

2023

WATER QUALITY REPORT

SPACE LAUNCH DELTA 45 • PATRICK SPACE FORCE BASE



Patrick Space Force Base 2023 Water Quality Report

2023 Annual Drinking Water Quality Report for Patrick Space Force Base (SFB) PWS ID #: 3054128

According to state and federal law, each water system is required to publish an annual Consumer Confidence Report (CCR). The CCR is intended to inform you about the quality of your drinking water. All drinking water sampling requirements, results and any contaminants exceeding regulatory limits defined by the Safe Drinking Water Act (SDWA) are published in this report.

This report is also available online at www.patrick.af.mil

TABLE OF CONTENTS

SECTION 1:	WATER SOURCES, SOURCE WATER PLAN, AND TREATMENT	3
SECTION 2:	BASIC STATEMENT OF COMPLIANCE	5
SECTION 3:	CONTACT INFORMATION	5
SECTION 4:	PERIOD COVERED BY REPORT	5
SECTION 5:	TERMS AND ABBREVIATIONS	5
SECTION 6:	WATER QUALITY TEST RESULTS	7
SECTION 7:	VIOLATIONS	13
SECTION 8:	PROTECTING WATER QUALITY AND WATER CONSERVATION	14
SECTION 9:	REQUIRED INFORMATION FROM THE EPA	16
SECTION 10:	PFAS/PFOA	18
SECTION 11:	CLOSING	19

Section 1

WATER SOURCES, SOURCE WATER PLAN, AND TREATMENT

We at Patrick SFB are pleased to present to you the 2023 Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. 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.

Where Does My Water Come From?

Patrick SFB purchases drinking water from the neighboring City of Cocoa. Therefore we are classified as a “Consecutive Community Water System.” Cocoa has supplied central Brevard County with high quality drinking water since 1957. Cocoa’s drinking water system processed approximately 7.05 billion gallons of water in 2023, with a peak flow of 24.60 million gallons per day (MGD) during the month of March. The average daily flow was 19.31 MGD during 2023. Cocoa’s water sources are groundwater wells, Aquifer Storage and Recovery (ASR) wells, and surface water from the Taylor Creek Reservoir.

Groundwater

Cocoa’s primary water source is groundwater pumped from the Intermediate and Floridan Aquifers. Groundwater treatment begins when raw water from wellfields is pumped to Cocoa’s water treatment facility, the Claude H. Dyal Water Treatment Plant (WTP). When ground water enters the plant chlorine, lime, soda ash, and coagulant are added to remove hardness and suspended solids. Fluoride is then added to the water in accordance with the Environmental Protection Agency/Center for Disease Control guidelines. Carbon dioxide is added to reduce the pH and to stabilize the water. Chloramination is used to disinfect the water after it passes through filters

containing sand and anthracite coal and enters the clearwell. Turbidity (cloudiness) is constantly measured at each filter. In 2023, the Dyal WTP treated 6.90 billion gallons of groundwater.

Aquifer Storage and Recovery (ASR) Wells

Cocoa has 10 ASR wells at the Dyal WTP for the storage of finished, treated water. This is a system of wells that stores finished water safely underground. During periods of high demand this high quality water can be pumped to the head of the plant or to the ground storage tanks. In 2023, the Dyal WTP injected 208.12 million gallons into the ASR and recovered 191.31 million gallons.

Surface Water

Water from the Taylor Creek Reservoir is a supplemental source for Cocoa’s water supply. Surface water requires a different type of treatment. After surface water enters the plant, ferric sulfate, hydrated lime, and a polymer are added. Ozone is injected into clarified water for disinfection, taste and odor removal. After adding ozone, the water is treated with hydrated lime, carbon dioxide, chlorine and ammonia before passing through sand and anthracite coal filters. Turbidity is constantly measured at each filter.

In 2023, the Dyal WTP treated approximately 485.45 million gallons of surface water.

Treatment at Patrick SFB

Once the water reaches Patrick SFB, the 45th Civil Engineer Squadron provides appropriate chlorine residual by using an automatic injection system. The water is then distributed throughout Patrick SFB

through a system of pipes to assure a safe supply of water is available at sufficient pressure to serve the needs of base personnel, family housing residents, and the Child Development Center. Monthly microbiological and chlorine monitoring is conducted to ensure a safe supply of water.

