CITY OF PALM BAY UTILITIES DEPARTMENT

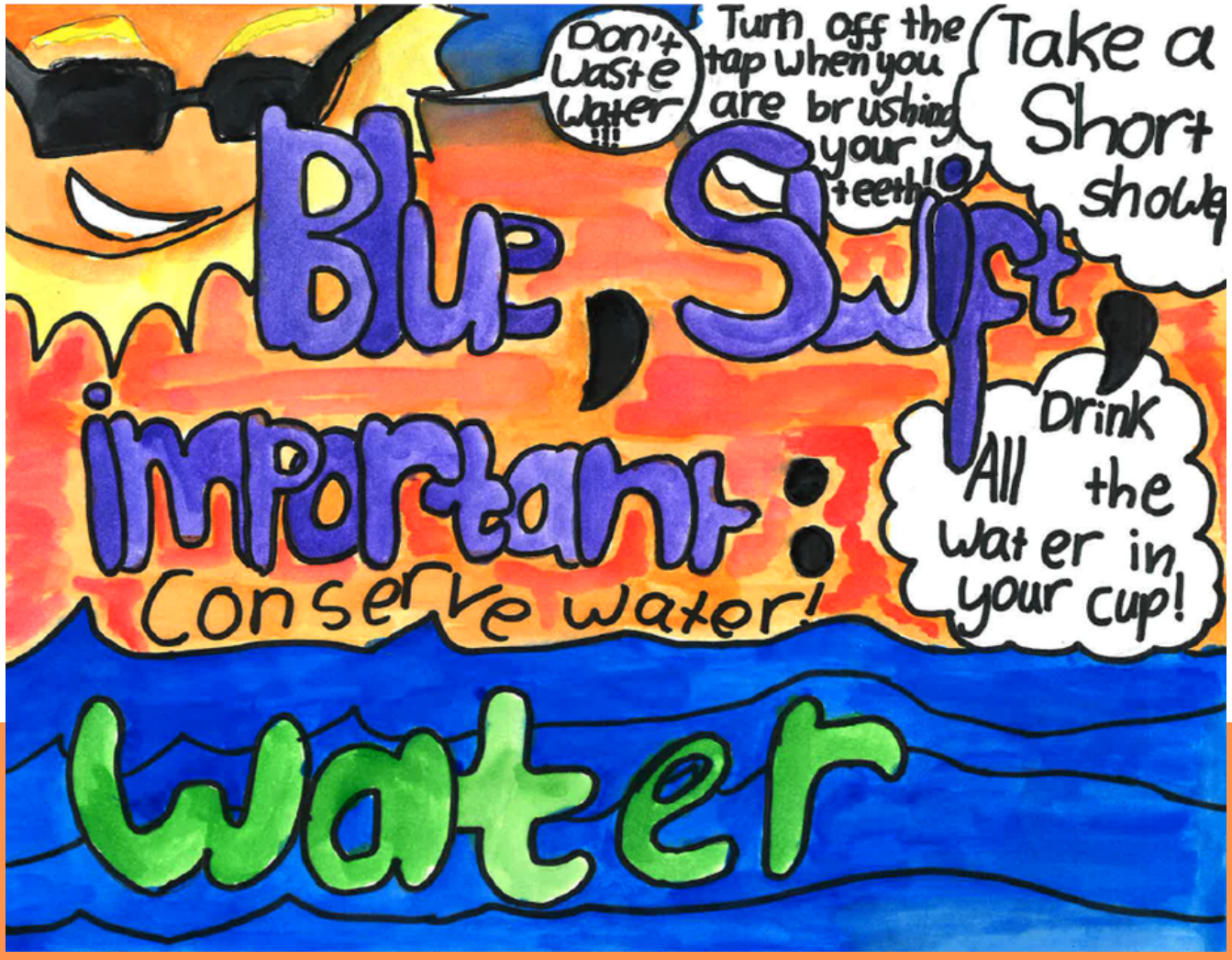
Palm Bay Utilities

WATER QUALITY

2022 REPORT

Testing performed in 2021
PWS# 3050442

For more on water quality and conservation visit us online at PBUD.ORG



2022 COVER ART

SARAH-ANN GREER
ODYSSEY CHARTER SCHOOL
2022 DROP SAVERS POSTER CONTEST WINNER

Drop Saver Poster Contest

The Palm Bay Utilities Department (PBUD) promotes the Drop Savers Water Conservation Poster Contest. This is a nationwide program supported by the American Water Works Association (AWWA) and locally the Florida Section American Water Works Association (FSAWWA). This program allows students the ability to express their message of water conservation through art. Winners are selected and invited to the April City Council meeting, where the Mayor reads the proclamation announcing April as Water Conservation Month for the City of Palm Bay.

If you are interested in having your classroom or student participate please email **outreach@palmbayflorida.org.**

2022

A Message From Your Utilities Provider

PBUD is pleased to present our valued customers with the 2022 Annual Water Quality Report. This report is designed to inform you about the quality services we provide to the community. Our goal is to deliver a safe and dependable supply of drinking water to all our customers within the PBUD's service area. This report will help you understand the efforts we make each day to improve water quality and continuously protect our water resources.

If you have questions about this report or your Utility service, please do not hesitate to contact us at 321.952.3410 or visit www.pbud.org.

"Our mission as a public utility is to provide superior drinking water and advanced treatment and disposal..."

Palm Bay's Water

Our mission as a public utility is to provide superior drinking water and advanced treatment and disposal of wastewater through an effective utility system, reflecting responsible environmental stewardship and striving for 100% customer satisfaction. We do our job with pride and are committed to ensuring the quality of your water.

The City of Palm Bay's water source is groundwater obtained from 41 wells located throughout the City. These raw water wells provide water to PBUD's 2 water treatment facilities. The water collected by our wells is drawn from the Floridan Aquifer at a depth of 850 feet and surficial aquifers at a depth ranging from 80 to 150 feet. PBUD treats the raw water from its wells using processes known as lime-softening and reverse osmosis. Once treated, the water is chlorinated for disinfection purposes and fluoridated for dental health before entering our distribution system and delivered to our customers.

