

# 2022 WATER QUALITY REPORT



## **A LETTER TO OUR CUSTOMERS**

At Palm Beach County Water Utilities Department (PBCWUD), our top priority is providing you with clean, safe and dependable supply of drinking water. We are excited to announce that for another year, your drinking water meets and exceeds state and federal drinking water standards, with

## ZERO WATER QUALITY VIOLATIONS.

I am pleased to present to you the 2022 Annual Drinking Water Quality Report. This report is a snapshot of the water quality delivered to our residents last year and includes details about your water source, what it contains, and how it compares to standards set by regulatory agencies. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources.

You can also find more information regarding water quality on our website at pbcwater.com. If you have any questions about this report or concerning your water, please call (561) 740-4600 or visit **PBCWATER.COM.** 

Ali Bayat

Ali Bayat, P.E., PMP, PBCWUD Director

#### YOUR AWARD-WINNING UTILITY



#### PBCWUD Earns International Organization for Standardization (ISO) 55001 Certification

The ISO 55001 is an asset management system standard to which organizations manage the life-cycle of assets. **PBCWUD is the first water utility in North America to be certified.** In addition, PBCWUD is one of only seven organizations known in North America to be awarded this certification.

#### What is the impact of being a certified ISO 55001 utility?

By adopting ISO 55001, our customers can be assured that PBCWUD is focused on long-term asset planning and risk management. This means we are better equipped to anticipate and address potential issues. This proactive approach helps maintain the reliability of your water system with cost efficiency and peace of mind.



Sterling Manufacturing Business Excellence (SMBE) Award recognizes our commitment to performance excellence and model practices for other manufacturers to emulate.



FWEA Municipal Utility Operational Performance Excellence Award







Corporate Transformation Award

## **PBCWUD SERVICE AREA**

The Palm Beach County Water Utilities Department (PBCWUD) is the largest water utility provider in Palm Beach County and is comprised of two regions, eastern and western. To the east, PBCWUD serves residents and businesses in unincorporated Palm Beach County, as well as the Village of Royal Palm Beach, the City of Greenacres, and the Town of Haverhill. To the west, PBCWUD serves residents and businesses in the cities of Belle Glade, Pahokee, and South Bay. Visit **PBCWATER.COM** to find your provider.



## **YOUR WATER SUPPLY**

Palm Beach County Water Utilities Department (PBCWUD) sources ground water from the Biscayne and Floridan Aquifers.

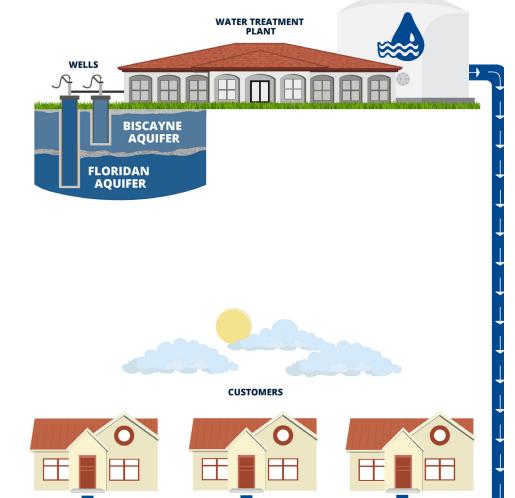
#### **EASTERN SYSTEM**

In the East, source water comes from the Biscayne Aquifer. This is a surficial or shallow-depth aquifer that enables water collection approximately 150 feet underground. PBCWUD pumps water from the most permeable layer of this aquifer to one of our four drinking water plants for treatment.

WESTERN SYSTEM

PBCWUD pumps water from the most permeable layer of this aquifer to our western drinking water plant for treatment.

In the West, source water comes from the Floridan Aquifer. This deeper aquifer enables collection between 1,000 - 1,200 feet underground.



## DID YOU KNOW?



+ 600,000 Residents served by PBCWUD



**60 MILLION** Gallons of drinking water distributed

per day



**60 MILLION** Gallons of water storage capacity in case of emergency



+ 2, 500 MILES

Drinking water pipelines maintained by PBCWUD

## **ZERO WATER QUALITY VIOLATIONS IN 2022**

## WATER TREATMENT PROCESSES

At PBCWUD, we continuously invest in the latest technology and treatment processes to ensure that we are always providing our customers with the highest quality water. It is part of this commitment that we have implemented three types of treatment processes. This includes lime softening and ion exchange, nanofiltration, and reverse osmosis.

The first step in the treatment process is sourcing the fresh raw water from the well fields into one of five water treatment plants for processing.



WELLS

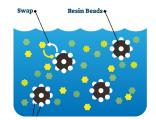
From there, the water undergoes one of the following, several distinct treatment processes designed for the specific water source.