Source Water Assessment for the City of Cocoa

The Florida Department of Environmental Protection (FDEP) began conducting a statewide assessment of drinking water systems in 2004. The Source Water Assessment Program provides local leaders, water suppliers, and citizens with the information necessary to protect public drinking water sources from contamination

Ground Water

In 2023, the Florida Department of Environmental Protection performed a Source Water Assessment on the City of Cocoa's public water system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of their wells. FDEP identified 28 unique sources of potential contamination with a range of low to moderate risk. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at <https://fldep.dep.state.fl.us/swapp/> or they can be obtained by contacting the Conservation/Public Relations Officer at (321) 433-8705, or emailing ddowns@cocoaf1.org.

assessment and Protection Program website at <https://prodapps.dep.state.fl.us/swapp/> or they can be obtained by contacting the Conservation/Public Relations Officer at (321) 433-8705, or emailing ddowns@cocoaf1.org. No assessment is currently published for 2023.

The City of Cocoa's National Environmental Laboratory Accreditation Conference (NELAC) certified laboratory analyzes water quality throughout the treatment process and distribution system to ensure safe drinking water is delivered to its customers. The City of Cocoa remains vigilant in meeting the challenges of source water protection, water conservation and community education while continuing to serve the needs of all of their water users.

Surface Water

In 2021, the Florida Department of Environmental Protection performed a Source Water Assessment on the City of Cocoa's public water system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of their surface water intakes. The surface water system is considered to be at high risk because of the many potential sources of contamination present in the assessment area. The assessment results are available on the FDEP Source Water As-

Community Involvement is Encouraged

Interested customers are welcome to attend Cocoa's regularly scheduled Council meetings held on the second and fourth Tuesday of every month. Please contact the City Clerk at (321) 433-8488 to confirm day, time, and location of the meeting.

The Utilities Advisory Board meets as directed by the City Manager. The Utilities Advisory

Board advises the City Council on matters relating to utility subjects. Please contact the

City Clerk at (321) 433-8488 to confirm day, time, and location of the meeting.

SECTION 2

BASIC STATEMENT OF COMPLIANCE

We are pleased to report that our drinking water meets all federal and state requirements.

SECTION 3

CONTACT INFORMATION

For specific information about Patrick SFB's drinking water system, you can call the Bioenvironmental Engineering Flight at (321) 494-5435 or Civil Engineer Customer Service at (321) 494-7773/7883. Water quality questions, concerns, and comments can also be addressed at town meetings. For more information about the City of Cocoa water supply, you can call (321) 433-8705, visit the City's Drinking Water website under Utilities at <http://www.cocoafl.org>, or email ddownloads@cocoafl.org.

SECTION 4

PERIOD COVERED BY REPORT

Cocoa's Claude H. Dyal WTP and Patrick SFB routinely monitors for contaminants in your drinking water according to federal and state laws, rules, and regulations. This report is based on the results of our monitoring for the period of January 1, 2023 through December 31, 2023. Any data that was obtained before January 1, 2023 and presented in this report are from the most recent testing performed in accordance with the laws, rules, and regulations.

SECTION 5

TERMS AND ABBREVIATIONS

Throughout this report you may find unfamiliar terms and abbreviations. To help you better understand these terms we have provided the following definitions:

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

water system must follow.

Health Advisory (HA): The EPA develops health advisories to provide information

on contaminants that cause human health effects in drinking water. Health advisories are non-enforceable and non-regulatory.

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

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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

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

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

Million fibers per liter (MFL): Measure of the presence of asbestos fibers that are longer than 10 micrometers.

Millirem per year (mrem/yr): Measure of radiation absorbed by the body.

N/A: Not Applicable

ND: Means “not detected” and indicates that the substance was not found by laboratory analysis.

Nephelometric Turbidity Unit (NTU): Measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

Parts per trillion (ppt) or Nanograms per liter (ng/l): One part by weight of analyte to one trillion parts by weight of the water sample.

