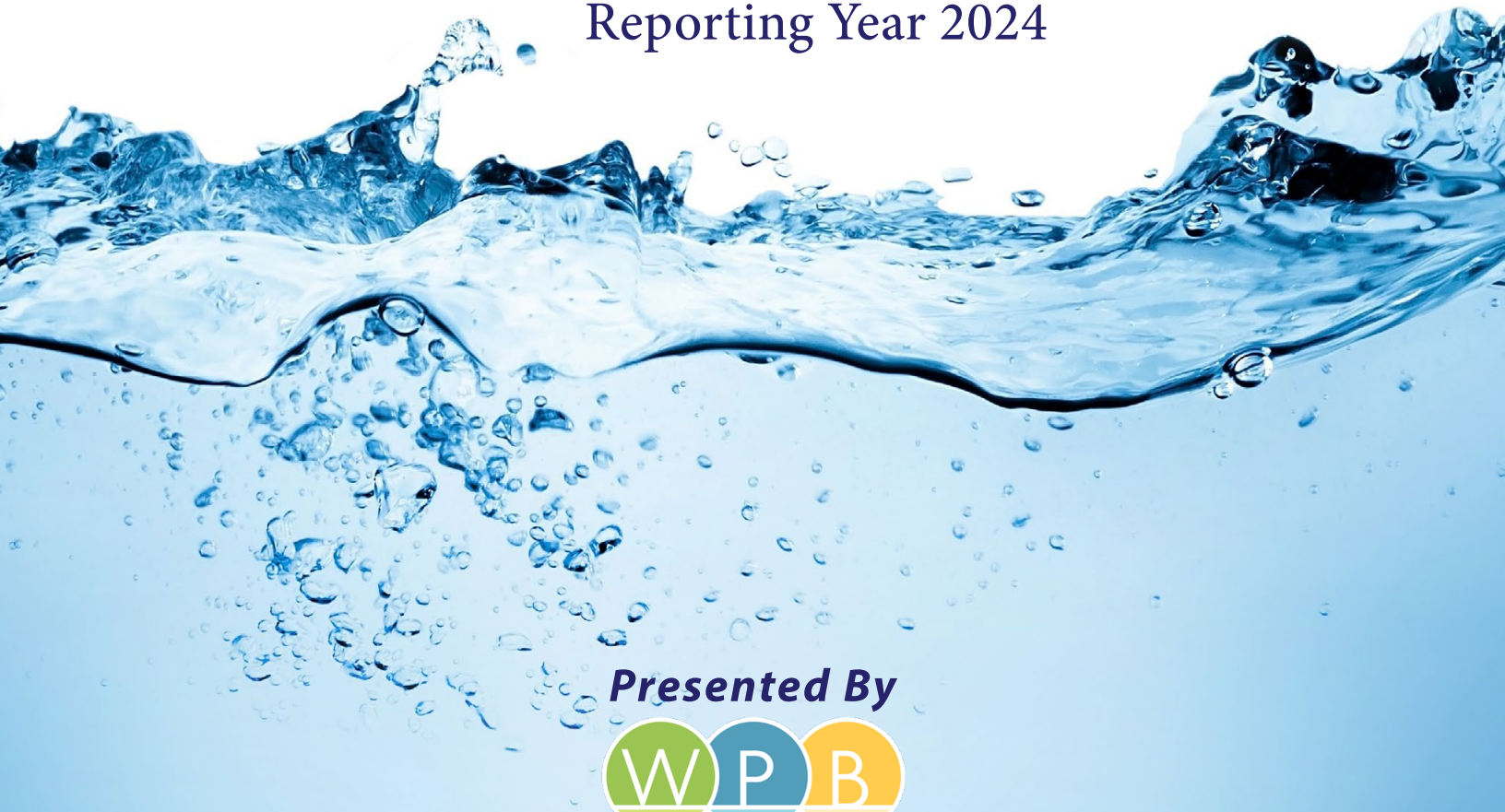
ANNUAL WATER QUALITY REPORT

Reporting Year 2024



Presented By

WEST PALM BEACH

Published June 2025

(561) 822-2222
(TTY: 800 955-8771)

2024 Informe Anual
DE CALIDAD DEL AGUA POTABLE

Visite nuestro sitio web en:
wpb.org/WaterReport

Public Water System ID#: 4501559

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

Introduction

We are privileged to present our annual water quality report for 2024. The report contains essential information about the quality of your drinking water. I am pleased to say that the City of West Palm Beach Water Department has met all requirements to protect your water quality from its source to your tap.