#### LIME SOFTENING AND ION EXCHANGE TREATMENT PROCESSES



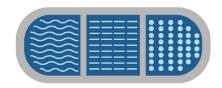
**Lime Softening** 

This process uses lime (Calcium hydroxide) to remove impurities and adjust pH levels, ensuring clean and balanced water.



Ion Exchange

This process uses a specialized resin to remove dissolved organic matter from the water. This process removes substances such as natural organic matter, color, and other impurities.

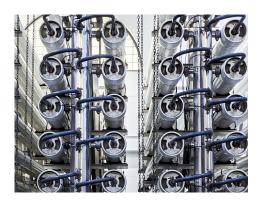


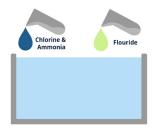
Filtration

Water is then filtered through fine layers of granulated material to remove any remnants.

#### NANOFILTRATION AND REVERSE OSMOSIS TREATMENT PROCESSES

This process is a highly effective water treatment that involves using a semi-permeable membrane to remove impurities from the water. These membranes can remove small impurities such as bacteria, viruses, and heavy metals, making it excellent for water treatment.





#### **DISINFECTION IS THE FINAL STEP OF ANY PROCESS**

In the western service area, Chlorine is added before the water leaves the plant. In the eastern service area, Chloramine (a combination of chlorine and ammonia) is added before the water leaves the plant. This is to ensure water quality throughout the distribution system. Fluoride is also added as a measure to improve public health levels, recommended by the American Dental Association and Florida Department of Environmental Protection.

#### The water is now ready to enter over 2,500 miles of utility service lines.

## **DELIVERING THE BEST WATER**

Once the water leaves the water treatment plant, it travels through a complex distribution system that includes water mains, valves, hydrants, pump stations, elevated and ground storage tanks, and more.

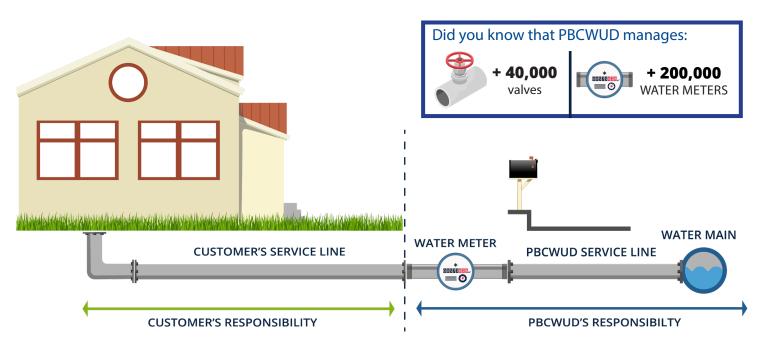
Our 2,500 miles of potable water main lines deliver safe, clean drinking water to customers throughout Palm Beach County.



#### **YOUR SERVICE LINE**

Water Storage Tank at Water Treatment Plant 3

Once drinking water leaves our water main and enters your service line, it is your responsibility.



#### **ENSURING THE BEST**

Many factors in your household plumbing can affect your water quality. Follow these simple tips to ensure the quality of the water that flows from the PBCWUD water main remain the same as it flows to your tap.



#### CLEAN FAUCET AERATORS

Regularly clean your faucet aerators screens located at the tip of your faucets.



#### REPLACE FILTER CARTRIDGES

If you use filters, make sure to routinely replace cartridges according to the manufacturer's instructions.



A water heater needs to be properly drained as part of its regular maintenance according to the manufacturer's instructions.

#### **BACKFLOW PREVENTION**

A backflow prevention assembly (BFP) is a mechanical valve arrangement designed to prevent the reverse flow of water. In accordance with the Florida Administrative Code 62-555.360 and the Safe Drinking Water Act, Palm Beach County Water Utilities has an established CrossConnection Control program. All backflow prevention assemblies are tested annually to ensure protection from cross-connections and backflow of contaminants into the distribution system.



## Assembly (BFP)

#### WHY IS BACKFLOW PREVENTION SO IMPORTANT?

The BFP aims to eliminate the potential of contaminated water entering the distribution system. PBCWUD requires non-residential and large meter customers to install and maintain testable backflow prevention assemblies to protect the drinking water distribution system.

#### **ABOUT LEAD & COPPER**

PBCWUD performs rigorous testing to verify that the water leaving the PBCWUD water treatment plants is in compliance with EPA Regulations, ensuring the safety and well-being of all consumers.

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. When lead is found in tap water, it can typically be traced to lead that is leaching from plumbing material. PBCWUD is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components.

#### SOURCES OF LEAD CAN INCLUDE:

**Older fixtures and valves:** Lead can be found in older fixtures and valves inside your home. It may also be found in old solder where pipes are joined together.

**Service lines:** This pipe connects a property's plumbing to the water main in the street. Maintaining or replacing the service line after the meter is the responsibility of the property owner.