Source Water Assessment

To ensure that public drinking water is compliant with national standards set by the Environmental Protection Agency (EPA), the Florida Department of Environmental Protection (FDEP) initiated a program called SWAPP — Source Water Assessment and Protection Program. This program is intended to ensure that drinking water is safe at the tap and the source.

In 2021, the FDEP performed a Source Water Assessment of PBUD's water treatment system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our groundwaters wells.

The evaluation showed 16 potential sources of contamination identified for this system with low to moderate susceptibility levels. The expanded results of the City of Palm Bay's Source Water Assessment are available for viewing at:

https://fldep.dep.state.fl.us

"The presence of contaminants is normal..."

Drinking Water Contaminants

Sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels along the land's surface or through the ground, it dissolves naturally-occurring minerals and radioactive materials (in some cases). It can pick up substances resulting from the presence of humans and animals. Contaminants that may be present in source water include:

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

(b) Inorganic contaminants, such as salts and metals, can naturally occur or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil, and gas.

(c) Pesticides and herbicides may come from various 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, can also come from gas stations, urban stormwater runoff, and septic systems.

(e) Radioactive contaminants 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 EPA prescribes regulations that limit the number of specific 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 protections for public health.

Drinking water, including commercially bottled water, may reasonably contain small amounts of some contaminants. The presence of impurities is regular and does not necessarily indicate that the water poses a health risk to consumers.

More information about contaminants found in water can be obtained by calling the EPA's Safe Drinking Water Hotline (800) 426-4791.

"PBUD routinely monitors for contaminants in your drinking water..."

