

City of Lake Worth Beach Water System

2018 Annual Drinking Water Quality Report of the City of Lake Worth Beach

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien.

The City of Lake Worth Beach is pleased to present the Annual Water Quality Report for 2018. This report is designed to inform you about the quality of water that is delivered to you every day. It is the City's constant goal to provide you with a safe and dependable supply of drinking water. It is important for customers to understand the efforts that are made to continually improve the water treatment process and protect water resources. Lake Worth is committed to ensuring the quality of your water. The highly professional staff is the cornerstone of this commitment to quality.

THE LAKE WORTH WATER BEACH TREATMENT PLANT IS COMPRISED OF TWO FACILITIES, A LIME SOFTENING WATER PLANT AND A REVERSE OSMOSIS WATER PLANT.

The Lime Softening Plant is designed to treat a maximum of 12.9 Million-Gallons-per-Day (MGD). The plant is supplied fresh raw water from the East Coast Surficial Aquifer and Biscayne Aquifer that is 100-300 feet deep. It is pumped out of 12 production wells located within a half-mile radius of the plant.

The Reverse Osmosis Plant is designed to treat an average 4.5 MGD. The brackish (slightly salty) raw water is supplied to the Reverse Osmosis Plant from Floridan Aquifer wells that are approximately 1,000 feet deep. It is pumped out of 3 Floridan production wells located within a half-mile radius of the plant.

The treated water from these two plants is blended to produce very high quality finished water. This process produces water that is non-corrosive, facilitates clothes washing, bathing and has an excellent taste. The water is disinfected with chloramines before it is distributed to the consumer. During 2018, the average daily flow to the system was 5.141 MGD and the peak daily flow was 6.654 MGD. Staff at the Lake Worth Water Treatment Plant works around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.

We want our valued customers to be informed about their water utility. We invite interested customers to visit the City of Lake Worth website: www.lakeworth.org or attend our regularly scheduled City commission meetings. The commission meetings are held on the first and third Tuesday of each month at 6:00 PM in City Hall, located at 7 North Dixie Highway. If you want to learn more about water rates or your utility bill, please call the Customer Service Office at 533-7300.

If you have, any questions about this report please contact

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MESSAGE FROM THE DIRECTOR

The City Water Utility Department had a very productive year in 2018. We continue to work to serve our residents and water customers with safe, excellent quality water and provide the highest level of friendly, courteous service in 2019.

The Water Utility Department has provided needed information in a clearer and more convenient format. This included a Customer Handbook, a Water Utility Ordinance (Chapter 18), a Policies and Procedures Manual and the Consumer Confidence Report. They are located on the Water Utility website for your information.

The City's Water Treatment Plant provides drinking water from two separate well water sources that improve the reliability and environmental sustainability of our water supply. The original fresh (East Coast Surficial Aquifer and Biscayne Aquifer) well water source is treated with chlorine, ammonia and lime then filtered prior to disinfection and to improve aesthetics. The second (Floridan Aquifer) water source uses brackish (mildly salty) water from approximately 1000-foot-deep wells, which is treated with reverse osmosis membranes to remove the salt and other impurities. Together, this blend of treated water helps us protect the environment by reducing salt water intrusion, and provides excellent quality, cost-effective, good-tasting water. Be assured that our finished water complies with all requirements of the Local, State and Federal Regulatory Agencies, including the Lead and Copper Rule.

DURING THE LAST YEAR, THE DEPARTMENT HAS COMPLETED MANY CAPITAL PROJECTS TO MAKE THE WATER UTILITY SYSTEM EVEN BETTER. THESE INCLUDE:

- 2" watermain replacement Phase 3 is nearing completion in Summer 2018 and Phase 4 will be starting soon.
- Over 3.5 miles of new water distribution piping and 25 hydrants were installed with the Neighborhood Road Program in various areas of the City.
- Downtown Watermain replacement provides a more reliable water service to downtown residents and businesses
- Structural repairs and piping replacement in the East Clearwell at the Water Treatment Plant
- Rehabilitation of Surficial Aquifer Well 6

- Rehabilitation of Surficial Aquifer Well 8
- Rehabilitation of North Booster Storage Tank
- New fire hydrants on existing mains within the City.
- Completed Replacement of outdated water meters with Automatic read meters.