#### **HOW WE MONITOR LEAD & COPPER**



Photo Credit: U.S. Environmental Protection Agency

PBCWUD takes our responsibility of providing safe water seriously and regularly monitors Lead and Copper levels according to EPA guidelines. The detailed results of these sampling events are public and sent to the Florida Department of Health.

#### WAYS TO REDUCE EXPOSURE

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.

## **SAFETY IS OUR PRIORITY**



Before you turn on the tap, PBCWUD has numerous safeguards to protect your drinking water. PBCWUD tests and monitors drinking water guality as it flows through the system, ensuring that our water meets all required Federal and State laws, rules, and regulations.

Preparing water quality control sample

Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1, 2022, to December 31, 2022.

Data obtained before January 1, 2023, and presented in this report, are from the most recent testing done in accordance with the laws, rules, and regulations. This report shows our water quality results and what they mean. As illustrated by this annual report, our system had **ZERO VIOLATIONS.** 

#### **CONTINUOUS MONITORING**



SCADA monitoring at Water Treatment Plant 9

computer known as Supervisory Control and Data Acquisition (SCADA). This system provides a comprehensive visualization of the water plant's instrumentation and equipment, ensuring prompt action and effective management at all times.



Collecting a field quality sample

PBCWUD's operations team comprises over 75 state-licensed water plant operators who diligently oversee the water supply system round the clock, every day of the year. These operators are constantly alerted to any fluctuations in water levels, pressure, flow, chlorine levels, pH, and other crucial parameters through a central

To ensure quality, every year our laboratory:



#### Collects 13,000 samples



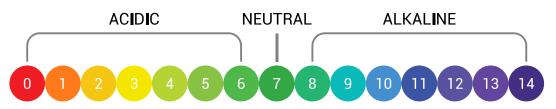
Tests for +100 contaminants



Analyzes +80,000 water quality tests

#### **BALANCING pH LEVELS**

Balancing pH levels is one way we minimize corrosion. Daily pH readings are taken with water quality samples using calibrated field multimeters. A pH level of 7 is the baseline for water. We target a pH level of 7.8 - 9 in the East and 7.8 - 8.5 in the West.



#### Water Quality Report 2022 | Consumer Confidence Report (CCR) 2022 9

## **SEMIANNUAL WATER SYSTEM MAINTENANCE**

To ensure water quality year-round, it is a common practice to implement a two-part maintenance process that includes treatment modification and pipeline flushing.

#### **1. TREATMENT MODIFICATION**

Twice a year, PBCWUD changes from using chloramine (a combination of chlorine and ammonia) to using only chlorine, cleaning the pipes to ensure optimum water quality throughout the year.

PBCWUD monitors drinking water to ensure the disinfectant levels are safe and consistent within our distribution system. Although chlorine is safe for consumption, it must be removed from water used for kidney dialysis and aquariums.

This process does not affect Belle Glade, Pahokee, and South Bay customers.

#### **2. PIPELINE FLUSHING**

During this same time treatment modification starts, you may notice PBCWUD out in your community conducting hydrant flushing. This is a common practice for many U.S water systems to bring freshly treated water to distant parts of the pipeline network. This process helps maintain healthy levels in all parts of the distribution network, which keeps the water safe to drink as it moves, sometimes miles from the treatment to your tap.

#### WILL I NOTICE A CHANGE IN MY WATER?

During the temporary switch, some customers may notice a stronger chlorine taste or smell in their drinking water. The taste and odor are not a health risk. Chlorine levels continue to meet EPA standards. If you notice a taste or smell, we recommend refrigerating tap water in an open pitcher. Within a few hours, the taste and odor will disappear.

#### WHAT IS A CONTAMINANT?

A contaminant is anything found in your water that is not a water molecule. Impacts depend on the substance and quantity. For example, E. coli is a very small organism that is harmless at low levels but makes people sick in large quantities. On the other hand, chlorine, which is used in the water treatment process as a disinfectant against bacteria like E. coli, is also an impurity, but is added at very safe levels to ensure high-quality drinking water makes it to your home.

#### **SPECIAL CONSIDERATIONS**

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. U.S. Environmental Protection Agency/Center for Disease Control 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).



## **UNDERSTANDING THE MEASUREMENTS**

Laboratory results are reported as "parts per million" (ppm) or "parts per billion (ppb)." Here's a visual representation of what that looks like:

# This is an Olympic-sized swimming pool. A pool of this size contains 660,000 gallons of water or 507 million teaspoons.

#### Example:

#### ppm (parts per million):



Means 1 part per 1,000,000 parts. This is the equivalent of two thirds of a gallon in an Olympic-sized swimming pool.

#### ppb (parts per billion):



Means 1 part per 1,000,000,000 parts. This is the equivalent of half a teaspoon in an Olympic-sized swimming pool.

## **TERMS & ABBREVIATIONS**

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.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the 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.

#### N/A: Not Applicable

ND: Not Detected - indicates that the substance was not found by laboratory analysis.

MCL (Maximum Contaminant Level): The highest level of 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.