Testing Information

PBUD routinely monitors for contaminants in your drinking water following Federal and State laws, rules, and regulations. Except where indicated otherwise, this report is based on the results of our monitoring from the period of January 1, 2021, to December 31, 2021. Data obtained before January 1, 2021, presented in this report, was obtained from the most recent testing performed under the applicable laws, rules, and regulations.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

The EPA's Centers for Disease Control guidelines on the appropriate means of lessening the risk of infection by parasites (cryptosporidium) and other microbiological contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

If present, elevated lead levels 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.

The Palm Bay Utilities Department is responsible for providing high-quality drinking water, but cannot control the variety of materials used in home plumbing components. When the water has been sitting for several hours, in-home plumbing, one can minimize the potential for lead exposure by flushing the 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 pipes tested. Information on lead, testing methods, and steps you can take to minimize exposure are available from the Safe Drinking Water Hotline at (800) 426-4791 or by visiting www.epa.gov.

KEY TERMS TO KNOW

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

Alkalinity (Total & Phenolphthalein): The capacity of water to neutralize acids. Is a measure of how much acid must be added to water to lower the pH.

Ammonia: Both chlorine and small amounts of ammonia are added to the water which react together to form chloramines (also called combined chlorine), a long-lasting disinfectant. It is also naturally occurring in water.

Chloride: Water high in sodium chloride will taste unpleasant and can damage plants, if used for watering or irrigation. It is also highly corrosive and can damage plumbing, causing toxic metals to leach into the water. Water high in sodium chloride can damage appliances and hot water heaters over time

Conductivity: A measure of the ability of a solution (water) to carry an electric current.

Hardness (Total, Calcium & Magnesium): Caused by calcium and magnesium ions. Hard water can cause scale when the water evaporates, or when heated in household hot water heaters and piping. Hardness-producing substances in water also combine with soap to form insoluble precipitates.

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

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

KEY TERMS CONTINUED

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

Maximum Residual Disinfectant Level or MRDL: The highest level of disinfectant allowed in drinking water.

Maximum Residual Disinfectant Level Goal or MRLDG: The level of a drinking water disinfectant below which there is no known or expected risk to health.

Non-Detects (ND): Indicates that the substance was not found by laboratory analysis.

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.

Picocurie per Liter (pCi/L): Measure of the radioactivity in water.

Running Annual Average (RAA): The average of sample analytical results for samples taken during the previous four calendar quarters.

2021 TESTING DATA

RADIOLOGICAL CONTAMINANTS

Contaminant	POE Samples	Date of Sample	MCL/AL Violation	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Alpha Emitters	North Regional ASR Well	03/03/2020 Jan-Dec 2021	No	2.82 0.12 (RAA)	N/A ND - 1.4	0	15	Erosion of natural deposits.
Combined Radium	ASR Well North Regional South Regional	Jan-Dec 2021 03/03/2020 03/03/2020	No No No	0.66(RAA) 0.199 0.598	ND - 1.6 N/A N/A	0 0 0	5 5 5	Erosion of natural deposits.

INORGANIC CONTAMINANTS

Contaminant	Units	POE Samples	Date of Sample	MCL/AL Violation	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Arsenic	ppb	ASR Well	Jan-Dec 2021	No	1.3 (average)	ND – 5.3	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass & electronics production waste.
Barium	ppm	North Regional South Regional ASR Well	03/03/20 03/03/20 03/03/20	No No No	0.0074 0.018 0.009	N/A N/A N/A	2 2 2	2 2 2	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries.
Fluoride	ppm	North Regional South Regional ASR Well	03/03/20 03/03/20 03/03/20	No No No	0.14 0.087 0.14	N/A N/A N/A	4 4 4	4 4 4	Erosion of natural deposits; discharge from fertilizer & aluminum factories. Water additive which promotes strong teeth when at optimum level of 0.7.
Lead	ppb	South Regional	03/20/20	No	2.6	N/A	0	15	Residue from man-made pollution such as auto emissions & paint; lead pipe, casing & solder.
Nitrate (as Nitrogen)	ppm	North Regional South Regional ASR Well	03/03/20 03/03/20 03/03/20	No No No	0.12 0.027 0.86	N/A N/A N/A	10 10 10	10 10 10	Runoff from fertilizer use; leaching from septic tank, sewage; erosion of natural deposits.
Sodium	ppm	North Regional South Regional ASR Well	03/03/20 03/03/20 03/03/20	No No No	79.5 69.9 88.9	N/A N/A N/A	N/A N/A N/A	160 160 160	Saltwater intrusion, leaching from soil.

