

# CITY OF ATLANTIS 2019 WATER QUALITY REPORT

Dear Customers,

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. The City of Atlantis purchases its water from Palm Beach County Utilities, which is treated well water from shallow aquifers.

I'm pleased to report that our drinking water meets federal and state requirements.

The City of Atlantis routinely monitors for contaminants in your drinking water according to Federal and State laws and regulations. Except where indicated otherwise, this report is based on the results of our water monitoring for the period of January 1 to December 31, 2019.

The data obtained and presented in this report are from the most recent tests performed in accordance with the established drinking water laws, rules, and regulations.

The City of Atlantis is responsible to test for total Coliform bacteria monthly, Disinfection by-Products, Lead and Copper in accordance with 40 CFR 141.Subpart 1. Palm Beach County Utilities System II, the primary supplier, is responsible to monitor for Primary, and Secondary contaminants, as required by Federal, and State Laws. This annual report is for the reporting period of January 1, 2019 to December 31, 2019.

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:

(A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

(B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

(C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

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

(E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink the EPA prescribes regulations to limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

**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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).**

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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

These charts are designed to inform you about substances that may be found in your tap water. Therefore, the Environmental Protection Agency (EPA) has established standards regulating contaminants. Our utility has never been in violation of the EPA standards.

The charts below show substances that the EPA requires our utility to report, even though we are not in violation of their standard. To determine how we compare to the federal regulation, compare the column that shows the highest level allowed by EPA (MCLs) to the column that shows the level detected at our utility

during 2019.

Keep in mind that MCLs are set at very stringent levels. To understand the possible health effects for many regulated substances, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having a health effect.

If you have any questions about this report or concerning your water utility, please contact Steve Mazuk, Atlantis Utilities Department at 965-1744. City of Atlantis, 260 Orange Tree Dr., Atlantis, Florida 33462. This report can also be viewed on the City's website at <http://www.atlantisfl.gov>. Our regularly scheduled council meetings are on the third Wednesday of each month at 7:00 p.m. at the Atlantis Municipal Complex.

Thank you,

Steven Mazuk  
UTILITIES DIRECTOR  
ATLANTIS UTILITIES DEPARTMENT

## Table definitions

Action Level (AL): Concentration of a contaminant that requires treatment

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 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 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 contaminants.

ppb: parts per billion; one part per billion equals approximately one drop in 10,000 gallons  
ppm: parts per million; one part per million equals approximately one drop in 10 gallons  
pCi/l: picocuries per liter; a measure of radiation matter in drinking water

ND: not detected; indicates that the substance was not found by laboratory analysis

Treatment Techniques (TT) A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

"Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present."

We are in the city monthly collecting samples for microbiological analyses. We are pleased to report that all samples collected were negative.

**LEAD & COPPER**

	AL exceeded Y/N	90th Percentile result	No. of Sampling sites exceeding AL	MCLG	AL (action level)	Date of Sample	Likely Source of Contamination
1. Lead (ppb)	No	0.0092	1	0	0.015ppm	10/25/2019	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
2. Copper (ppm)	No	0.15	0	0	1.0ppm	10/25/2019	Corrosion of household plumbing systems; erosion of natural deposits

"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. Atlantis Utilities is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your 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>."

**STAGE 1 DISINFECTANTS AND DISINFECTION BY -PRODUCTS**

	Dates of Sampling	MCL Violation	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of contamination
Chloramines (ppm)	Daily	No	2.0*	0.6 -3.0	4 ppm	4 ppm	Water additive used to control microbes

**STAGE 2 DISINFECTANTS AND DISINFECTION BY-PRODUCTS**

	Dates of Sampling	MCL Violation	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of contamination
Total Haloacetic Acids (HAA5)(ppb)	10/23/2019	No	29.4	29.4 ug/l	N/A	60 ug/l	By-product of drinking water chlorination
Total Trihalomethanes (ppb)	10/23/2019	No	47.7	47.7 ug/l	N/A	80 ug/l	By-product of drinking water chlorination

\* The results in the column indicating “Level Detected” for chloramines is the running annual average from all sampling sites.

Atlantis receives its water from Palm Beach County Water Utilities. PBCUD operates four water treatment plants serving the distribution system to which the City of Atlantis is connected, they have wells approximately 150 feet underground in the Surficial Aquifer. The plants are staffed 24 hours a day by state-licensed water plant operators. The Department is continually upgrading its facilities to utilize the most effective and up-to-date technologies for water treatment, such as state-of-the-art membrane softening, lime softening, filtration, and disinfection by ammonia and chlorination.