Picocurie per liter (pCi/L): The measure of the radioactivity in water.

Trihalomethanes (TTHM): Compounds formed during chloramination (disinfection) of drinking water. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system

Haloacetic Acids (HAA5): The five haloacetic acid species regulated by EPA

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

#### **SOURCE WATER ASSESSMENT**

In order to ensure that your drinking water is safe, not just at the tap, but at its source, the Florida Department of Environmental Protection (FDEP) conducts potential contamination studies of all source water. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of the wells that provide source water to our water treatment plants. The contaminant susceptibility levels only describe potential contamination due to nearby activity and are not based on monitoring data.

The 2022 assessment identified 125 potential sources of contamination in eastern region and 5 potential sources of contamination in our western region in the vicinity of our system, with susceptibility levels ranging from low to moderate. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at https://prodapps.dep.state.fl.us/swapp/.

#### HOW DO CONTAMINANTS GET INTO SOURCE WATER?

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 byproducts 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.

To ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (FDA) 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

#### WHAT DO THESE TABLES EXPLAIN?

The first table shows substances that the EPA requires our utility to report. To determine how our water compares to the federal regulation, compare the column that shows the level allowed by EPA (MCLs) to the column that shows the highest level detected at our utility during the year 2022.

The State of Florida allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

				Inorgan	ic Contar	ninants	
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL Violation Y/N	Level Detected <sup>(1)</sup>	Range of Results <sup>(1)</sup>	MCLG	MCL	Likely Source of Contamination
Barium (ppm)	5/20	N	0.0073	0.00396 I - 0.0073	2 ppm	2 ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	5/20	N	0.927	0.129 - 0.927	4 ppm	4.0 ppm	Erosion of natural deposits: discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when a the optimum level of 0.7 ppm
Lead (point of entry) (ppb)	5/20	N	1.72	ND - 1.72 I	0 ppb	15 ppb	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder
Nitrate, as Nitrogen (ppm)	6/22	N	0.048	ND - 0.048	10 ppm	10 ppm	Runoff from fertilizer use; leaching from septi tanks, sewage; erosion of natural deposits
Sodium (ppm)	5/20	N	54.5	15.7 - 54.5	N/A	160 ppm	Salt water intrusion, leaching from soil
				Radioact	ive Conta	minants	
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL Violation Y/N	Level Detected <sup>(2)</sup>	Range of Results <sup>(2)</sup>	MCLG	MCL	Likely Source of Contamination
Radium 228 (pCi/L)	5/20	N	1.08 ± 0.562	ND - 1.08 ± 0.562	0 pCi/L	5 pCi/L	Erosion of natural deposits
			Stage 1	Disinfectants	and Disi	nfection By-Products	
Disinfectant or	Dates of	MRDL	Level	Range of	MRDLG	MRDL	Likely Source of Contamination
Contaminant and Unit of Measurement	Sampling (mo/yr)	Violation Y/N	Detected <sup>(3)</sup>	Results <sup>(3)</sup>			
Chlorine and Chloramines (ppm)	1/22 to 12/22	N	3.25	0.2-4.3(4)	4 ppm	4 ppm	Water additive used to control microbes
			Stage 2	Disinfectants	and Disi	nfection By-Products	
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL Violation Y/N	Level Detected <sup>(5)</sup>	Range of Results <sup>(5)</sup>	MCLG	MCL	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	2/22, 5/22, 8/22, 11/22	N	32.2	5.7-36.7	N/A	60 ppb	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	2/22, 5/22, 8/22, 11/22	N	46.5	13.1-52.3	N/A	80 ppb	By-product of drinking water disinfection
	,			Lead & C	opper (Ta	p Water)	
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	AL Exceeded Y/N	90 <sup>th</sup> Percentile Result	No. of Sampling Sites Exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	12/20	N	0.279	0	1.3 ppm	1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	12/20	N	1.95 I	1	0 ppb	15 ppb	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
				Microbiolo	gical Con	taminants	· · · · ·
Contaminant	Dates of Sampling (mo/yr)	MCL Violation Y/N	Total Number of Positive Samples for the Year <sup>(6)</sup>		MCLG	MCL	Likely Source of Contamination
E. coli	1/22 to 12/22	N	1		0	Routine and repeat samples are total coliform positive and either is E. coli positive or system fails to take repeat samples following E. coli positive routine sample or system fails to analyze total coliform positive repeat sample for E. coli	Human and animal fecal waste

Qualifier Codes I = Between lab detection limit and lab practical quantitation limit

Notes: <sup>22</sup> Results in the Level Detected column for radioactive contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the

(a) Results in the Level Detected column for radioactive contaminants are the nignest average at any or the sampling points or the nignest detected for the tag being b

