

Utility Service Affiliates, Inc. (USA-Avalon)

A Subsidiary of



ANNUAL WATER QUALITY REPORT

2019



Get To Know Your Drinking Water



This document is an annual report on the quality of water delivered by Utility Service Affiliates (Avalon) Inc.(USA-Avalon) in 2019. It meets the Federal Safe Drinking Water Act for “Consumer Confidence Reports” and contains information on the sources of our water, its constituents, and the health risks associated with any contaminants.

USA-Avalon had one Non-Compliance Violation in 2019, The fourth quarter sodium samples taken from Wells #6, 9, and 10 were sampled from the raw water sample taps instead of finished water sample tap. The three previous quarters of 2019 were sampled and showed results in the expected range. The results of the 4th quarter samples are as follows- Well #6: 46mg/L; Well #9: 39mg/L and Well #10:51 mg/L. All the other wells required to be sampled were. The remaining quarters showed results within the expected range. This is not a health issue. See notice at end of this report for more information. We believe high quality drinking water is vital to the well-being of the residents of the Borough of Avalon and are committed to delivering a safe and plentiful drinking water supply. We encourage you to read this report to gain a better understanding of all that’s involved in bringing clean, clear tap water to your home.

How to Contact Us

The water system is owned by Borough of Avalon and managed and operated by Utility Service Affiliates (Avalon), a subsidiary of Middlesex Water Company.

If you have questions about this report, would like more information about your water quality and/or opportunities for public participation in decisions about our drinking water, please call Kenneth Koches, Superintendent at (609) 222-7910.

You may also write to USA-Avalon at:

Utility Service Affiliates, Inc.
P.O. Box 167
Iselin, NJ 08830

Additional information about drinking water regulatory programs may be obtained by contacting the Environmental Protection Agency (EPA) Safe Drinking Water Hotline at (800) 426-4791.



Water When You Need It!

Approximately 400 million gallons of water was delivered to approximately 6272 customer accounts in 2019. Water is treated and then delivered to customers through 37 miles of distribution mains. The Borough's water supply is obtained from groundwater from the Atlantic City "800-foot" sand aquifer. The ground water is chlorinated for disinfection and then delivered to the Borough's residents.

Special Notes Regarding COVID-19

While this report addresses water quality during 2019, we wanted to include information related to the current 2020 COVID-19 pandemic. Throughout the public health crisis, our dedicated team of essential employees continued to work to provide reliable water service critically important for washing hands and maintaining overall appropriate personal hygiene. According to the World Health Organization and the American Water Works Association, treatment methods like those used by our companies are sufficient to disinfect water for numerous contaminants, including COVID-19. Our crews continued to maintain treatment plants and water quality, repair main breaks and respond to customer calls all while maintaining appropriate safety measures and precautions. We also moved forward with important construction projects designed to enhance the reliability and resiliency of our water treatment and distribution systems.

When buildings and facilities are left vacant for an extended period of time, as during the pandemic, we recommend that building owners and managers seek guidance on how to prepare their facility plumbing for reoccupation. Water that has been sitting idle within plumbing systems of unoccupied or partially occupied buildings and facilities could harbor microbial and other inorganic matter which, over time of non-use, can become a health issue. MWC recommends reviewing the following resources:

The Centers for Disease Control and Prevention (CDC): "Guidance for Building Water Systems" – <https://www.cdc.gov/coronavirus/2019-ncov/php/building-water-system.html>

The Environmental Science Policy & Research Institute: "Building Water Quality and Coronavirus: Flushing Guidance for Periods of Low or No Use" – https://www.rwater.com/media/4664/final_coronavirus-building-flushing-guidance-20200403.pdf

Protecting the Source of Your Drinking Water

(SWAP) Source Water Assessment Program

The New Jersey Department of Environmental Protection (NJDEP) has implemented the Source Water Assessment Program to study existing and potential threats to the quality of public drinking water sources throughout the state.

Susceptibility Ratings for the USA-Avalon Water System

The table below illustrates the susceptibility ratings for each contaminant category for each source in the system. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report.