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

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

Section 6

WATER QUALITY TEST RESULTS

To ensure our drinking water is potable and all Safe Drinking Water Act (SDWA) regulatory limits are met, the Bioenvironmental Engineering Flight and the City of Cocoa conduct routine sampling, analysis, and monitoring of the drinking water. Each sample type requires a different sampling technique and frequency. Some are required several times throughout the year, while others are required annually or on three, four, or even nine-year intervals. This report shows our water quality results and what they mean. For your information, we have compiled the tables below to show what substances were detected in our drinking water during 2023. We feel it is important that you know exactly what was detected and how much of the substance was present in the water.

Patrick SFB utilizes two laboratories for water sampling analysis: Eurofins Orlando in Altamonte Springs, FL and the Kennedy Space Center Environmental Microbiology (KSC EM) Laboratory. The KSC EM Lab performs monthly microbiological analysis and Eurofins performs quarterly disinfection byproduct analysis and triennial lead and copper analysis.

MICROBIOLOGICAL CONTAMINANTS							
City of Cocoa							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Single Measurement	Lowest Monthly Percentage of Samples Meeting Regulatory Limits	MCLG	MCL	Likely Source of Contamination
¹ Turbidity (NTU)	2023 (Daily)	No	0.38	100	N/A	TT	Soil Runoff

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Total number of Positive Samples for the Year	MCLG	MCL	Likely Source of Contamination
² <i>E. coli</i>	2023 (Monthly)	No	^{2*} 1	0	Routine and repeat samples are total coliform positive and either is <i>E. coli</i> positive or system fails to take repeat samples following <i>E. coli</i> positive routine sample or system fails to analyze total coliform positive sample for <i>E. coli</i>	Human and animal fecal waste

³ RADIOACTIVE CONTAMINANTS							
City of Cocoa							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	⁶ Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Radium 226 + 228 [Combined Radium] (pCi/L)	2023 (Monthly)	No	ND	ND	0	5	Erosion of natural deposits

ADDITIONAL RESULTS ON NEXT PAGE

3 INORGANIC CONTAMINANTS

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	⁶ Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
City of Cocoa							
Arsenic (ppb)	23-Feb	No	1.2	ND – 1.20	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	23-Feb	No	ND	ND	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	23-Jan	No	0.13	0.13 – 0.19	4	4	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)	23-Jan	No	0.38	ND – 0.38	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	23-Feb	No	ND	ND	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	23-Jan	No	82.8	82.8	N/A	160	Salt water intrusion, leaching from soil
Patrick SFB							
Asbestos (MFL)	20-Feb	No	ND	N/A	7	7	Decay of asbestos cement water mains; erosion of natural deposits

ADDITIONAL RESULTS ON NEXT PAGE

4 STAGE 1 DISINFECTANTS AND DISINFECTION BY-PRODUCTS

Disinfectant or Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	⁶ Level Detected	Range of Results	MCLG Or MRDLG	MCL	Likely Source of Contamination
City of Cocoa							
Chloramines (ppm)	2023 (Quarterly)	No	3.17	0.37– 3.92	MRDLG = 4	MRDL = 4	Water additive used to control microbes
Chlorine (ppm)	2023 (Quarterly)	No	0.81	0.04 –2.97	MRDLG = 4	MRDL = 4	Water additive used to control microbes
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	TT Violation Y/N	⁵ Lowest Running Annual Average, Computed Quarterly, of Monthly Removal Ratios	Range of Monthly Removal Ratios	MCLG	MCL	Likely Source of Contamination
City of Cocoa							
Total Organic Carbon	2023 (Quarterly)	No	1.3	1.0 – 1.6	N/A	TT	Naturally present in the environment

SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES AND HERBICIDES

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	⁶ Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
City of Cocoa							
Di(2-ethylhexyl) phthalate (ppm)	23-Jan	No	0.79	ND – 0.79	0	6	Discharges from rubber and chemical factories

ADDITIONAL RESULTS ON NEXT PAGE

7 STAGE 2 DISINFECTANTS AND DISINFECTION BY-PRODUCTS

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	⁶ Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
City of Cocoa							
Haloacetic Acids (HAA5) (ppb)	2023 (Quarterly)	No	22.3	9.8 – 19.3	N/A	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	2023 (Quarterly)	No	23.8	14.0 – 32.1	N/A	80	By-product of drinking water disinfection
Patrick SFB Results							
Haloacetic Acids (HAA5) (ppb)	2023 (Quarterly)	No	22.4	10.3 – 27.9	N/A	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	2023 (Quarterly)	No	26.7	13.1 – 24.6	N/A	80	By-product of drinking water disinfection