The Department has an ongoing program to replace the old 2” steel water pipes that provide water to many homes in the City, and coordinates addition and replacement of water mains with the Neighborhood Road Program roads. These piping improvements are needed to assure the reliability and quality of water delivered to customers. Our field crews are also installing fire hydrants and new water meters as part of the system maintenance work. The field crews routinely flush water from the hydrants to keep the chlorine content of the water above acceptable levels for public safety. As piping improvements occur, we will be able to reduce the amount of this periodic water flushing.

The Water Utility Team looks forward to the challenges and opportunities to serve Lake Worth’s residents and customers in the years to come. We ask that you work with us to conserve this valuable resource and use water wisely. If you want to learn more, please check the City’s website: www.lakeworth.org.

Brian A. Shields, P.E.
Water Utility Director/City Engineer

In 2018, the Department of Environmental Protection performed a Source Water Assessment on our system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells. There are eight (8) potential sources of contamination identified for this system, all with a low susceptibility level. The assessment results are available on the FDEP Source Water Assessment and Protection website at www.dep.state.fl.us/swapp.

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 be the result of oil and gas production and mining activities.

WHAT ABOUT TAP WATER VS. BOTTLED WATER?

In order 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.

WHAT ABOUT LEAD?

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. Lake Worth 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 or at: www.epa.gov/safewater/lead.

NOTE TO IMMUNO-COMPROMISED CUSTOMERS:

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 Hot-Line (800-426-4791).

DEFINITIONS

IN THE TABLES YOU WILL FIND MANY TERMS AND ABBREVIATIONS YOU MIGHT NOT BE FAMILIAR WITH. 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 that, if exceeded, triggers treatment or other requirements that a water system must follow.
- **Maximum residual disinfection 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 disinfection 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.
- **None Detected (ND):** Means not detected and indicates that the substance was not found by laboratory analysis.
- **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 Billion (ppb) (or Micrograms per Liter µg/L):** One part by weight of analyte to 1 billion parts by weight of the water sample.
- **Picocurie per liter (pCi/L):** Measure of the radioactivity in water.

SAFE DRINKING WATER HOT-LINE

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hot-Line at: **1-800-426-4791**.

Or visit their web-site at: www.epa.gov/OGWDW.

LAKE WORTH BEACH WATER TREATMENT PLANT TEST RESULTS FOR 2018

The City of Lake Worth 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 1 to December 31, 2018. Data obtained before January 1, 2019, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

TABLE 1 - INORGANIC CONTAMINANTS:

Contaminant and Unit of Measurement	Dates of sampling (Month/ Year)	MCL Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Barium(ppm)	02/18	N	0.0023	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride(ppm)	02/18	N	0.11	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum level of 0.7 ppm.
Sodium(ppm)	02/18	N	76.2	N/A	160	Salt water intrusion, leaching from soil.
Nitrate(as Nitrogen) (ppm)	02/18	N	0.040	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite(as Nitrogen) (ppm)	02/18	N	0.029	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

TABLE 2 - STAGE 2 DISINFECTANTS AND DISINFECTION BY-PRODUCTS

Contaminant and Unit of Measurement	Dates of sampling (Month/Year)	MCL or MRDL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Chloramines (ppm)	01/18 – 12/18	N	3.67	0.2–5.7	4	4	Water additive used to control microbes.
TTHM [Total Trihalomethanes] (ppb)	Quarterly Testing, 2018	N	13.05	8.6–19.4	N/A	80	By-product of drinking water disinfection.
Haloacetic Acids (five) (HAA5) (ppb)	Quarterly Testing, 2018	N	19.175	12.6–22.1	N/A	60	By-product of drinking water disinfection.

TABLE 3 - LEAD AND COPPER (TAP WATER)

Contaminant and Unit of Measurement	Dates of sampling (Month/Year)	AL Exceeded Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water)(ppm)	01/18-06/18 07/18–12/18	N	0.213 0.22	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead (tap water)(ppb)	01/18 - 06/18 07/18 – 12/18	N	2.3 4.2	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits.

The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. We have learned through our monitoring and testing that some constituents have been detected.

CITY OF LAKE WORTH SERVICE AREA

Our water service area includes the areas shown below. This includes all residents within the city limits of Lake Worth and outside the City limits generally between Congress and Interstate 95, from 10th Avenue North south to Hypoluxo Road.