Parameter	WELLS - 5
Pathogens	Low
Nutrients	Low
Pesticides	Low
VOCs	Low
Inorganics	Medium
Radionuclides	Low
Radon	Low
Disinfection Byproduct Precursors	High

Susceptibility Chart Definitions

Pathogens – Organisms such as bacteria and viruses.

Nutrients – Compounds such as phosphorus and nitrogen that aid in the growth of organisms.

Volatile Organic Compounds (VOCs) – Man-made chemicals used as solvents, degreasers and gasoline components such as MTBE.

Pesticides – Man-made chemicals used to control pests and weeds such as Atrazine.

Inorganics – Mineral-based, man-made and naturally occurring, compounds such as arsenic and nitrates.

Radionuclides – Radioactive, man-made and naturally occurring, substances such as radium and uranium.

Radon – Naturally occurring gas.

Disinfection Byproduct Precursors – Naturally occurring organic matter, mainly in surface waters, that when combined with disinfectants such as chlorine, produce unwanted byproducts.

A public water system's susceptibility rating (Low, Medium or High) is a combination of two factors:

- How sensitive the water supply is to potential contamination.
- How often a contaminant is used or exists near the source water.

The USA-Avalon System produced **408 million gallons** of water in 2019.





The ratings are based on the potential for a contaminant to be at or above 50% of the MCL (High), between 10% and 50% of the MCL (Medium) and less than 10% of the MCL (Low).

DEP considered all surface water highly susceptible to pathogens; therefore, all intakes received a high rating for the pathogen category. For the purpose of the Source Water Assessment Program, radionuclides are more of a concern for groundwater than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and they all received a low rating.

If a system is rated 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 of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, the DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

Source Water Assessment Reports and Summaries are available for public water systems at www.state.nj.us/dep/swap or by contacting the NJDEP's Bureau of Safe Drinking Water at (609) 292-5550.

What Substances May be Found in the Source Water Before it is Treated?

The sources of drinking water (both tap water and bottled water) generally include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water moves over land or through the ground, it dissolves naturally occurring minerals and organics and can pick up substances resulting from the presence of animal or human activity. Substances that may be present in source waters prior to the treatment process include:

Microbial Contaminants

Such as viruses and bacteria, which may come from sewage treatment plants, septic systems, livestock and wildlife.

Inorganic Contaminants

Such as salts and metals, which can be naturally occurring or result from storm water runoff, wastewater discharges, or farming.

For more information about contaminants and potential health effects, call the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Pesticides and Herbicides

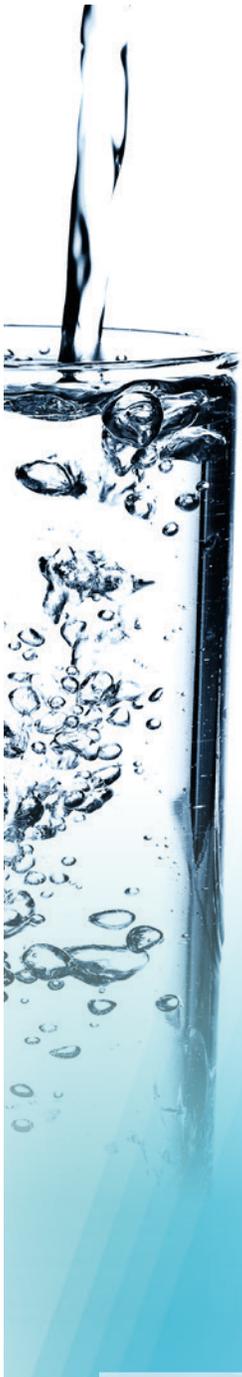
May come from a variety of sources such as agriculture, storm water runoff, and residential uses.

Organic Chemical Contaminants

Including natural, synthetic and volatile organic chemicals, which are by-products of nature and industrial processes and petroleum production. Can also come from gas stations, storm water runoff and septic systems.

Radioactive Contaminants

Can be naturally occurring or may be the result of oil and gas production and mining activities.



