CITY OF DELRAY BEACH UTILITIES
2021 WATER QUALITY REPORT

We are pleased to present to you this year's Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you everyday. 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. Our water source is ground water from the Surficial Aquifer.

(ESPAÑOL) Este es un documento muy importante con respecto a su agua potable. Este reporte está disponible en Español en La Casa Municipal cuando llame a (561) 243-7312 o visitenos en la Internet a www.delraybeachfl.gov.

(KREYOL) Ti Liv sa, se yon Dokiman trè enpotan Konsènan Kalite Dlo Ke ou bwe. Si ou ta vle, ou Kapab jwen'n li an Kreyol nan Komi'n Delray Beach la.

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WATER SOURCE AND TREATMENT

The City withdraws water from a shallow under-ground source called the east coast surficial aquifer. There are 30 raw water wells located throughout the City from which water is drawn and piped to the water treatment plant. We are currently operating under a water use permit issued by the South Florida Water Management District. Our water use permit allows for the withdrawal of up to 19.1 million gallons per day (MGD).

The water treatment plant uses what is known as "lime softening process" to treat raw water prior to distribution to our customers. Upon arrival at the water treatment plant the raw water is first aerated to remove natural gasses. The water is then blended with lime in settling tanks (clarifiers) for softening, color and iron removal. After the blending process the water is then filtered and disinfected to meet federal Safe Drinking Water Act and Florida state standards. Prior to distribution, fluoride is injected to help prevent tooth decay.

SOURCE WATER ASSESMENT PLAN (SWAPP)

In 2021, The Florida Department of Environmental Protection (FDEP) performed a source water assessment of our system. The assessment was conducted to provide information about potential sources of contamination near the City's wells. There were seventeen potential sources of contamination identified for the City's system with low to moderate susceptibility levels, of which none are of concern at this time. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

QUESTIONS?

The Utilities Department is open Monday through Friday, from 7:30 AM to 4:30 PM, and can be contacted directly for questions and concerns relating to water quality at 561-243-7312. Regular City Commission meetings are generally held on the first and third Tuesday of every month in the Commission Chambers at City Hall. We have worked very hard to maintain a first-rate facility and we welcome the public to tour our water treatment plant. Tours can be scheduled by contacting the water treatment plant directly at 561-243-7318. Further details of our water treatment process are also available at our web site www.delraybeachfl.gov.

MONITORING AND WATER QUALITY

The City of Delray Beach Utilities 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 Jan. 1 to Dec. 31, 2021. Data obtained before Jan. 1, 2021, and presented in this report is from the most recent testing done in accordance with the laws, rules, and regulations.

In the table below, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

Maximum Contaminant Level or 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 or 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

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

Maximum residual disinfectant level or 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 or 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

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

Parts per trillion (ppt) or nanograms per liter (ng/L): one part by weight of analyte to 1 trillion parts by weight of the water sample

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

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TEST RESULTS
2021 CCR - CITY OF DELRAY BEACH

Primary Inorganic Contaminants

Contaminant and Unit of Measurement	*Dates of sampling (mo./yr.)*	*MCL or MRDL Violation Y/N*	*Level Detected*	*Range of Results*	*MCLG*	*MCL*	*Likely Source of Contamination*
Barium (ppm)	01/20	N	0.0045 ppm	0.0045	2 ppm	2 ppm	(a)
Chromium (ppb)	01/20	N	1.2 ppb	1.2	100 ppb	100 ppb	(b)
Fluoride (ppm)	01/21 -12/21	N	0.32 ppm	0.08 – 0.63	4 ppm	4 ppm	(c)
Nitrate as Nitrogen (ppm)	09/21	N	0.08 ppm	0.08	10 ppm	10 ppm	(d)
Sodium (ppm)	01/20	N	26.5 ppm	26.5	160 ppm	160 ppm	(e)

Stage 2 Disinfectant/Disinfection By-Product (D/DBP) Parameters / Stage 1 Chloramines

Disinfectant or Contaminant and Unit of Measurement	*Dates of sampling (mo./yr.)*	*MCL or MRDL Violation Y/N*	*Level Detected*	*Range of Results*	*MCLG or MRDLG*	*MCL or MRDL*	*Likely Source of Contamination*
Total Trihalomethanes (ppb)	01/21 -12/21	N	30.8 ppb	6.8 – 45.9	0 ppb	80 ppb	(f)
Total Halo Acetic Acid (ppb)	01/21 -12/21	N	27.4 ppb	12.2 – 30.5	0 ppb	60 ppb	(f)
Chloramines (ppm)	01/21 -12/21	N	3.6 ppm	0.6 – 5.5	4 ppm	4 ppm	(g)

Lead and 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 (tap water) ppb	10/21	N	5 ppb	0	0 ppb	15 ppb	(h)
Copper (tap water) ppm	10/21	N	<0.1 ppm	0	1.3 ppm	1.3 ppm	(i)

Microbiological Contaminants

Contaminant and Unit of Measurement	*Dates of sampling (mo./yr.)*	TT Violation	*Results*	*MCLG*	*MCL*	*Likely Source of Contamination*
E. coli (at the wellhead ground water source)*	2/21	N	1	0	0	Human and Animal Fecal Waste

The following is a list of the definition and likely source of contamination for each detected contaminant.