## WESTERN WATER QUALITY DATA REPORT FOR 2022

of Measurement (moy)*     Violation (moy)*     Detected**     Results**     Measurement (moy)*     Product of path and algoing and and algoing the path and the	Contaminant and Unit	Datas of	MCI	Louis	Domas of	March	MC	Likoly Source of Contaminant
ControlControlControlControlPersonant of matural depointsFluoride (ppm)8/20N0.4280.4284 ppm4.0 ppmSection of matural depointsSodium (ppm)8/20N60.560.5N/A160 ppmSetting of matural depointsSodium (ppm)8/20N60.560.5N/A160 ppmSetting of matural depointsSodium (ppm)8/20N60.560.5N/A160 ppmSetting of matural depointsContaminant and UnitSates of Matural depointsSetting of matural depointsSetting of matural depointsRadium 228 (pC/A)N1.00 ± 0.4781.00 ± 0.478O pC/A5 pC/AErosion of natural depointsRadium 228 (pC/A)Sotes of Matural depointsSetting of Matural depointsSetting of matural depointsSetting of matural depointsRadium 228 (pC/A)Sotes of Matural depointsSetting of Matural depointsSetting of Matural depointsSetting of Matural depointsRadium 228 (pC/A)Sotes of Matural depointsSetting of Matural depointsSetting of Matural depointsSetting of Matural depointsRadium 228 (pC/A)Sotes of Matural depointsSetting of Matural depointsSetting of Matural depointsRadium 228 (pC/A)Sotes of Matural depointsSetting of Matural depointsSetting of Matural depointsRadium 228 (pC/A)Sotes of Matural depointsSetting of Matural depointsSetting of Matural depointsRadium 228 (pC/A)Sotes of Matural depointsSetting of Matural depoints <th>Contaminant and Unit of Measurement</th> <th></th> <th>MCL Violation Y/N</th> <th>Level Detected<sup>(1)</sup></th> <th>Range of Results<sup>(1)</sup></th> <th>MCLG</th> <th>MCL</th> <th>Likely Source of Contamination</th>	Contaminant and Unit of Measurement		MCL Violation Y/N	Level Detected <sup>(1)</sup>	Range of Results <sup>(1)</sup>	MCLG	MCL	Likely Source of Contamination
And the set of th	Chromium (ppb)	8/20	N	2.78 l, J	2.78 I, J	100 ppb	100 ppb	Discharge from steel and pulp mill erosion of natural deposits
Contaminant and Unit Measurement     Dates of Measurement     MRCL Signature Contaminants     Likely Source of Contaminants       Sadium 228 (pc/L)     8/20     N     1.00 ± 0.478     0 pc/L     5 pc/L     Erosion of natural deposits       Sadium 228 (pc/L)     8/20     N     1.00 ± 0.478     0 pc/L     5 pc/L     Erosion of natural deposits       Sadium 228 (pc/L)     8/20     N     1.00 ± 0.478     0 pc/L     5 pc/L     Erosion of natural deposits       Sadium 228 (pc/L)     8/20     N     1.00 ± 0.478     0 pc/L     S pc/L     Erosion of natural deposits       Sadium 228 (pc/L)     8/20     N     1.00 ± 0.478     0 pc/L     S pc/L     Erosion of natural deposits       Sadium 228 (pc/L)     8/20     N     2.39     1.0 - 4.00 (4)     4 ppm     4 ppm     Water additive used to controm microbes       Chortaminant and Unit     Sates of Measurement     Sates of Measurement     Range of Results <sup>18</sup> MCL6     MCL6     Likely Source of Contaminant and Unit       Jatacetted Acking Sates of Measurement     Sates of Measurement     Sates of Measurement     Elsected <sup>18</sup> Results <sup>18</sup> MCL6 <t< td=""><td>Fluoride (ppm)</td><td>8/20</td><td>N</td><td>0.428</td><td>0.428</td><td>4 ppm</td><td>4.0 ppm</td><td>Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additiv which promotes strong teeth whe at the optimum level of 0.7 ppm</td></t<>	Fluoride (ppm)	8/20	N	0.428	0.428	4 ppm	4.0 ppm	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additiv which promotes strong teeth whe at the optimum level of 0.7 ppm
Contaminant and Unit Of Measurement     Dates of Sampling     WCL V(N)     Level Detected <sup>10</sup> Range of Results <sup>10</sup> MCL6     MCL     Likely Source of Contaminati Spring       Radium 228 (pc/L)     8/20     N     1.00 ± 0.478     0 pc/L     5 pc/L     Erosion of natural deposits       Stage 1 Disinfectants and Disinfection By-Products       Disinfectant or Contaminant and Unit 12/22     Dates of NRDL     Likely Source of Contaminati Results <sup>10</sup> MRDL 4 ppm     Likely Source of Contaminati MRDL     Likely Source of Contaminati NRDL     Likely Source of Contaminati Likely Source of Contaminati NRDL     Likely Source of Contaminati NRDL     Likely Source of Contaminati NRDL       Chlorine (ppm)     172.20     N     2.39     1.0 - 4.00 (4)     4 ppm     4 ppm     4 ppm     MRDL     Likely Source of Contaminati MICC     MICC     Likely Source of Contaminati MICC     Corros	Sodium (ppm)	8/20	N	60.5	60.5	N/A	160 ppm	Salt water intrusion, leaching fron soil
of Measurement (molyn)Sampling (vi)Violation (vi)Detected <sup>in</sup> Results <sup>in</sup> Image: Control of Co					Radioa	ctive Cont	aminants	