This Consumer Confidence Report (CCR) includes information on source water, treatment processes, detected contaminants, and what it means. The U.S. Environmental Protection Agency (U.S. EPA) requires an annual CCR from every U.S. community water supplier.

Consumers can obtain more information on this CCR from epa.gov/ccr or by calling the Safe Drinking Water Hotline at (800) 426-4791 (TTY: 202-272-0165).

In 2024, both source and finished drinking water were monitored biweekly during algae season for the presence of algal toxins and reported on the city's website for public viewing.

The City of West Palm Beach is committed to providing a clean, safe, and stable water supply. Our water treatment professionals use state-of-the-art disinfection systems to ensure high-quality drinking water for our customers. I invite you to read the following pages carefully to learn more about the source-to-tap water treatment process.

Yours in service,

Keith A. James

Mayor, City of West Palm Beach

Downtown West Palm Beach

Public Utilities Mission Statement

The City of West Palm Beach Public Utilities Department strives to provide efficient, reliable and economical water, wastewater and storm water services. Protecting our water resources and preventing pollution is an important part of this mission.

Source Water Assessment

In 2024 the Florida Department of Environmental Protection (FDEP) performed a source water assessment of our system. The purpose of the assessment was to provide information on any potential sources of contamination in the vicinity of our wells and source water intake. Source water investigation by the FDEP indicated no potential sources of contamination within the assessment area for our system. As a result, the water system intake is considered to have a low concern level. The assessment results are available on the FDEP Source Water Assessment and Program Protection website at prodapps.dep.state.fl.us/swapp under PWS 4501559.

Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people: "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call the laboratory manager at (561) 822-2269 or visit https://www.wpb.org/Departments/Public-Utilities/Protecting-Water-Quality-Source-to-Tap.

Journey of Our Water

When you turn on your faucets or flush your toilet, do you ever wonder where the water comes from? In the City of West Palm Beach, Palm Beach, and South Palm Beach, your water's journey begins as rain falls into Grassy Waters Preserve.

Following gravity, the water flows along the M-canal 16 miles downtown to Lake Mangonia and Clear Lake. Once there, your water is finally pumped into the water plant to be treated and sanitized to eliminate pathogens before reaching your taps.

Ten percent of all Florida cities use surface water for consumption.

Henry Flagler initially purchased and designed the water system for West Palm Beach in the early 1900s. In the 1950s, the City acquired the water treatment plant, lakes, and Grassy Waters Preserve from his company.

Today, the Department of Public Utilities maintain and improve the original water system to serve over 130,000 citizens with clean, reliable, and economical drinking water.

The City occasionally draws additional water from Lake Okeechobee to supplement its supply. The City has also designed and implemented several innovative and cost-effective projects to increase its water conservation efforts and provide alternative water sources in times of drought. Efforts include the Renaissance Storm Water Project, aquifer storage and recovery, the C-17 Canal pump station, and wellfield management.

The City acquired approximately 375,978 million gallons of finished drinking water from the Palm Beach County public water system (ID 4504393) in 2024.

Community Participation

If you wish to learn more or participate, our biweekly city commission meetings are held on Mondays at 5:00 p.m. at 401 Clematis Street.

Freshwater enters Grassy Waters Preserve exclusively through rainfall. The Preserve can provide approximately 25 billion gallons per year.

The marshes and swamps of Grassy Waters Preserve catch and store the water. While at the Preserve, the water is essential for our unique Everglades habitats for threatened and endangered wetland animals and plants.

Water stored on a wetland like Grassy Waters has the added benefit of being filtered by the plants. Additionally, it allows water to slowly seep through the limestone, recharging aquifers-underground reservoirs that supply water to nearby communities through well-based systems.