2021
TESTING DATA

TTHM'S & STAGE 1 DISINFECTANT/DISINFECTION BY-PRODUCT (D/DBP) CONTAMINANTS

Contaminant	Units	Date of Sample	MCL/AL Violation	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Chloramines	ppm	2021	No	3.1 (running annual average)	0.2 – 4.0	MRDLG = 4.0	MRDL = 4.0	Water additive used to control microbes.
Haloacetic Acids	ppb	2021	No	33.7 (locational annual average)	1.6 – 44.5	N/A	MCL = 60	By-product of drinking water disinfection.
TTHM (Total Trihalomethanes)	ppb	2021	No	66.5 (locational annual average)	1.6 – 69.6	N/A	MCL = 80	By-product of drinking water disinfection.

LEAD & COPPER HOMESAMPLINGS

Contaminant	Units	Date of Sample	MCL/AL Violation	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Copper (tap water)	ppm	Aug- 2020	No	0.094 (90^{th} percentile)	No sample sites exceeded AL.	1.3	AL = 1.3	Erosion of natural deposits; corrosion of household plumbing systems; leaching from wood preservatives.
Lead (tap water)	ppb	Aug- 2020	No	3.3 (90^{th} percentile)	No sample sites exceeded AL.	0	AL = 15	Erosion of natural deposits; corrosion of household plumbing systems.

CONSERVATION

Mission

PBUD's mission and commitment to promoting water conservation are dependent on the number of people reached every year. Practicing water conservation is essential, and we strive to reach out to all residents of Palm Bay and share information for our vital yet fragile resource; water.

The world has a minimal amount of fresh water available for consumption. Nearly 70% of the world is covered by water. However, only 2.5% of it is fresh, with the rest being saline and ocean-based. Just 1% of our freshwater is easily accessible, with much of it trapped in glaciers and snowfields. According to the latest U.S. Geological Survey, the United States uses 408 billion gallons of water per day. In Florida, each person uses up to 120 to 150 gallons of water per day. According to the World Resources Institute, global projections for potable water (consumable water) availability are becoming strained every year. It is exceedingly important to educate our communities as it relates to water conservation.

WATERING DAYS

Watering Restrictions are established and enforced by the St. Johns River Water Management District. For residential customers, watering days are based on your house number (even or odd). You should only water before 10:00 a.m. and after 4:00 p.m. and foremost on your designated day(s).

November - March
(Water One Time per Week)

Designated Day Residential:
Saturday (Odd Address)
Sunday (Even Address)
Tuesday (Commercial)

March - November
(Water Two Times per Week)

Designated Days Residential:
Wednesday and Saturday (Odd Address)
Thursday and Sunday (Even Address)
Tuesday and Friday (Commercial)

Water Wise!

DRINK IT. ENJOY IT. DON'T WASTE IT.

OUTDOOR CONSERVATION TIPS:

- Outfit your hose with a shut-off nozzle that can be adjusted down to a fine spray so that water flows only as needed. When finished, turn the water off at the faucet instead of at the nozzle to avoid leaks.
- Plant the right plant in the right place. Ask a landscape professional to help you choose native plants. Use drought-tolerant grass, shrubs, ground cover, and trees.
- Using a hose to clean a driveway can waste hundreds of gallons of water. Use a blower or broom to clean leaves and other debris from these areas.
- The grass is often your yard's biggest water user. Save grass for areas where children or pets will play. In other areas, consider mulch, gravel, or ground cover.
- Do not leave sprinklers or hoses unattended. Your garden hose can put out 600 gallons or more in only a few hours.

