

Palm Beach County Water Utilities Department Annual Water Quality Report

Water delivered during 2017 - Cities of Belle Glade, Pahokee and South Bay



Dear Customers,

We're pleased to present to you this year's Annual Water Quality Report for water delivered in 2017. This report is designed to inform you about the quality of your drinking water and the services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

If you have any questions about this report or concerning your water utility, please contact our Customer Service Center at 561-740-4600. Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien, 561-355-2754.

We encourage our valued customers to be informed about their water utility. We encourage you to attend a Palm Beach County Commission meeting usually scheduled on Tuesday mornings throughout the year at the Governmental Center located in downtown West Palm Beach.

Where do we get our drinking water?

The Palm Beach County Water Utilities Department gets your drinking water from wells extending approximately 1,400 feet underground into the Floridan Aquifer. This well water is pumped under high pressure through a low-pressure reverse osmosis system that desalinates and purifies the water. The water is further treated by degasification and disinfection prior to entering the distribution system. The result is excellent quality drinking water.

Water Treatment Plant #11, which serves the Cities of Belle Glade, Pahokee and South Bay, has the capacity to produce 10 million gallons of drinking water per day for our customers.

Backflow Prevention

In accordance with the Florida Administrative Code 62-555.360 and the Safe Drinking Water Act, the Palm Beach County Water Utilities has an established Cross-Connection Control program. All backflow prevention assemblies are tested annually to ensure protection from cross-connections and backflow of contaminants into the distribution system.

How safe is our tap water?

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

Special Health Considerations

Some people are more vulnerable to contaminants in drinking water than the general population. People undergoing chemotherapy, 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/Center for Disease Control (CDC) guidelines to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

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 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.

Water Conservation Tips

Use water at home more efficiently.

Outside...

- ◆ Get a rain sensor for your sprinkler system.
- ◆ Water your lawn less often.
- ◆ Check your sprinkler heads.

In the Kitchen...

- ◆ Don't leave the water running while you wash dishes.
- ◆ Make sure dishwasher loads are full.
- ◆ Install a low-flow faucet tap.

In the Bathroom...

- ◆ Fix leaky toilets.
- ◆ Check faucets and pipes for leaks.
- ◆ Don't use the toilet as a wastebasket.
- ◆ Take shorter showers
- ◆ Install water-saving showerheads.

Lead in Public Drinking Water

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.

Palm Beach County Water 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 by an independent testing lab. 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>.

What is that pink stuff?

Water utilities throughout the country have received questions about a mysterious pink film on plumbing fixtures. The main culprit is a naturally occurring airborne bacteria called *Serratia Marcescens*, which produces a pink or orange residue.

***Serratia Marcescens* does not come from your drinking water.** Its origin is usually soil or dust, and the bacteria is attracted to moist surfaces.

The good news is that a common household cleaner, chlorine bleach, helps to curtail the onset of the bacteria. The best solution to keep these surfaces free from the bacterial film is continual cleaning and keeping them dry. A chlorinous compound is best, but use care with abrasives to avoid scratching the fixtures, which will make them even more susceptible to bacteria.

Cleaning and flushing your taps will not necessarily eliminate the problem, but it will help to control it. In addition to being unsightly, *Serratia Marcescens* has been linked in rare cases to urinary tract infections, wound infections and pneumonia. For more information, call us at 561-493-6000.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien, 561-355-2754.

Water Quality Testing Results

Palm Beach County Water Utilities Department routinely monitors for contaminants in your drinking water according to Federal and State laws, rules, and regulations. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1, 2017, to December 31, 2017. Data obtained before January 1, 2017, and presented in this report, are from the most recent testing done in accordance with the laws, rules, and regulations. As illustrated by this annual report, our system had **NO VIOLATIONS**. We're proud that your drinking water meets or exceeds all Federal and State requirements.

What do these tables explain?

The first table shows substances that the EPA requires our utility to report, even though we are not in violation of their standard. 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 2017.

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.

Source Water Assessment & Protection Program

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 is not based on monitoring data.

The 2017 assessment identified 1 potential source of contamination for our system with a susceptibility level of low. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

Table Definitions

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

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 any E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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 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.

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

Parts per billion (ppb) or Micrograms per liter (µg/l): one part by weight of analyte to 1 billion parts by weight of the water sample.

Parts per million (ppm) or Milligrams per liter (mg/l): one part by weight of analyte to 1 million parts by weight of the water sample.

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
Fluoride (ppm)	8/17	N	0.392	0.392	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
Sodium (ppm)	8/17	N	81.2	81.2	160 ppm	160 ppm	Salt water intrusion, leaching from soil
Stage 1 Disinfectants and Disinfection By-Products							
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MRDL Violation Y/N	Level Detected	Range of Results	MRDLG	MRDL	Likely Source of Cpontamination
Chlorine and Chloramines (ppm)	1/17 to 11/17	N	2.43*	0.05 - 4.60 ⁽¹⁾	4 ppm	4 ppm	Water additive used to control microbes
Chlorine (ppm)	5/17 to 12/17	N	2.70**	0.01 - 4.00 ⁽²⁾	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⁽³⁾	Range of Results^{***}	MCLG	MCL	Likely Source of Contamination
Total Trihalomethanes (TTHM) (ppb)	8/17, 11/17	N		1.0 - 93.6	80 ppb	80 ppb	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	8/17, 11/17	N		0.48 - 12.2	60 ppb	60 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
Lead at the Tap	8/17	N	2.71 ppb	0	15 ppb	15 ppb	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Copper at the Tap	8/17	N	0.0794 ppm	0	1.3 ppm	1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Qualifier Codes

U = Undetected
I = Between lab detection limit and lab practical quantitation limit
J = Estimated Value

Notes:

⁽¹⁾The highest level detected for chlorine and chloramines represents 1 out of 1499 samples.

*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. Compliance for Total Chlorine (Chlorine and Chloramines) ended in November 2017. As a result, fourth quarter results are the average of 11 months of data. The "Range of Results" is the range of results of all the individual samples collected from January 2017 to November 2017.

⁽²⁾The highest level detected for chlorine represents 1 out of 471 samples.

**The results in the column indicating "Highest Level Detected" for Chlorine are the mean of monthly averages from May 2017 to December 2017 of all samples collected. PBCWUD switched from Total Chlorine to Free Chlorine (Chlorine) in May 2017. Compliance for Free Chlorine began in December 2017. The "Range of Results" is the range of results of all the individual samples collected from May 2017 to December 2017.

⁽³⁾Systems that had only annual or triennial results and then quarterly results because the annual or triennial results were above the MCL must leave the level detected column blank and report the range of results (annual or triennial plus any subsequent quarterly sampling in 2017) in the range column.

One sample during 2017 (14032 US HWY 441 North, Canal Point) had a TTHM result of 93.6 ppb, which exceeds the MCL of 80 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 trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

***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.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway 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 or 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.

During the past year, two Level 2 assessments were required to be completed for our water system. Two Level 2 assessments were completed. In addition, we were required to take three corrective actions and we completed three of these actions.