LEAD AND COPPER (Tap water samples were collected from sites throughout the community)

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	AL Violation Y/N	⁸ 90th Percentile Result	No. of sampling sites exceeding AL	MCLG	AL (Action Level)	Likely Source of Contamination
City of Cocoa							
Copper (tap water) (ppm)	23-Jun	No	0.0227	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (tap water) (ppb)	23-Jun	No	1.8	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits
⁹ Patrick SFB							
Copper (tap water) (ppm)	23-Sep	No	0.079	0	0	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	23-Sep	No	1	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

ADDITIONAL RESULTS ON NEXT PAGE

PFOS/PFOA					
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	HA Exceeded Y/N	Level Detected	HA Limit	Likely Source of Contamination
Patrick SFB					
Perfluorooctane Sulfonic acid (PFOS) (ppt)	23-Nov	No	ND	70	Fire Fighting Foam
Perfluorooctanoic acid (PFOA) (ppt)	23-Nov	No	ND	70	Fire Fighting Foam

Footnotes:

- The result in the lowest monthly percentage column is the lowest monthly percentage of samples reported in the Monthly Operating Report meeting the required turbidity limits. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. High turbidity can hinder the effectiveness of disinfectants.
- E. coli* (EC): The total number of *E. coli* Positive (EC+) samples taken to comply with the RTCR must be reported even if they are not MCL violations.
A PWS will receive an *E. coli* MCL violation when there is any combination of an EC+ sample result with a routine/repeat Total Coliform Positive (TC+) or EC+ sample result. *E. coli* MCL violations occur with the following sample result combinations:
Routine EC+ and Repeat TC+
Routine EC+ and Repeat Any missing sample
Routine EC+ and Repeat EC+
Routine TC+ and Repeat EC+
Routine TC+ and Repeat TC+ (but no *E. coli* analysis)
- In June 2023, an EC+ sample occurred at Facility 350 during Routine sampling, however, repeat sampling was negative for EC or TC. The positive was determined to be due to lack of proper sampling procedure.
- Results in the Level Detected column for radioactive, inorganic contaminants, and unregulated contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.
- For Chlorine, Chloramines, and Bromate, the Level Detected is the highest running annual average (RAA), computed quarterly, of monthly averages of all samples collected. All of the 2023's TTHM and HAA5 samples were collected under "Stage 2 Disinfectants and Disinfection By-Products". Range of Results is the range of individual sample results (lowest to highest) for all monitoring locations.
- The monthly TOC removal ratio is the ratio between the actual TOC removal and the required TOC rule removal requirements.
- Results in the Level Detected column for radioactive, inorganic contaminants, and unregulated contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.
- Stage 2 Disinfectants and Disinfection By-Products includes results from 2022 for LRAA calculation. Level Detected is the highest Locational running annual average (LRAA) for any given sample location during 2023. Range of Results is the range of individual sample results (lowest to highest) for all monitoring locations for 2023.
- Lead and copper testing results are placed in ascending order (from lowest to highest value). The total number of samples is multiplied by 0.9. The 90th percentile test result is compared to the actions level. For copper that is 1.3 mg/L or 1.3 parts per million (ppm). For lead it 0.015 mg/L or 15 parts per billion (ppb).
- Lead and copper sampling is completed every three years at Patrick SFB to ensure the drinking water is not being contaminated by the degradation of aging pipes throughout the distribution system. Lead and copper were common materials used in the construction of water pipes prior to the early 1980's. The action levels (AL) for lead and copper are based on a percentage of the total samples collected. If 90% of the samples do not exceed the AL, the water system is in compliance with the Lead and Copper Rule. In 2023, lead and copper water samples were collected from 20 specific locations throughout the base and housing areas. Patrick SFB had two sites (Building 1368, ASTS and Building 3656, Youth Center) that exceeded the AL for copper. For additional lead-specific information, please refer to Section 11, Lead Information

Fifth Unregulated Contaminant Monitoring Rule (UCMR 5)

The Safe Drinking Water Act (SDWA) requires that once every five years the EPA issue a list of unregulated contaminants to be monitored by public water systems (PWSs).

