

Annual Water Quality Report

Reporting Year 2019

Presented By: Merchantville-Pennsauken Water Commission

PWS ID#: 0424001

Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2019. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available should you ever have any questions or concerns about your water.

Susceptibility Rating

Merchantville Pennsauken Water susceptibility Rating, depending on well sources are:

Pathogens medium and low, Nutrients high and medium, Pesticides medium and low, Volatile Organic Compounds high, Inorganics high, medium and low, Radionuclides high, Radon medium and low, Disinfection Byproducts Precursors high and medium.

Source Water Assessment

Our Source Water Assessment Report and Summary is available at www.state.nj.us/dep/swap/ or by contacting the New Jersey Department of Environmental Protection (NJDEP), Bureau of Safe Drinking Water at (609) 292-5550. The source water assessment performed on our 14 sources can be obtained by calling MPWC and asking for Superintendent Craig T. Campbell.

If a system is rated as highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination. Public water systems are required to monitor for regulated contaminants and to initiate treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, NJDEP may customize or change the existing monitoring schedules based on the susceptibility ratings.

Source water protection requires a long-term dedication to clean and safe drinking water. It is more cost-effective to prevent contamination than to address contamination after the fact. Every member of the community plays an important role in source water protection. The NJDEP recommends controlling activities and development around drinking water sources whether it is through land acquisition, conservation easements, or hazardous waste collection programs. We will continue to keep you informed of SWAP's progress and developments. If you have any questions about these findings, please contact us during regular business hours.

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 at (800) 426-4791 or at www.epa.gov/safewater/lead.

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.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent, according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Furthermore, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at <https://goo.gl/Jxb6xG>.

Working Hard for You

Under the Safe Drinking Water Act (SDWA), the U.S. Environmental Protection Agency (U.S.EPA) is responsible for setting national limits for hundreds of substances in drinking water and also specifies various treatments that water systems must use to remove these substances. Each system continually monitors for these substances and reports to the U.S. EPA if they were detected in the drinking water. The U.S.EPA uses this data to ensure that consumers are receiving clean water.

This publication conforms to the regulation under the SDWA requiring water utilities to annually provide detailed water-quality information to each of their customers. We are committed to providing you with this information about your water supply because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

For more information about this report, or for any questions relating to your drinking water, please call the main office at (856) 663-0043 and ask for Superintendent Craig T. Campbell. Our office hours are 8:00 a.m. to 4:00 p.m. Monday through Friday, or visit us on the Web www.mpwc.com

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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.

Where Does My Water Come From?

The Merchantville-Pennsauken Water Commission pumps groundwater from 14 wells that tap the Potomac-Raritan-Magothy (PRM) Aquifer and transmits it to the MPWC's six pumping stations. These wells vary in depth from 140 feet to 300 feet deep. The distribution system consists of 220 miles of piping. At the present time a very small amount of water is purchased from New Jersey American Water Company, which represents approximately 1% of our annual needs. NJAWC supplies water from three sources: surface water from the Delaware River and ground water from the PRM and Mount Laurel-Wenonah aquifers. Information on NJAWC water quality can be found at www.newjerseyamwater.com.

The MPWC prides itself on the above-ground water storage facilities that have been built through the years. These storage tanks greatly benefit our many customers. In total, MPWC has six above-ground water tanks. The total capacity of the above-ground storage tanks is 8 million gallons of water. This type of water storage not only enhances water pressure (which is needed to take showers, sprinkle lawns, and fight fires), but it also provides over a full day's worth of water supply to our entire franchise area in case of an emergency situation.

The MPWC is committed to keeping abreast of the most recent advancements in water treatment technologies through continuous training and education. Our management staff and treatment and transmission personnel attend training seminars and courses designed to keep us up to date and aware of better ways to serve our customers with the safest and best-tasting water possible.

The MPWC has invested in the most current and modern methods for the treatment and transmission of your drinking water. In fact, the MPWC has hosted other water treatment professionals to showcase our facilities and share our success stories.

The MPWC continues to invest in our infrastructure and work aggressively at living up to our mission of "supplying the best product at the most affordable cost."

Monitoring and Reporting Violation

On December 10, 2019, we received a positive coliform test result from our lab. We retested that location and also both neighboring customers and found the results were negative. Source water wells were also tested and found negative; however, source water samples were delayed, and this caused a violation. We do not believe this delayed monitoring requirement had any impact on public health and safety. We have already taken the steps to ensure that adequate monitoring and reporting will be performed in the future so that this oversight will not be repeated.