What You Should Know About Lead in Drinking Water

Recently, water quality issues related to lead in drinking water have dominated national headlines. Perhaps you are concerned if similar circumstances could be present in your own water systems?

We want you to know that water delivered by Middlesex Water Company is in compliance with the U.S. Environmental Protection Agency's Lead and Copper Rule, which sets standards for sampling for lead in drinking water.

Middlesex Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in household plumbing components. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead typically enters drinking water as a result of corrosion, or wearing away, of materials in household plumbing containing lead. While our surface water treatment process includes corrosion control to further protect customers, lead plumbing fixtures still present in your home are a cause for concern. These materials include lead-based solder that in the past had been used to join copper pipe, brass and chrome-plated brass faucets, and in some cases, the service line that connects your house to the water main, if the pipe is made of lead.

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 internal plumbing, 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 <https://www.epa.gov/your-drinking-water/basic-information-about-lead-drinking-water>.

Important Information About Nitrate in Drinking Water

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Do I Need to Take Special Precautions?

To ensure that tap water is safe to drink, the EPA and the DEP Bureau of Safe Drinking Water prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the **EPA Safe Drinking Water Hotline at (800) 426-4791**.

General Safety Suggestions Regarding Water Main Breaks

During main breaks or other system disruptions, USA - Avalon may encourage customers to boil their water used for drinking. **Customers should bring tap water to a rolling boil, boil for one minute, and cool before using.** Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and preparing food until further notice. This suggestion is offered to provide an extra margin of safety to our customers. This precautionary advisory is typically in effect from the time of the break, until 48 hours after service is restored.

These safety suggestions may be of particular interest to people with compromised immune systems, the elderly and infants who may be more vulnerable to possible contaminants in drinking water than the general population and have special needs regarding water quality. The Company suggests that these individuals discuss the boil water safety recommendation with their health care providers, should they experience any water service disruption to their homes in the future.

Based on past experience, USA - Avalon does not expect any water quality problems to be associated with main repairs. Its recommendation is simply a standard precautionary measure to better ensure the safety of its customers during distribution system and main repair work.



64,240 gallons

The amount of water used by the average American in one year. Source: Water.org

HEALTH INFORMATION

Health Effects of Detected Contaminants (Required Language)

Lead - Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Copper - Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Fluoride - Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.

Sodium - For healthy individuals, the sodium intake from water is not important, because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be a concern to individuals on a sodium restricted diet.

Required Additional Health Information

Special Considerations Regarding Children, Pregnant Women, Nursing Mothers, and Others

Children may receive a slightly higher amount of a contaminant present in the water than do adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason, reproductive or developmental effects are used for calculating a drinking water standard if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, this making the standard more stringent, to account for additional uncertainties regarding these effects. In the cases of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.

A Word of Caution

Our treatment systems are designed and operated to produce water that meets all state and federal standards. Many substances and microscopic organisms found in water may be a concern if they occur at high concentrations. For some contaminants, MCL levels have not been set because the EPA has not determined at what level they pose a public health risk. This is often because a reliable detection method is unavailable and/or because the contaminant is rarely found in treated water.

Some naturally occurring organisms commonly found in the natural water supplies may not be eliminated during the treatment process. This means that even a well-run system may contain low levels of microscopic organisms. The levels, however, are normally of little concern to healthy individuals. It should be noted, however, that under certain circumstances, these organisms might amplify to dangerous levels within a customer's own water supply system. All customers, including residential, commercial and industrial customers, and other large facilities such as schools, hospitals and hotels/motels, should follow appropriate procedures for maintaining their own internal plumbing systems and appliances. If you have any concerns about these matters, please call the **EPA Safe Drinking Water Hotline at (800) 426-4791**.

For Your Safety

A Message for People with Compromised Immune Systems

Although our drinking water meets all state and federal regulations, some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals 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 individuals 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 pathogens are available from the EPA Safe Drinking Water Hotline at (1-800 426-4791).