The water flows from the Preserve into the M-Canal, which flows east toward the twin lakes, Lake Mangonia and Clear Lake. Since Grassy Waters Preserve is at a higher elevation than the canal, the water flows into the canal by gravity.

As the water continues down the M-Canal, it passes through Control Structure 4, which can have the gates open or closed depending on the water levels of the lakes.

When the gates are closed the control structure works like a dam, and when the gates are open, water moves by gravity allowing 25-35 million gallons a day to pass through. The control structure is usually open to replenish the lakes since they lose 1/3 inch per day due to evaporation and seepage.

Once the water passes through Control Structure 4, the M-canal carries it to Lake Mangonia, which then flows into Clear Lake via a man-made waterway constructed in 1925. At approximately 1000 acres and an average depth of 12 feet, this twin lake system serves as a water storage reservoir, like Grassy Waters Preserve.

Water is pumped out of Clear Lake into the water treatment plant. In 1894, Henry Flagler pumped water from this site to provide water for his hotel, the Royal Poinciana, on Palm Beach Island. Updated over the years, the plant now produces 28-36 million gallons of treated water per day.

The water treatment process begins as water passes through a screen to remove large debris. Next, impurities are removed through a coagulation and sedimentation process. Then, the remaining solids are filtered out through giant carbon and sand-based filters. Finally, the water is disinfected through UV technology and other methods resulting in filtered tap water. Throughout this treatment stage and the entire water's journey, the water is tested over 2,500 times per month on a wide variety of parameters to ensure that clean, safe drinking water is sent to your tap.

How Do Contaminants Get into Drinking 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:

- Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- 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.
- Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive Contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the U.S. 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 Safe Drinking Water Hotline at (800) 426-4791.

Lead in Home Plumbing

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. The City of West Palm Beach is responsible for providing high-quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter certified by an American National Standards Institute-accredited certifier to reduce lead is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure it is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling does not remove lead from water.

Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, or doing laundry or a load of dishes. If you have a lead or galvanized service line requiring replacement, you may need to flush your pipes for a longer period. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at epa.gov/safewater/lead.

To address lead in drinking water, public water systems were required to develop and maintain an inventory of service line materials by October 16, 2024. Developing an inventory and identifying the location of lead service lines (LSL) is the first step for beginning LSL replacement and protecting public health. The lead service inventory may be found at wpb.org/Departments/Public-Utilities/Water-Service-Line. Please contact us if you would like more information about the inventory or any lead sampling that has been done.

Period Covered by Report

The City of West Palm Beach 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 1st to December 31st, 2024. The EPA requires monitoring of over 80 contaminants. The contaminants listed in the Tables are the only contaminants detected in your drinking water. Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

We have been monitoring for unregulated contaminants (UCs) as part of a study to help the U.S. EPA determine the occurrence in drinking water of UCs and whether these contaminants need to be regulated. For example, we participated in the fifth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5) program by performing additional tests on our drinking water. At present, no health standards (e.g., 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 U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

MICROBIOLOGICAL CONTAMINANTS

CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LOWEST RUNNING ANNUAL AVERAGE, COMPUTED QUARTERLY, OF MONTHLY REMOVAL RATIOS	RANGE OF RESULTS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Total Organic Carbon (removal ratio)	1/24 - 12/24	No	1.1	1.0–1.1	NA	TT	Naturally present in the environment

CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED	THE LOWEST MONTHLY PERCENTAGE OF SAMPLES MEETING REGULATORY LIMITS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Turbidity (NTU)	1/24 - 12/24	Yes	0.38[1]	83.3	NA	TT	Soil runoff

INORGANIC CONTAMINANTS

CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED	RANGE OF RESULTS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Barium (ppm)	1/24	No	0.0051	0.0050–0.0051	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	1/24	No	0.089	0.089	4	4.0	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)	1/24	No	0.16	0.16	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	1/24	No	24.9	24.2–24.9	NA	160	Saltwater intrusion; leaching from soil