Stage 1 Disinfectants and Disinfection By-Products       Disinfectant or Contaminant and Unit Measurement     Dates of Sampling (moyr)     MRDL Violation VIO     Range of Results <sup>th</sup> MRDLG     MRDL     Likely Source of Contaminati       Chlorine (ppm)     1/2/22     N     2.39     1.0 - 4.00 (4)     4 ppm     4 ppm     Water additive used to contraminati       Stage 2 Disinfectants and Disinfection By-Products       Contaminant and Unit Measurement     Dates of MCL     Likely Source of Contaminati       Jampling (moyr)     Water additive used to contraminetic products       Value of Masurement       Jampling (moyr)     Violation (NA)     Level Detected <sup>40</sup> Range of Results <sup>40</sup> MCLG     MCL     Likely Source of Contaminati       Jalacetic Actids (HAAS)     8/22     N     5.50     0.90 - 2.2     N/A     60 ppb     By-product of drinking water disinfection       Level & Copper (Tap Water)       Lead & Copper (Tap Water)       Contaminati ad Unit Measurement     Dates of Sampling (moyr)     AL     90°     Percentile Result     Sampling Sites Results <sup>2</sup> AL (Action Level)     Likely Source of Contamina		Sampling	Violation		Range of Results <sup>(2)</sup>	MCLG	MCL	Likely Source of Contamination
Disinfectant or Gritaminant and Unit Measurement     Dates of Sampling (T)     MRDL Violation 12/22     MRDL Detected <sup>10</sup> Range of Results <sup>10</sup> MRDLG     MRDL     Likely Source of Contaminati MRDL       Chlorine (ppm)     1/22 to 12/22     N     2.39     1.0 - 4.00 (4)     4 ppm     4 ppm     Water additive used to contromin microbes       Chlorine (ppm)     1/22 to 12/22     N     2.39     1.0 - 4.00 (4)     4 ppm     4 ppm     Water additive used to contromin microbes       Contaminant and Unit (molyy)     Dates of (molyy)     MCLL Violation     Level Detected <sup>10</sup> Range of Results <sup>10</sup> MCLG     MCL MCLG     Likely Source of Contaminati Microbes       Haloacetic Acids (HAA5)     8/22     N     5.50     0.90 - 2.2     N/A     60 ppb     By-product of drinking water disinfection       Total Trihalomethanes of Measurement     Dates of Sampling (molyr)     EXCL VIN     Porcentile Result VIN     So. of Sampling Sites Exceeded     MCLG     AL (Action Level)     Likely Source of Contaminati disinfection       Copper (tap water) (ppm)     11/20     N     0.0566     0     1.3 ppm     1.3 ppm     Corresion of household plumb systerms, erosion of natural depo- leaching from wood pres	Radium 228 (pCi/L)	8/20	N	1.00 ± 0.478	1.00 ± 0.478	0 pCi/L	5 pCi/L	Erosion of natural deposits
Contaminant and Unit Measurement (mo/yr)Sampling (mo/yr)Violation NDetected® NResults®AA <th< td=""><td></td><td></td><td></td><td>Stage</td><td>1 Disinfectan</td><td>ts and Dis</td><td>infection By-Products</td><td></td></th<>				Stage	1 Disinfectan	ts and Dis	infection By-Products	
Art   Art   Art   Mathematical and an antipart of the second and antipart of the second antite second antipart of the second antite secon	Contaminant and Unit	Sampling	Violation	Level Detected <sup>(3)</sup>	Range of Results <sup>(3)</sup>	MRDLG	MRDL	Likely Source of Contamination
Contaminant and Unit of Measurement     Dates of (mo/yr)     MCL V/N     Level Detected <sup>(w)</sup> Range of Results <sup>(w)</sup> MCLG     MCL     Likely Source of Contamination (mo/yr)       Haloacetic Acids (HAA5)     8/22     N     5.50     0.90 - 2.2     N/A     60 ppb     By-product of drinking water disinfection       Total Trihalomethanes     8/22     N     27.0     4.3 - 27.0     N/A     80 ppb     By-product of drinking water disinfection       Total Trihalomethanes     8/22     N     27.0     4.3 - 0.0     N/A     80 ppb     By-product of drinking water disinfection       Contaminant and Unit (Ppb)     Dates of (mo/yr)     Exceeded V/N     Percentile Result     Samping Sites Exceeding the AL     MCLG     AL (Action Level)     Likely Source of Contamination disinfection       Copper (tap water) (ppm)     11/20     N     0.0566     0     1.3 ppm     1.3 ppm     Corrosion of household plumb systems; erosion of natural dep leaching from wood preservait       Lead (tap water) (ppb)     11/20     N     ND     0     0 ppb     15 ppb     Corrosion of household plumb systems; erosion of natural dep leaching from wood preservait       Contaminant     D	Chlorine (ppm)		N	2.39	1.0 - 4.00 (4)	4 ppm	4 ppm	Water additive used to control microbes
Contaminant and Unit of MeasurementDates of (modyr)MCL Detected <sup>(10)</sup> Range of Results <sup>150</sup> MCLGMCLLikely Source of ContaminatiHaloacetic Acids (HAA5)8/22N5.500.90 - 2.2N/A60 ppbBy-product of drinking water disinfectionTotal Trihalomethanes8/22N27.04.3 - 27.0N/A80 ppbBy-product of drinking water disinfectionLead & Copper (Tap Water)Contaminant and Unit of MeasurementDates of (mo/yr)AL Exceeded (mo/yr)Sono. of ResultSampling Sites Exceeding the ALMCLGAL (Action Level)Likely Source of Contaminati disinfectionCopper (tap water) (ppm)11/20N0.056601.3 ppm1.3 ppmCorrosion of household plumb systems; erosion of natural depc leaching from wood preservatiLead (tap water) (ppb)11/20NND00 ppb15 ppbCorrosion of household plumb systems; erosion of natural depc leaching from wood preservatiContaminantDates of (mo/yr)MCLTotal Number of Positive Samples for the Year''MCLGMCLLikely Source of Contaminati depc leaching from wood preservatiContaminant1/22 to 12/22N10Routine and repeat samples are total coliform positive and ether is E. coli positive or system folls to tak repeat samples following E. coliHuman and animal fecal wast				Stage	2 Disinfectan	ts and Dis	infection By-Products	