Definitions & Abbreviations used below:

Primary Standards: Standards which relate to public health. **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. **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. **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 contamination. **Waiver:** State permission to reduce monitoring frequency because previous results have consistently been below the MCL. **ppt:** Parts Per Trillion. 1 ppt corresponds to 1 penny in \$10 billion. **ppb:** Parts Per Billion. 1 ppb corresponds to 1 penny in \$10 million. **ppm:** Parts Per Million. 1 ppm corresponds to 1 penny in \$10 thousand. **mrem/year:** Millirems per year. A measure of radiation absorbed by the body. **N/A:** Not Applicable. **ND:** None Detectable at testing limit. **NR:** Not Reported. **<:** Less Than. **>:** Greater Than. **AL:** Action Level. The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. **CNR:** Currently Not Regulated. **NTU:** Nephelometric

Turbidity Unit. Used to measure cloudiness in drinking water. We monitor turbidity because it is a good indicator that our filtration system is functioning properly. High turbidity can hinder the effectiveness of disinfectants. **pCi/l:** Picocuries per Liter. A measure of the radioactivity in water. **TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.

Monitoring Waivers

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for some compounds because previous results have consistently been below the MCL. USA-Avalon received waivers for the following contaminants in its groundwater supplies: Synthetic Organic Chemicals and Asbestos.

What the Numbers Mean to You: The table shows the results of our monitoring during 2019. The EPA requires monitoring of over 100 drinking water contaminants. Those listed are the only contaminants detected. For a complete list of monitored contaminants, contact USA-Avalon at (609) 222-7910. As you can see, the USA-Avalon system had no MCL violations. The EPA has determined that your water is safe at these levels. The State requires water systems to monitor for certain contaminants less than once a year because the concentration of these contaminants is not expected to vary significantly from year to year. Therefore, some of these data may represent prior period testing that is considered representative of water quality.

ANNUAL WATER QUALITY RESULTS - 2019							Primary Standards
Parameter	Units	MCL (State/Federal Standard)	MCLG (Ideal Goal)	Results		MCL Violation Yes/No	Major Sources in Drinking Water
				Highest Level used for Compliance	Range		
INORGANIC							
Selenium (5)	ppb	50	50	1.1	ND - 1.1	No	Discharge from petroleum and metal refineries; Erosion of natural deposits.
Lead (1)	ppb	AL = 15	0	2.2	N/A	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (1)	ppm	AL = 1.3	1.3	0.06	N/A	No	Corrosion of household plumbing systems; Erosion of natural deposits
DISINFECTION BY-PRODUCTS							
Total Trihalomethanes (2)	ppb	80	N/A	13	7 - 13	No	By-product of drinking water disinfection
Total Haloacetic Acids (2)	ppb	60	N/A	1.3	ND - 1.3	No	By-product of drinking water disinfection
RADIOLOGICAL (3)							
Radium (226 and 228)	pCi/l	5	0	1.5	N/A	No	Erosion of natural deposits
MICROBIOLOGICAL							
Disinfectant Residuals (Chlorine)	ppm	>4 (MRDL)	>4 (MRDLG)	.48	.20 -.75	No	Water additive used to control microbes
Additional Monitoring	Units	MCL (State/Federal Standard)	MCLG (Ideal Goal)	Highest Level Detected	Range	MCL Violation Yes/No	Major Sources in Drinking Water
UCMR3 (Unregulated Contaminant Monitoring Rule) (4)							
Chlorate	ppb	CNR	N/A	330	200-330	N/A	Agricultural defoliant: used in the production of chlorine dioxide
Strontium	ppb	CNR	N/A	170	76-170	N/A	Naturally occurring element: historically used in faceplate glass of cathode-ray tube televisions

Secondary Standards (Non-Health Related)				
Parameter	Units	RUL*	Results	
			Average	Range
Sodium	ppm	50	57	45-68
Iron	ppm	0.3	ND	NA
Alkalinity	ppm	N/A	89	88-91
Chlorides	ppm	250	37	12-129
Color	Color Units	10	<5	N/A
Hardness	ppm	250	34	30-44
Sulfates	ppm	250	17	15-20
Odor	Threshold Odor Number	3	ND	N/A
pH	N/A	6.5 - 8.5 (optimum range)	7.0	6.9-7.1
Total Dissolved Solids	ppm	500	171	135-203
Zinc	ppm	5	0.004	ND-0.004