**Source Water Assessment**

In 2018, the Department of Environmental Protection performed a Source Water Assessment on PBCWUD system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of their wells. The assessment identified 123 potential sources of contamination with susceptibility levels ranging from low to moderate. The majority of sources are privately owned and operated petroleum storage tanks (gas stations) and waste clean-up facilities. The results are available on the FDEP Source Water Assessment and Protection Program website at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp)

**PALM BEACH COUNTY WATER UTILITIES DEPARTMENT  
WTP 2, 3, 8 and 9  
CONSUMER CONFIDENCE REPORT  
2019 DATA**

**2019 DATA TO REPORT ON CCR**

Inorganic Contaminants							
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Barium (ppm)	5/17	N	0.00893	0.00412 I - 0.00893	2 ppm	2 ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	5/17	N	2.24 I	ND - 2.24 I	100 ppb	100 ppb	Discharge from steel and pulp mills; erosion of natural deposits
Cyanide (ppb)	5/17	N	5.6 I	ND - 5.6 I	200 ppb	200 ppb	Discharge from steel metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	5/17	N	0.72	0.571 - 0.72	4 ppm	4 ppm	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
Nitrate, as Nitrogen (ppm)	5/19	N	0.068 I	0.030 I - 0.068 I	10 ppm	10 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite, as Nitrogen (ppm)	5/19	N	0.011 I	ND - 0.011 I	1 ppm	1 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	5/17	N	57.8	9.49 - 57.8	N/A	160 ppm	Salt water intrusion, leaching from soil
Stage 1 Disinfectants and Disinfection By-Products							
Disinfectant or Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MRDL Violation Y/N	Level Detected*	Range of Results	MRDLG	MRDL	Likely Source of Contamination
Chlorine and Chloramines (ppm)	1/19 to 12/19	N	3.54	0.08 - 5.2 <sup>(1)</sup>	4 ppm	4 ppm	Water additive used to control microbes
Stage 2 Disinfectants and Disinfection By-Products							
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL Violation Y/N	Level Detected**	Range of Results	MCLG	MCL	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	2/19, 5/19, 8/19, 11/19	N	47.2	6.1 - 66.0 <sup>(2)</sup>	N/A	60 ppb	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	2/19, 5/19, 8/19, 11/19	N	51.9	12.1 - 70.2	N/A	80 ppb	By-product of drinking water disinfection
Lead & Copper (Tap Water)							
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	AL Exceeded Y/N	90th Percentile Result	No. of Sampling Sites Exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	8/17	N	0.187 ppm	0	1.3 ppm	1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	8/17	N	ND	0	0 ppb	15 ppb	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

**Qualifier Codes**

I = Between lab detection limit and lab practical quantitation limit

J = Estimated Value

**Notes:**

<sup>(1)</sup> The highest level detected for chloramine represents 1 out of 6772 samples.

<sup>(2)</sup> The results in the column indicating "Highest Level Detected" for Chlorine and Chloramines are the highest running annual average (RAA), computed quarterly, of monthly averages of all samples collected. The range of results is the range of results of all the individual samples collected during the past year.

<sup>(\*)</sup> The results in the column indicating "Highest Level Detected" for total trihalomethanes and HAA5 are the highest locational running annual average (LRAA), computed quarterly, of quarterly averages of all samples collected. The range of results are the range of individual sample results (lowest to highest) for all monitoring locations.

<sup>(2)</sup> One sample during 2019 (17168 Innovation Drive, August) had a haloacetic acids (HAA5) result of 66.0 ppb, which exceeds the MCL of 60 ppb. However, the system did not incur an MCL violation, because all annual average results at all sites were at or below the MCL. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Unregulated Contaminants (UCMR 4)				
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	Level Detected (average)	Range	Likely Source of Contamination
Germanium (ppb)	1/19, 2/19, 5/19, 8/19	0.13 J	ND - 0.14 J	Naturally-occurring element, commercially available in combination with other elements and minerals; a byproduct of zinc ore processing; used in infrared optics, fiber-optic systems, electronics and solar applications
Manganese (ppb)	12/18, 1/19, 6/19	0.43	0.19 J - 0.68	Naturally-occurring element, commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical, essential nutrient
Total Organic Carbon (TOC) (ppm)	12/18, 1/19, 6/19	10.44	7.46 - 12.9	Naturally present in the environment
Bromide (ppm)	12/18, 1/19, 6/19	73.93	0.099 - 302	By-product of drinking water disinfection
HAA5 (ppb)	12/18, 2/19, 3/19, 6/19, 8/19	20.96	6.3 - 42.2	By-product of drinking water disinfection
HAA6Br (ppb)	12/18, 2/19, 3/19, 6/19, 8/19	7.81	3.8 - 13.1	By-product of drinking water disinfection
HAA9 (ppb)	12/18, 2/19, 3/19, 6/19, 8/19	27.47	9.7 - 52.8	By-product of drinking water disinfection

The 1996 Safe Drinking Water Act (SDWA) amendments require that once every five years EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs).

The fourth Unregulated Contaminant Monitoring Rule (UCMR 4) was published in the Federal Register on December 20, 2016. UCMR 4 requires monitoring for 30 chemical contaminants between 2018 and 2020 using analytical methods developed by EPA and consensus organizations. This monitoring provides a basis for future regulatory actions to protect public health.

Palm Beach County Water Utilities Department has been monitoring for unregulated contaminants (UCs) as part of a study to help the US Environmental Protection Agency (EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. At present, no health standards (for example, maximum contaminant levels) have been established for UCs. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. If you would like more information on the EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.