STAGE 1 DISINFECTANTS AND DISINFECTION BY-PRODUCTS

CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED	RANGE OF RESULTS	MRDLG	MRDL	LIKELY SOURCE OF CONTAMINATION
Total Chlorine Residual (Chloramines) (ppm)	1/24 - 12/24	No	3.0[2]	0.4–4.3	4	4.0	Water additive used to control microbes
Chlorine (Free) (ppm)	7/8/24 - 7/29/24	No	2.6[2]	ND–3.7	4	4.0	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 (YES/NO)	LEVEL DETECTED	RANGE OF RESULTS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Haloacetic Acids (five) [HAA5] (ppb)	1/24, 2/24, 4/24, 5/24, 8/24, 9/24, 11/24, 12/24	No	20.5[3]	7.2–27.7	NA	60	By-product of drinking water disinfection
TTHM [total trihalomethanes] (ppb)	1/24, 2/24, 4/24, 5/24, 8/24, 9/24, 11/24, 12/24	No	59.6[3]	13.9–90.1	NA	80	By-product of drinking water disinfection

LEAD AND COPPER (Tap water samples were collected from sites throughout the community)[4]								
CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR.)	AL EXCEEDANCE (YES/NO)	90TH PERCENTILE RESULT	RANGE LOW-HIGH	NO. OF SAMPLING SITES EXCEEDING THE AL / TOTAL SITES	MCLG	AL (ACTION LEVEL)	LIKELY SOURCE OF CONTAMINATION
Copper [tap water] (ppm)	8/22	No	0.15	0.0018–0.39	0/63	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead [tap water] (ppb)	8/22	No	1.3[5]	0.23–8.2	0/63	0	15	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

UNREGULATED CONTAMINANTS[6]				
CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR.)	AVERAGE RESULT	RANGE OF RESULTS	LIKELY SOURCE OF CONTAMINATION
Perfluorobutanoic Acid [PFBA] (ppt)	2/24	7.8	7.0–8.5	Manufactured chemicals used in industry and consumer products
Perfluorohexanoic Acid [PFHxA] (ppt)	2/24	3.4	3.3–3.5	Manufactured chemicals used in industry and consumer products
Perfluoropentanoic Acid [PFPeA] (ppt)	2/24	4.0	3.8–4.2	Manufactured chemicals used in industry and consumer products

[1] Turbidity is a measure of the cloudiness of the water and has no health effects. We monitor it because it is a good indicator of the effectiveness of our filtration system. High turbidity can hinder the effectiveness of disinfectants. Turbidity guidelines require a 0.3 NTU or less for at least 95% of samples taken monthly with no samples to exceed 1 NTU. Our treatment process includes both filtration and disinfection for a multibarrier approach to control bacteriological contamination prior to leaving the plant. We use Ultraviolet (UV) Light, chlorine, and chloramine after the filters. To correct the situation, the filter backwashing process has been modified with the turbidity levels returning to below 0.3 NTU. The U.S. EPA classifies this exceedance as a Tier 2 Notice, which you were already provided with.

[2] Highest running annual average, computed quarterly, of monthly averages of all samples collected. The range of results is the highest and lowest result from the individual sampling sites. Compliance with MCL standards is based on monthly averages.

[3] Highest LRAA. The range of results are the highest and lowest result from the individual sampling sites. Compliance with MCL standards is based on quarterly averages.

[4] The tap water table summarizes our most recent lead and copper tap sampling data.

[5] There is no safe level of lead in drinking water. Exposure to lead in drinking water can cause serious health effects in all age groups, especially pregnant people, infants (both formula-fed and breastfed), and young children. Some of the health effects to infants and children include decreases in IQ and attention span. Lead exposure can also result in new or worsened learning and behavior problems. The children of persons who are exposed to lead before or during pregnancy may be at increased risk of these harmful health effects. Adults have increased risks of heart disease, high blood pressure, kidney or nervous system problems. Contact your health care provider for more information about your risks.

[6] These analytes were detected but are not currently considered for regulation.

Vulnerability to Contaminants

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health-care providers. U.S. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or epa.gov/safewater.

Definitions

90th %ile: The value at which 90% of the sample results are equal to or below that number.

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

LRAA (Locational Running Annual Average): The average of analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

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.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

ND (Not Detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (µg/L) (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (mg/L) (parts per million): One part substance per million parts water (or milligrams per liter).

ppt (ng/L) (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

Removal Ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

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