(ppb)     Image: Constraint of the second s		Sampling	Violation	Level	Range of			Likely Source of Contaminatior
Image: Contaminant and Unit Oppin   Dates of Sampling (mo/yr)   AL A L Actor Sampling Stees (mo/yr)   MCL Sampling Stees (mo/yr)		8/22	N	5.50	0.90 - 2.2	N/A	60 ppb	By-product of drinking water disinfection
Contaminant and Unit of Measurement     Dates of Sampling (mo/yr)     AL Exceeded Y/N     90 <sup>th</sup> Percentile Result     No. of Sampling Sites Exceeding the AL     MCLG     AL (Action Level)     Likely Source of Contamination (model plumb)       Copper (tap water) (ppm)     11/20     N     0.0566     0     1.3 ppm     1.3 ppm     Corrosion of household plumb) systems; erosion of natural depo- leaching from wood preservation       Lead (tap water) (ppb)     11/20     N     ND     0     0 ppb     15 ppb     Corrosion of household plumb) systems; erosion of natural depo- leaching from wood preservation       Lead (tap water) (ppb)     11/20     N     ND     0     0 ppb     15 ppb     Corrosion of household plumb) systems; erosion of natural depo- leaching from wood preservation       Lead (tap water) (ppb)     11/20     N     ND     0     MCLG     MCL     Corrosion of household plumb) systems; erosion of natural depo- leaching from wood preservation       Lead (tap water) (ppb)     11/20     N     ND     0     Recutine and repeat samples are total coliform positive and either is E. coli positive or system fails to take repeat samples for total coliform positive and either is E. coli positive or system fails to take repeat samples following E. coli     Human and animal fecal wast		8/22	N	27.0	4.3 - 27.0	N/A	80 ppb	By-product of drinking water disinfection
Contaminant and Unit of Measurement     Dates of Sampling (mo/yr)     AL Exceeded Y/N     90 <sup>th</sup> Percentile Result     No. of Sampling Sites Exceeding the AL     MCLG     AL (Action Level)     Likely Source of Contamination (not yr)       Copper (tap water) (ppm)     11/20     N     0.0566     0     1.3 ppm     1.3 ppm     Corrosion of household plumb systems; erosion of natural depo- leaching from wood preservation (action percentation action of postive)       Lead (tap water) (ppb)     11/20     N     ND     0     0 ppb     15 ppb     Corrosion of household plumb systems; erosion of natural depo- leaching from wood preservation (mod yr)       Lead (tap water) (ppb)     11/20     N     ND     0     0 ppb     15 ppb     Corrosion of household plumb systems; erosion of natural depo- leaching from wood preservation (mod yr)       Contaminant     Dates of Sampling (mo/yr)     MCL Violation Y/N     Total Number of Positive Samples for the Year'?     MCLG     MCL MCL     Likely Source of Contamination (mod yr)       E. coli     1/22 to 12/22     N     1     0     Routine and repeat samples are total coliform positive are deither is E. coli positive or system fails to take repeat samples for the year is the positive or system fails to take repeat samples for the year is the positive or system fails to take repeat samples following E. coli					Lead &	Copper (T	ap Water)	
(ppm) Image: Second S		Sampling	Exceeded	Percentile	No. of Sampling Sites Exceeding			Likely Source of Contamination
Microbiological Contaminant Dates of Sampling (mo/yr) MCL Violation Y/N Total Number of Positive Samples for the Year <sup>(7)</sup> MCLG MCL Likely Source of Contamination   E. coli 1/22 to 12/22 N 1 0 Routine and repeat samples are total coliform positive and either is E. coli Human and animal fecal wast		11/20	N	0.0566	0	1.3 ppm	1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposit leaching from wood preservatives
Contaminant     Dates of Sampling (mo/yr)     MCL Violation Y/N     Total Number of Positive Samples for the Year <sup>(7)</sup> MCLG     MCLG     MCL     Likely Source of Contamination       E. coli     1/22 to 12/22     N     1     0     Routine and repeat samples are total coliform positive and either is E. coli positive or system fails to take repeat samples following E. coli     Human and animal fecal wast	Lead (tap water) (ppb)	11/20	N	ND	0	0 ppb	15 ppb	Corrosion of household plumbing systems; erosion of natural deposi leaching from wood preservatives
Sampling (mo/yr)     Violation Y/N     Samples for the Year <sup>(7)</sup> Routine and repeat samples are total coliform positive and either is E. coli positive or system fails to take repeat samples following E. coli     Human and animal fecal wast					Microbio	logical Co	ntaminants	
12/22 positive and either is E. coli positive or system fails to take repeat samples following E. coli	Contaminant	Sampling	Violation			MCLG	MCL	Likely Source of Contamination
total coliform positive repeat sample or E. coli	E. coli		Ν	1		0	positive and either is E. coli positive or system fails to take repeat samples following E. coli positive routine sample or system fails to analyze	Human and animal fecal waste