The fifth Unregulated Contaminant Monitoring Rule (UCMR 5) was published on December 27, 2021. UCMR 5 requires sample collection for 30 chemical contaminants between 2023 and 2025 using analytical methods developed by the EPA and consensus organizations. This action provides the agency and other interested parties with scientifically valid data on the national occurrence of these contaminants in drinking water.

In 2023, the City of Cocoa sampled for a series of unregulated contaminants, including 29

per- and polyfluoroalkyl substances (PFAS) and lithium. You have a right to know these data are available. There were no detectable quantities for any of these contaminants. Unregulated contaminants do not yet have a drinking water standard; this monitoring will help determine whether the contaminants should require on-going testing and establish allowable maximum contaminant limits. You can learn more about UCMR 5 at www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule. If you wish to examine the results please call Donald Downs, at 321-433-8705 or email ddowns@cocoaf1.gov.

Patrick SFB will test for UCMR 5 in 2025 per the EPA issued schedule.

Section 7

VIOLATIONS

Patrick SFB Violations

Between 1 January and 31 December 2023, Patrick SFB had no drinking water violations.

City of Cocoa Violations

Monitoring and reporting of compliance data violation

We are required to monitor your drinking water for specific contaminants triennially (once every three years) for two quarters in that year. Results of the monitoring are an indicator of whether or not our drinking water meets health standards. During the first quarter of 2023 (January-March) one of the synthetic organic contaminants, Di(2-ethylhexyl)phthalate (DEHP) exceeded the Regulatory Detection Level (RDL) but was below the Maximum Contaminant Level (MCL). Some people who drink water containing di(2-ethylhexyl) phthalate well in excess of the MCL over many years may

have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer. This exceedance triggered the utility to perform four consecutive quarterly samples of DEHP. The first quarter following the exceedance (April-June 2023) the utility tested for DEHP and the levels were undetectable. In error, the utility did not monitor or test the third quarter of 2023 (July-September) for DEHP. The utility tested for DEHP in the fourth quarter of 2023 (October-December) and the first quarter of 2024 (January-March) and the levels were undetectable.

Monitoring and reporting violation of Rule 62-550.520 Florida Administrative Code

The City of Cocoa did not perform compliance monitoring for the Secondary Contaminant of Color during the 2023 calendar year. The City of Cocoa performed compliance monitoring for the Secondary Contaminant of Odor during the 2023 calendar year, however the sample was determined to be invalid. These are monitoring and reporting violations of Rule

62-550.520 Florida Administrative Code. Secondary contaminants are regulated for aesthetic considerations, and are not considered to cause major health effects. Both Color and Odor were resampled in January 2024. Odor was resampled once and was under the MCL. Color was sampled twice and the average of the two samples was under the MCL.

Section 8

PROTECTING WATER QUALITY AND WATER CONSERVATION

You can help protect our water quality. Quick things you can do!

Protecting drinking water sources usually requires the combined efforts of many partners such as public water systems, communities, resource managers, and the public.

- **Use and dispose of harmful materials properly.** Don't dump them on the ground! Hazardous waste that is dumped on or buried in the ground can contaminate the soil and can move down into the ground water or be carried into the nearby surface waters by runoff during rainstorms. You might be surprised to learn that a number of products you use at home contain hazardous and or toxic substances. Products like motor oil, pesticides, leftover paints or paint cans, mothballs, flea collars, weed killers, household cleaners, and even a number of medications contain materials that can be harmful to surface and ground water.
- **Don't overuse pesticides or fertilizers.** You might apply fertilizer to make your grass thick and green, your flowers colorful, and your vegetable crop abundant. You might also use pesticides to keep bugs from ruining what the fertilizers have helped to produce. What you might not know is that many of these fertilizers and pesticides contain hazardous chemicals that can travel through the soil and contaminate ground water. If you feel you must use chemicals, use them in moderation.
- **Don't flush your used/unwanted medications down toilets or sink drains.** For more information, please go to <http://www.dep.state.fl.us/waste/categories/medications/pages/disposal.htm>

Water Conservation:

Water Conservation measures are an important first step in protecting our water supply. Such measures help to preserve the supply of water and also save you money by reducing your water bill.

