bathroom](#), get ready for your mini-makeover.
- [Calculate how much you can save](#) with WaterSense labeled products in the bathroom!

In the kitchen—whip up a batch of big water savings:

- Plug up the sink or use a wash basin if washing dishes by hand.
- Use a dishwasher—and when you do, make sure it's fully loaded!
- Scrape your plate instead of rinsing it before loading it into the dishwasher.
- Keep a pitcher of drinking water in the refrigerator instead of letting the faucet run until the water is cool.
- Thaw in the refrigerator overnight rather than using a running tap of hot water.
- Add food wastes to your compost pile instead of using the garbage disposal.

In the laundry room—where you can be clean AND green:

- Wash only full loads of laundry or use the appropriate water level or load size selection on the washing machine.
- To save money on your energy bills, set your washing machine to use cold water rather than hot or warm water.

Save Outdoors

Of the estimated 29 billion gallons of water used daily by households in the US, nearly 9 billion gallons, or 30 percent, is devoted to outdoor water use. In the hot summer months, or in dry climates, a household's outdoor water use can be as high as 70 percent.

- [Create a water-smart landscape](#) that is both beautiful and efficient to give your home the curb appeal you desire.
- Timing is everything! Knowing when and how much to water allows you to keep a [healthy landscape](#).
- Upgrade to a WaterSense labeled controller if you have an [in-ground irrigation system](#).
- Find a certified irrigation professional to install, maintain, or audit your irrigation system to ensure it is watering at peak efficiency.
- Sweep driveways, sidewalks, and steps rather than hosing off.
- Wash the car with water from a bucket, or consider using a commercial car wash that recycles water.
- If you have a pool, use a cover to reduce evaporation when the pool is not being used.
- Take action during the [hot summer months](#) when water use increases to curb water waste. Get the facts on water use when it's hot.
- If a [drought](#) is declared in your area, go the extra mile to save water.

General Water Saving Tips

- Create an awareness of the need for water conservation among your children. Avoid the purchase of recreational water toys which require a constant stream of water.
- Be aware of and follow all water conservation and water shortage rules and restrictions which may be in effect in your area.
- Encourage your employer to promote water conservation at the workplace. Suggest that water conservation be put in the employee orientation manual and training program.
- Patronize businesses which practice and promote water conservation.
- Report all significant water losses (broken pipes, open hydrants, errant sprinklers, abandoned free-flowing wells, etc.) to the property owner or the Water Department.
- Encourage your school system and local government to help develop and promote a water conservation ethic among children and adults.
- Support projects that will lead to an increased use of reclaimed waste water for irrigation and other uses.
- Encourage your friends and neighbors to be part of a water conscious community. Promote water conservation in community newsletters, on bulletin boards and by example.
- Conserve water because it is the right thing to do. Don't waste water just because someone else is footing the bill such as when you are staying at a hotel.
- Try to do one thing each day that will result in a savings of water. Don't worry if the savings is minimal. Every drop counts. And every person can make a difference. So tell your friends, neighbors and co-workers to "Turn it Off" and "Keep it Off".

Save Energy

It takes a lot of energy to deliver and treat the water you use every day for bathing, shaving, cooking, and cleaning. Homes with electric water heaters, for example, spend one-quarter of their electric bill just to heat water. As an example, letting your faucet run for five minutes uses about as much energy as letting a 60-watt light bulb run for 14 hours.

Drops & Watts: You Can't Have One Without the Other

On average, the annual energy used to deliver and treat water for only 10 households could power a refrigerator for more than two years. In some areas of the country, that estimate is very low. Heating water for showering, bathing, shaving, cooking, and cleaning also requires a considerable amount of energy. Homes with electric water heaters, for example, spend one-fourth of their total electric bills.

Did you Know?

It also takes water to create energy. Vast amounts of water are used to cool the power plants that generate electricity. In fact, it takes 3,000 to 6,000 gallons of water to power a 60-watt incandescent bulb for 12 hours per day over the course of a year. One of the simplest ways to save both water and energy is to install water-efficient products. WaterSense labeled products not only save water, but can help reduce your energy bills. Installing WaterSense labeled faucet aerators in your bathrooms, for example, costs just a few dollars but could save you enough electricity to dry your hair every day for a year! You can be sure the products will not only save resources, but will perform well. All WaterSense labeled products are tested and independently certified to ensure they meet EPA's criteria for both efficiency and performance.

Please help us find leaks, save water and reduce water service costs... Because water lines are located underground, leaks may go unnoticed for days and even years resulting in a considerable waste of our valuable water resource and additional costs for all customers. Please help us locate these leaks by reporting to the Water Department any occurrences of: water running in locations that are normally dry; wet spots in yards and streets; the sound of water running in your home when water is not in use; the sound of water trickling or running in a storm inlet when it is not raining; sudden or unusually low water pressure; and slugs of discolored or cloudy water. When an occurrence such as this is reported, a representative of the water department will make contact and investigate the situation.

Williamsburg Municipal Authority
305 E. 2nd St
Williamsburg PA 16693

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This report shows our water quality and what it means. **IF YOU HAVE ANY QUESTIONS ABOUT THIS REPORT** or questions concerning your water utility, please contact Mr. Joseph. L. Lansberry, Borough Manager, at (814) 832-2051, by fax at 814-832-9626 or by email at Authority16693@gmail. Authority office hours are Monday, Tuesday, Thursday and Friday, 9 AM to 3 PM, and Wednesday 8 AM to 4:30 PM, excluding holidays. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Authority meetings. They are held at 6 PM on the first Tuesday of each month at the Williamsburg Municipal Building located at 305 E. 2nd Street, Williamsburg.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.