



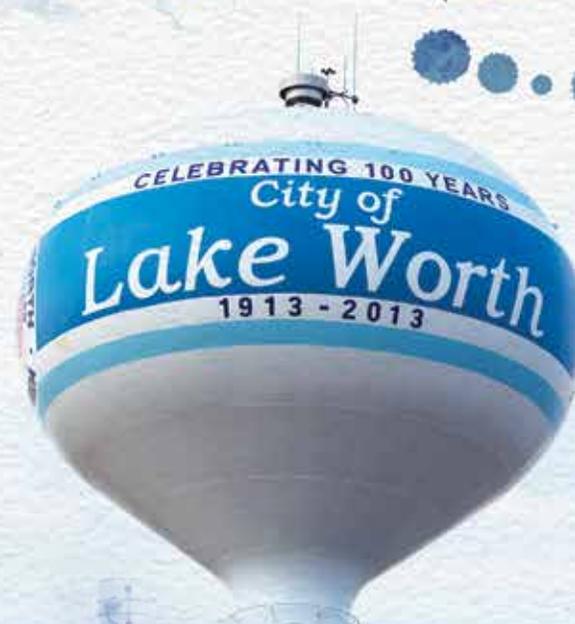
CITY OF LAKE WORTH WATER SYSTEM

## 2015 Annual Drinking Water Quality Report of the City of Lake Worth

**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 is pleased to present the Annual Water Quality Report for 2015. 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 is 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 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 Surficial Aquifer that is 100-300 feet deep. It is pumped out of 13 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 2015, the average daily flow to the system was 5.078 MGD and the peak daily flow was 6.122 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.

Additionally, staff routinely monitors for contaminants in your drinking water in accordance with Federal and State laws, rules and regulations. The included table shows the results of our monitoring for the most recent period applicable for this report.

If you have any questions regarding this information, please contact:

**Timothy Sloan, Water Treatment Plant Manager**  
**561.586.1710 or [tsloan@lakeworth.org](mailto:tsloan@lakeworth.org)**



## Message from the Director

We continue to work to serve our residents and water customers with safe, excellent quality water and provide friendly, courteous service in 2016.

The Water Utility Department has provided information in a clearer and more convenient format. In keeping with the times, all information has been uploaded to the City's website [www.lakeworth.org](http://www.lakeworth.org) on the Water Utility page providing 24-hour access to needed information. Items to look for include:

- Customer handbook;
- Policies and Procedures Manual;
- Water utility ordinance (Chapter 18);
- Consumer Confidence Report.

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 (surficial) well water source is treated with chlorine, ammonia for disinfection and lime. It is then filtered to improve aesthetics. The second (Upper Floridan) 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. Chlorine and ammonia are then added for disinfection. 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.

This past year, the water plant completed a project to provide even better quality water by improving the water disinfection process. The improvement meets new EPA/FDEP guidelines and provides a higher level of assurance that your water is of excellent quality. 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 past year, the Water Utilities Department has completed many capital projects to make the water utility system even better. These include:

- 10th Avenue South Water Main replacement;
- New water distribution piping and fire hydrants at 14th, 15th Avenue North and Crestwood;
- Design of new water mains and fire hydrants along Tropical Drive, Barton Road and 2" Water Main Replacements Phase 1;
- 23 New fire hydrants on existing mains within the City;
- Replacement of outdated water meters with Radio read meters.

Additionally, the Water Utilities Department has an ongoing program to replace the old 2 inch steel water pipes that provide water to many homes in the City. 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 water fresh and ensure proper chlorine content. As piping improvements occur, we will be able to reduce the amount of this periodic water flushing.

I would like to thank my predecessor, Larry Johnson, and wish him well in his retirement. The Water Utility Team looks forward to the challenges and opportunities to serve Lake Worth residents and customers in the years to come. We ask that you work with us to conserve this valuable resource and use water wisely.

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

The Lake Worth Water Utility Department had an exciting and productive year in 2015.

## In 2015, the Department of Environmental Protection performed a Source Water Assessment on the City of Lake Worth Water System.

The assessment was conducted to provide information about any potential sources of contamination in the vicinity of the City's wells. There are four (4) 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 <http://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:

- (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.



### 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: <http://www.epa.gov/safewater/lead>.



Some people may be more vulnerable to contaminants in drinking water than the general population.



### 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.



### LAKE WORTH WATER TREATMENT PLANT TEST RESULTS FOR 2015

The City of Lake Worth 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, 2015. Data obtained before January 1, 2015, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

Microbiological Contaminants						
Contaminant and Unit of Measurement	Dates of sampling (Month/Year)	Violation Y/N	Highest Monthly Percentage/ Number	MCLG	MCL	Naturally present in the environment
Total Coliform Bacteria (positive samples)	Jan-Dec 2015	N	2.2%	0	>5%	Naturally present in the environment

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)	01/14	N	0.0026	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride (ppm)	01/14	N	0.12	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)	01/14	N	64.3	N/A	160	Salt water intrusion, leaching from soil.