(a) Barium	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
(b) Chromium	Discharge from steel and pulp mills, erosion of natural deposits
(c) Fluoride	Erosion of natural deposits; water additive which promotes strong teeth at optimum levels between 0.7 and 1.2 ppm; discharges from fertilizer and aluminum factories.
(d) Nitrate as Nitrogen	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
(e) Sodium	Saltwater intrusion; leaching from soil.
(f) TTHM's & HAA's	By-product of drinking water disinfection
(g) Chloramines	Water additive used to control microbes.
(h) Lead	Corrosion of household plumbing systems; erosion of natural deposits.
(i) Copper	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

* On 2/19/21 well #40; one of the 30 wells the city uses as raw water source was turned on just for sampling and tested positive for the fecal indicator E-Coli. The well was placed out service immediately and corrective action taken. It was determined that sampling port was compromised and once replaced test results were negative. The treated water provided to all residents was never at risk.

Voluntary Monitoring

Contaminant and Unit of Measurement	*Dates of sampling (mo./yr.)*	*MCL or MRDL Violation Y/N*	*Level Detected*	*Range of Results*	*MCLG*	*MCL*	*Likely Source of Contamination*
Perfluoro-n-octanoic acid (PFOA)	01/21 -12/21	N	11 ng/L	10-13	N/A	N/A	(j)
Perfluorooctanesulfonic acid (PFOS)	01/21 -12/21	N	29 ng/L	21-35	N/A	N/A	(j)

The following is a list of the definition and likely source of contamination for each detected contaminant.

(j) PFOA & PFOS	PFAS are a group of manufactured chemicals that have been used in industry and consumer products since the 1940s because of their useful properties.

The City took the initiative to test for additional chemicals in the drinking water. Perfluoro-n-octanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS) were found at levels well below the health advisory limits established by EPA. The average sum of PFOA and PFOS was 40 ng/L (ranging from 31 to 46 ng/L) well below the Health Advisory of 70 ng/L. For additional information on these chemicals visit https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas

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 City of Delray Beach 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 two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

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.

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To ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4719.

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

We at the City of Delray Beach Utilities 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:

City of Delray Beach Utilities Department- Customer Service	(561) 243-7312
City of Delray Water Treatment Plant	(561) 243-7318
City of Delray Beach Utilities Billing Inquiries	(561) 243-7101
Environmental Protection Agency (Safe Drinking Water Hotline)	(800) 426-4719
Florida Department of Health- Palm Beach County	(561) 837-5900
Florida Department of Health- Tallahassee (Headquarters)	(904) 791-1599

2021 CONSENT ORDER

In November 2021, the City of Delray Beach was issued a consent order from the Department of Health-Palm Beach County, regarding a recent cross-connection discovery. Below you will find the violations found. If you have any questions regarding the issued consent order, please contact the City of Delray Beach Utilities Department Customer Service at (561) 243-7312.

Violations

a) Respondent failed to implement its cross-connection control program
b) Respondent failed to issue a public notice within 24 hours of discovery of a cross connection on June 6, 2019 at 120 N. Ocean Blvd
c) Respondent failed to report a cross connection at 120 N. Ocean Blvd to the department within 24 hours of discovery on June 6, 2019.
d) Respondent failed to ensure adequate backflow protection is provided at all locations served by both potable drinking water and reclaimed water. Respondent admits cross-connection inspections conducted to date reveal 609 customer connections without backflow protection.
e) Respondent identified 5 physical cross-connections between potable water service and reclaimed water service at service connections in Respondent's distribution system. The locations were the physical cross-connections were found are: 801 S. Ocean, 120 S. Ocean, 1029 Langer, 120 N. Ocean and 1008 Vista Del Mar.
f) Respondent failed to maintain copies of written reports, summaries, or communications relating to cross-connection control program or sanitary surveys of the system including, but not limited to: records of installation, inspection, maintenance, and replacement of backflow prevention devices and assemblies.
g) Respondent failed to color code potable and reclaimed pipes and fixtures as required.
h) Respondent submitted one or more false statements or representations.
i) Respondent failed to implement enhanced public education in accordance with AWWA Manual M14.

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