patnway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments. <sup>(9)</sup>During the past year, one Level 1 Assessment was required to be completed for our water system. One Level 1 assessment was completed. In addition, we were required to take two corrective actions and we completed two of these actions. <sup>(10)</sup>During the past year, one Level 2 Assessment was required to be completed for our water system. One Level 2 assessment was completed. In addition, we were required to take zero corrective actions and we completed zero of these actions.

## Keep track of your water use, anytime, anywhere

## MEW MyAMI Account

My Advanced Meter Infrastructure (myAMI) Account is designed as a free resource for account holders to easily access, monitor, and manage water use.

## **MORE CONTROL WITH REPORTS**

Dig into the data to pinpoint when you are using water with easy to understand reports and insights.

## **MANAGE SMART ALERTS**

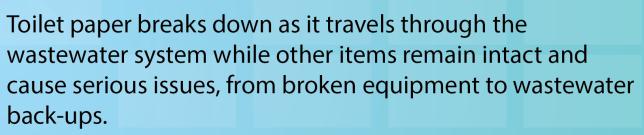
Set email or text alerts for multiple users. Get peace of mind whether you're at home or away with myAMI alerts.

## **SAVE MONEY**

See how small changes can save big on your bill over time. Don't flush these savings, have control over your water usage with myAMI.

> Don't wait. Sign up today at: pbcwater.com/myAMI

# **MEET THE UNFLUSHABLES**



UTILITIES DEP



## **CUSTOMER RESOURCES**



#### **Emergencies**

- Report an urgent concern, such as a water outage, discolored water, or hydrant leaks: (561) 740-4600, option #1
- Sign up to receive emergency alerts: alertPBC.com



#### **Customer Billing**

- Manage your account: <u>pbcwater.com/PayBill</u>
- Speak with a customer service representative, Monday Friday, 8am 5pm: (561) 740-4600, option #4
- Learn about the several convenient ways for customers to pay their bill: pbcwater.com/paybill



#### **myAMI**

- Monitor your hourly, daily, and weekly water usage: <u>pbcwater.com/myAMI</u>
- Speak with a customer service representative to help you set up your account, Monday Friday, 8am 5pm: (561) 740-4600, option #4



#### **Water Conservation**

Explore tips to help you save water and money on your next water bill: pbcwater.com



#### Stay Informed

- We want our customers to be informed, find our important notices at *pbcwater.com*
- Follow us on social media:

## 

## **ABOUT THIS REPORT**

This report contains important information about your water quality. We are pleased to report that Palm Beach County meets or exceeds state and federal requirements. If you have any questions about the information in this report, call us at (561) 740-4600 for assistance.

#### To view this report online visit *pbcwater.com/waterquality*.

Please share this report with those who may not have received this notice directly (for example, people in apartments, nursing homes, and businesses). You can do this by posting this notice in a public place or distributing copies by hand and mail. To receive a printed copy of this report, please call (561) 740-4600.