- 1: Avalon Water System is on reduced monitoring, once per three-year cycle. The listed Lead and Copper concentrations are the 90th Percentile. Results are from 2017. Next samples due in 2020 and Copper concentrations are the 90th Percentile. Results are from 2017. Next samples due in 2020.
- 2: Samples are taken only once per year.
- 3: Samples are taken every six years. Next sample due in 2024. Results from 2018.
- 4: The purpose of the UCMR monitoring is to provide the EPA Administrator with data to support decisions concerning whether or not to regulate these contaminants.
- 5: Samples are taken every 3 years. Next sample due in 2021. Results taken from 2018.

*RUL: Recommended Upper Limit

MONITORING VIOLATIONS ANNUAL NOTICE

Monitoring Requirements Not Met for Borough Of Avalon

Our water system violated drinking water requirements over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we are doing (did) to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During The 4th Quarter of 2019, we did not complete all monitoring or testing for sodium.

What should I do?

There is nothing you need to do at this time.

The table below lists the contaminant(s) we did not properly test for during the last year, how often we are supposed to sample for [this contaminant/these contaminants], how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

Contaminant	Required sampling frequency	Number of samples taken	When samples should have been taken	When samples were taken
Sodium	Wells # 6, 9 and 10-3 samples taken every quarter	3 Samples were taken in December 2019, but the results were tested from the raw water source.	December 2019	March, June and September 2019

What is being done?

The Borough of Avalon is required to sample for Sodium from Well #6, Well #9 and Well #10 at the Point of Entry (POE) each quarter of the year. In the 4th quarter of 2019, our contracted sampling and testing laboratory sampled for both sodium and chlorides. The lab inadvertently mislabeled the sample bottles which resulted in the sodium to be analyzed from the samples taken at the raw water sample tap. The samples were analyzed for sodium, even though the results were in compliance they were analyzed from the wrong sample. The results for the December 2019 sodium samples are as follows. Well #6 - 46mg/L, Well #9 - 39mg/L and Well #10 - 51mg/L. The results of the previous 3 quarters in 2019 are as follows. Well #6, March-68mg/l, June-67mg/l, Sept-57mg/l. Well #9, March-53mg/l, June-52mg/l, Sept-52mg/l. Well #10, March-58mg/l, June-58mg/l, Sept-57mg/l. This issue has been fully corrected with the labs to prevent any future sampling errors.

For more information, please contact Ken Koches at 609-222-7910 or Kkoches@middlesexwater.com

PLEASE SHARE THIS INFORMATION with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail to water users at their locations.

This notice is being sent to you by Middlesex Water Company. State Water System ID#: NJ0501001.

Date distributed: 06/11/20

Utility Service Affiliates, Inc. (USA-Avalon)

A Subsidiary of



P. O. Box 167
Iselin, New Jersey 08830

You can help

protect drinking water!

Never flush unwanted or expired medicine down the toilet or drain.

Avoid using pesticides and fertilizers.

Pick up after your pets.

Use and dispose of chemicals properly.

ANNUAL WATER QUALITY REPORT

2019

This report contains important information about your drinking water. If you do not understand it, please have someone translate it for you.

Wise Water Tips for Your Home

Fix leaking faucets, pipes, toilets, etc.

Replace old fixtures; install water-saving devices in faucets, toilets and appliances.

Wash only full loads of laundry.

Capture tap water. While you wait for hot water to come through the pipes, catch the flow in a watering can and use later on houseplants or your garden. This simple action can save about 200 to 300 gallons a month.

Don't let the faucet run while you clean vegetables.

Rinsing them in a filled sink or pan saves 150 to 250 gallons a month.

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PLEASE SHARE THIS REPORT WITH OTHERS.

Landlords, businesses, schools, hospitals, and other groups are encouraged to share this Water Quality Report with all water users at their locations.

PWSID #0501001