Community Participation

You are invited to participate in our public forum and voice any concerns about your drinking water. We meet the second Thursday of each month, beginning at 4:00 p.m., at our Headquarters: 6751 Westfield Avenue, Pennsauken, NJ 08110.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. Also, the water we deliver must meet specific health standards. Here, we show only those substances that were detected in our water. (A complete list of all our analytical results is available upon request.) Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less often than once per year because the concentrations of these substances 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 participated in the 4th stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining this information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

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 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.

REGULATED SUBSTANCES¹

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine ² (ppm)	2019	[4]	[4]	1.22	0.6–1.22	No	Water additive used to control microbes
Combined Radium ³ (pCi/L)	2019	5	0	7.86	2.53–7.86	No	Erosion of natural deposits
Di(2-ethylhexyl) Phthalate (ppb)	2018	6	0	0.59	0.59–0.59	No	Discharge from rubber and chemical factories
Dichloromethane (ppb)	2018	5	0	2.1	ND–2.1	No	Discharge from pharmaceutical and chemical factories
Methyl tert-Butyl Ether [MTBE] (ppb)	2019	70	NA	3.8	ND–3.8	No	Leaking underground gasoline and fuel oil tanks; Gasoline and fuel oil spills
Nitrate (ppm)	2017	10	10	3.92	2.47–3.92	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrate-Nitrite (ppm)	2019	10	10	3.64	1.67–3.64	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2019	80	NA	29	ND–29	No	By-product of drinking water disinfection
Total Organic Carbon ² (Units)	2019	TT	NA	71%	49%–71%	No	Naturally present in the environment
Trichloroethylene (ppb)	2019	1	0	0.9	ND–0.9	No	Discharge from metal degreasing sites and other factories
Turbidity ⁴ (NTU)	2017	TT	NA	0.09	0.01–0.09	No	Soil runoff
Xylenes [Total] (ppb)	2019	1,000	1,000	1.1	ND–1.1	No	Discharge from petroleum factories; Discharge from chemical factories
cis-1,2-Dichloroethylene (ppb)	2019	70	70	1.3	ND–1.3	No	Discharge from industrial chemical factories

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2015	1.3	1.3	0.029	1/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2015	15	0	ND	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	RUL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2016	250	NA	53.8	20.3–53.8	No	Runoff/leaching from natural deposits
Copper (ppm)	2018	1.0	NA	0.742	ND–0.742	No	Corrosion of household plumbing systems; Erosion of natural deposits
Foaming Agents (ppb)	2018	500	NA	168	ND–168	No	Municipal and industrial waste discharges
Hardness [as CaCO₃] (ppm)	2017	250	NA	71	41.2–71	No	Naturally occurring
Iron (ppb)	2019	300	NA	53	ND–53	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2017	50	NA	10	ND–10	No	Leaching from natural deposits
pH (Units)	2017	6.5–8.5	NA	7.42	7.25–7.42	No	Naturally occurring
Sodium (ppm)	2017	50	NA	33.9	7.42–33.9	No	Naturally occurring
Sulfate (ppm)	2017	250	NA	47.4	14.6–47.4	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2017	500	NA	239	117–239	No	Runoff/leaching from natural deposits
Zinc (ppm)	2017	5	NA	0.056	ND–0.056	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
1,4-Dioxane (ppb)	2018	5.69	0.32–5.69
Bromodichloromethane (ppm)	2018	0.0059	ND–0.0059
Bromoform (ppb)	2015	29.8	ND–29.8
Chloroform (ppb)	2019	3.7	ND–3.7
Dibromochloromethane (ppb)	2019	10.8	ND–10.8
Dicamba (ppb)	2018	0.074	0.074–0.074
HAA5 (ppm)	2019	6.3	0–6.3

¹Under a waiver granted on December 30, 1998, by the State of New Jersey Department of Environmental Protection, our system does not have to monitor for synthetic organic chemicals/pesticides because several years of testing have indicated that these substances do not occur in our source water. The SDWA regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. Our system received monitoring waivers for synthetic organic chemicals and asbestos.

²MPWC receives 50,000 gallons of water per day from NJAW. This test result was received from NJAW.

³Based on quarterly monitoring, determined on annual running average.

⁴Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of water quality and the effectiveness of disinfectants.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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.

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.

pCi/L (picocuries per liter): A measure of radioactivity.

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).

RUL (Recommended Upper Limit): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

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