Stage 1 Disinfectants and Disinfection By-Products							
For bromate, chloramines, or chlorine, the level detected is the the highest running annual average (RAA), computed quarterly, of monthly averages of all samples collected. The range of results is the range of results of all the individual samples collected during the past year. For haloacetic acids or THM, the level detected is the highest RAA, computed quarterly, of quarterly averages of all samples collected if the system is monitoring quarterly or is the average of all samples taken during the year if the system monitors less frequently than quarterly. Range of Results is the range of individual sample results (lowest to highest) for all monitoring locations.							
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)	01/15 - 12/15	N	3.64	0.2 - 5.7	4	4	Water additive used to control microbes.
THM [Total Trihalomethanes] (ppb)	Quarterly Testing, 2015	N	9.11	2.0 - 27.3	N/A	80	By-product of drinking water disinfection.
Haloacetic Acids (five) (HAA5) (ppb)	Quarterly Testing, 2015	N	11.78	6.1 - 16.8	N/A	60	By-product of drinking water disinfection.

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) CLG	Likely Source of Contamination
Copper (tap water) (ppm)	07-09/15	N	0.43	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead (tap water) (ppb)	07-09/15	N	3.2	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits.

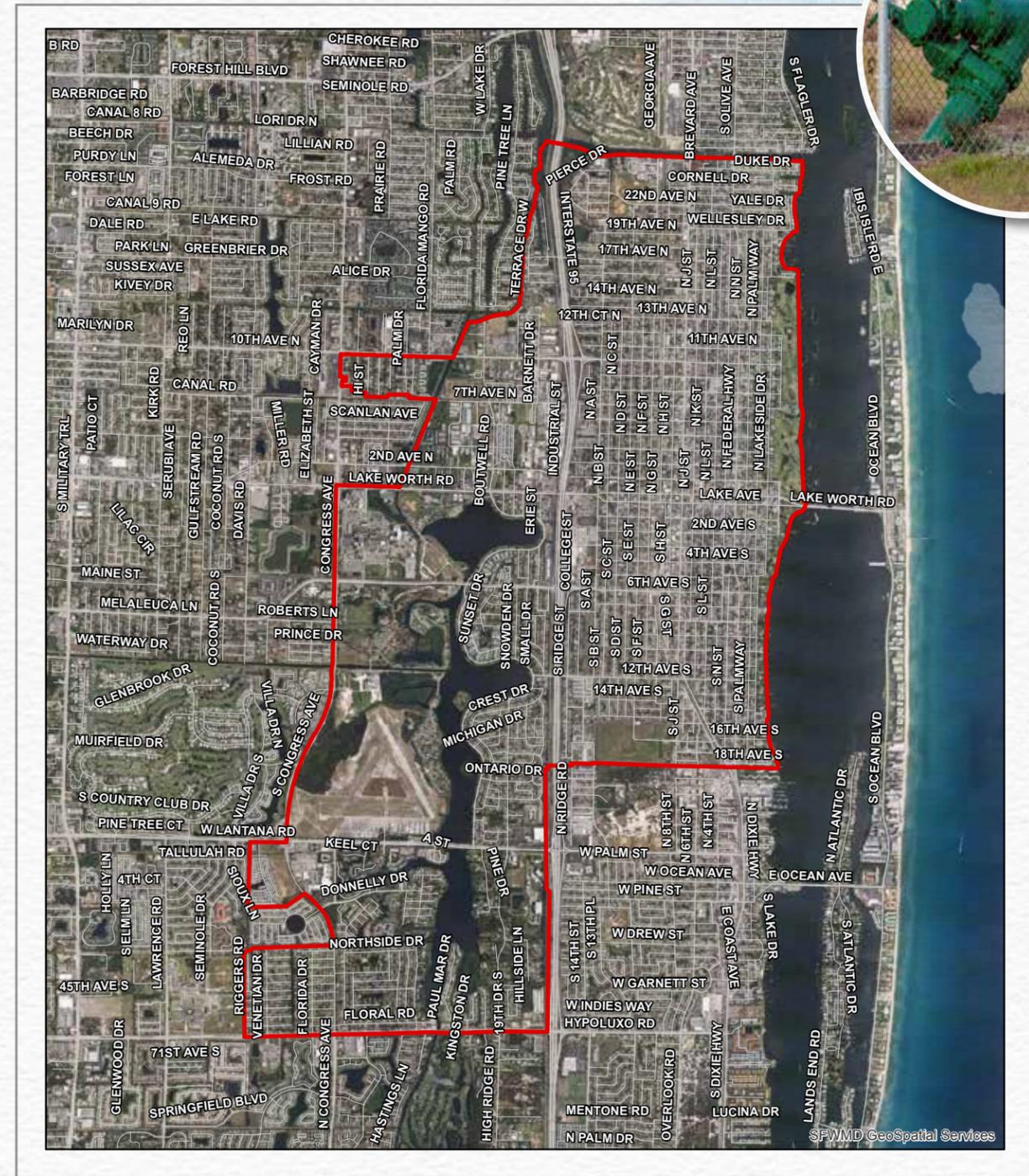
The state allows the City to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative, are more than one year old. It has been learned through our monitoring and testing that some constituents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

### 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: <http://www.epa.gov/OGWDW>

### CITY OF LAKE WORTH WATER UTILITIES SERVICE AREA

The City's water service area is indicated in the grey areas of the map. This includes all residents within the municipal boundaries of Lake Worth and outside the City limits generally between Congress Avenue and Interstate 95, from 10th Avenue North proceeding south to Hypoluxo Road.



Lake Worth Water Utilities  
301 College Street  
Lake Worth, Florida 33460

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[www.lakeworth.org](http://www.lakeworth.org)