Know your days - Irrigate before 10:00 am and after 4:00pm

Daylight Savings Time (Spring & Summer) 2 days a week, if needed

- **Odd numbered residential addresses -**
Wednesday & Saturday
- **Even numbered residential addresses -**
Thursday & Sunday
- **Non-residential irrigation -**
Tuesday & Friday

Eastern Standard Time (Fall & Winter) 1 day a week, if needed

- **Odd numbered residential addresses -**
Saturday
- **Even numbered residential addresses -**
Sunday
- **Non-residential irrigation -**
Tuesday

Other ways that you can help conserve water can be found at <http://www.cocoaf1.org/conservation> or <http://water.epa.gov/action/protect>

Section 9

REQUIRED INFORMATION FROM THE EPA

Cryptosporidium in Drinking Water

Cryptosporidium is a microbial parasite found in surface water throughout the United States. The City of Cocoa detected Cryptosporidium in the untreated surface water. The City of Cocoa detected this contaminant in two out of 25 samples tested in 2006 through 2008. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Ozone is a powerful disinfectant that effectively destroys Cryptosporidium. The City of Cocoa ozonates all surface water before it is filtered to ensure the highest possible removal rate.

The City of Cocoa sampled Taylor Creek Reservoir for Cryptosporidium in accordance with Florida Department of Environmental Protection (FDEP)'s Long Term 2 (LT2) Enhanced Surface Water Treatment rule. This rule requires that the city sample for Cryptosporidium to provide a baseline for the amount of Cryptosporidium in Taylor Creek Reservoir. This baseline will be used by the EPA to increase treatment techniques or allow established techniques to continue to treat the surface water. Compliance sampling began in October 2006 and ended in October 2008. We began testing for LT2 compliance again in March, 2015 and completed sampling in March, 2017.

We believe it is important for you to know that Cryptosporidium may cause serious illness in 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. These people should seek advice from their health care providers.

Lead and 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. The Cocoa Utilities Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Contaminants that may be present in the 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 storm water 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 storm water 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 storm water 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 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.

Important Health Information

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

Section 10

PFAS/PFOA

Per- and polyfluoroalkyl substances (PFAS)

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the U.S., since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams such as aqueous film-forming foam, or AFFF, used for fighting petroleum fires at airfields and in industrial fire suppression processes. PFAS compounds are persistent in the environment and some are persistent in the human body – meaning they do not break down and they can accumulate over time.

Is there a regulation for PFAS in drinking water?

In May 2016, the Environmental Protection Agency (EPA) established a lifetime health advisory (LHA) level at 70 parts per trillion (ppt) for individual or combined concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Both compounds are types of PFAS. On 10 April 2024, the EPA published new drinking water standards for certain PFAS under the Safe Drinking Water Act (SDWA). AF is reviewing the EPA's new rule now, and will incorporate these standards into future sampling and analysis efforts.

Out of an abundance of caution, DoD pursued PFAS testing and response actions beyond EPA SDWA requirements. In 2020, the DoD established a policy to monitor drinking water for 17 PFAS compounds at all service owned and operated water systems. If results confirmed the drinking water contained PFOA and PFOS at individual or combined concentrations greater than 70ppt, water systems quickly took action to reduce exposures. While not a SDWA requirement, in 2023, DoD improved upon its 2020 PFAS drinking water monitoring policy by expanding the list of PFAS compounds monitored to 29, implementing continued monitoring of systems with detectable PFAS over the laboratory Method Reporting Limits (MRL), and requiring initial mitigation planning actions.

Has Patrick SFB tested its water for PFAS?

Yes. In 2023 we sampled for a series of unregulated contaminants, including 29 per- and polyfluoroalkyl substances (PFAS). You have a right to know these data are available. **There were no detectable quantities** for PFAS. Unregulated contaminants do not yet have a drinking water standard; this monitoring will help determine whether the contaminants should require on-going testing and establish allowable maximum contaminant limits. If you wish to examine the results, please call the SLD 45 Bioenvironmental Engineering Flight at 321-494-5435, or email usaf.patrick.45sw-mdg.list.45-omrs-bioenvironmental@health.mil. In accordance with current DoD policy, the water system will be resampled every two years for your continued protection.

Section 11

CLOSING

We at Patrick SFB would like 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 or concerns about the information provided, please feel free to call any of the numbers listed in Section 3 of this report.



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