INDOOR CONSERVATION TIPS:

- Check for leaks. Leaks can drip away 90 gallons a day or more from old fixtures such as leaky faucets.
- Insulate your water pipes. You'll get hot water faster, plus avoid wasting water while it heats.
- Reuse household water instead of just pouring it down the drain; use it for watering a plant or garden or for cleaning.
- Don't let the water run while shaving, washing your face, or brushing your teeth.
- Don't use running water to thaw frozen foods. Instead, defrost overnight in the refrigerator or use the defrost setting on your microwave.
- Store drinking water in the refrigerator rather than letting the tap run every time you want a cool glass of water.

EDUCATION & OUTREACH

PBUD's commitment to sustainability is dependent on an active outreach and education program. Each year staff members visit local K-12 schools to educate young people about conservation, water and wastewater treatment, careers in the water industry, and how the department uses technology such as geographic information systems (GIS) to assist in day-to-day operations and decisions.

PBUD promotes the Drop Savers Water Conservation Poster Contest. This is a nationwide program supported by the American Water Works Association (AWWA) and locally by the Florida Section of the American Water Works Association (FSAWWA). This program allows students the ability to express their message of water conservation through art. Winners are selected and invited to the April City Council meeting, where the Mayor reads the proclamation announcing April as Water Conservation Month for the City of Palm Bay. The St. John's River Water Management District identifies Palm Bay as an active participant in Water Conservation Month via their website.

PBUD staff also provides information to the public at City events such as Palm Bay Play Day in April, Space Coast Waterfest in May, the City's Independence Day celebration in July, and other events throughout the year.

During the school year, PBUD sponsors the WaterWise Conservation Program in several area schools. As part of the WaterWise program, students and teachers discuss the significance of water conservation through carefully designed lesson plans and in-classroom activities. Each student receives a WaterWise Resource Kit to take home, containing a high-efficiency showerhead, kitchen and bathroom sink aerators, and tools for monitoring water usage at home.

PBUD is a proud sponsor of the Academy of Environmental Water Technology (AEWT) program at Heritage High School which prepares and equips students to become future water professionals. In 2013, PBUD launched an internship pilot program with two students, and the program continues today with four students. Teaching today's young people how to effectively manage our water resources and the value of clean, safe, reliable drinking water is imperative, and we are excited to partner with Heritage High School in this effort.

RESOURCES

WE LOVE FEEDBACK

We value our customers' opinions and would like to hear how you think we are doing. We welcome any suggestions you may have about how we can better serve the public. Visit www.pbud.org for more information.

STAY INFORMED

We encourage our customers to stay informed about their Palm Bay Utilities Department and the services we provide. There are several ways for customers and the public to receive updates and information; website, social media, and e-notifications. We invite you to take advantage of these resources. Attending regularly scheduled Utilities Advisory Board and City Council meetings are encouraged to share suggestions, ideas, and concerns regarding the City's municipal water and sewer systems.

City Council Meetings
Council Chambers
120 Malabar Road SE
6:00 p.m. | 1st & 3rd Thursday of the month

Utilities Advisory Board
Utilities Administrative Office
250 Osmosis Drive SE
6:30 p.m. |Held Quarterly

FOR MORE INFORMATION

Palm Bay Utilities Department Customer Service
120 Malabar Road SE • Palm Bay, FL 32907
(321) 952-3420

Palm Bay Utilities Department Administration
250 Osmosis Drive SE • Palm Bay, FL 32909
(321) 952-3410
www.pbud.org

Utilities After Hours Emergency Service
(Water & Sewer Issues Only)
(321) 952-3478

Community Outreach (321) 952-3410

SCAN THE CODE FOR MORE INFORMATION