



Town of Lake Clarke Shores

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2016 Annual Drinking Water Quality Report

Lake Clarke Shores Utility System

The following is important information about the water quality of your area, please call (561) 642-7870 to request a translated report or assistance with the language in the report.

La siguiente es información importante sobre la calidad del agua de su área, llame al (561) 642-7870 para solicitar un informe traducido o asistencia con el idioma en el informe.

Swivan enfòmasyon enpòtan sou dlo kalite zòn ou la, tanpri, rele (561) 642-7870 pou mande yon rapò ke oubyen asistans ak lang nan rapò a.

INTRODUCTION:

We are very pleased to provide you with this year's Annual Drinking Water Quality Report. This report is in compliance with requirements of the latest amendments to the Federal Safe Drinking Water Act regarding consumer confidence, and it is designed to assure that our water consumers are better informed about the quality water and services that we provide. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water.

The Town of Lake Clarke Shores owns and operates the Lake Clarke Shores Utility System. The Lake Clarke Shores Utility System receives its water supply from the Village of Palm Springs and distributes it through a system of piping.

The Palm Springs Treatment Plant is supplied raw water from the Surficial Aquifer and is pumped out of 17 production wells.

The Village of Palm Springs 2016 Annual Water Quality Report Data is included with this report as reported by Palm Springs Utilities to the Town of Lake Clarke Shores.

In 2016 the Department of Environmental Protection preformed a Source Water Assessment on the Palm Springs Utilities System which supplies the Lake Clarke Shore System with water. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at the following link: https://fldep.dep.state.fl.us/swapp/DisplayPWS.asp?pws_id=4501058.

Our water is obtained from ground water sources and is chlorinated for disinfection purposes.

If you have any questions about this report or concerning your water utility, please contact the Lake Clarke Shores Water Utility Department at (561) 642-7870. We want our customers to be informed about their water utilities, if you want to learn more, please attend any of our regularly scheduled Town Council meetings.

Town Council Meetings are held on the second Tuesday of each month at Town Hall, 1701 Barbados Road, Lake Clarke Shores, FL beginning at 6:30 PM. You can obtain additional information from the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

The Lake Clarke Shores Water 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 January 1 to December 31, 2016. Data obtained before January 1, 2016, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

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

DEFINITIONS

Not-Detected (ND) - "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 - one part by weight of analyte to 1 billion parts by weight of the water sample.

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

90th percentile value reported – If the 90th percentile value does not exceed the AL, the system is in compliance.

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

Location 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 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.

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.

Initial Distribution System Evaluation (IDSE) – An important part of the Stage 2 Disinfection By-Products Rule (DBPR). The IDSE is a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.

Level 1 Assessment – A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment – A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

TEST RESULTS

Microbiological Contaminants						
*Data from analysis of bacteriological sample results for Lake Clarke Shores						
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly Number	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (positive samples)	01/16-03/16	N	0	0	For systems collecting fewer than 40 samples per month: presence of coliform bacteria in >1 sample collected during a month.	Naturally present in the environment

Inorganic Contaminants							
*Data from Palm Springs 2016 Annual Drinking Water Quality Report							
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Barium (ppm)	02/14	N	0.0049	0.00378 - 0.00491	2	2 ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Nitrate (as Nitrogen) (ppm)	02/16	N	0.065	0.050 - 0.065	10	10 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nitrite (as Nitrogen) (ppm)	02/16	N	0.025	0.025	1	1 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Sodium (ppm)	02/14	N	37.7	31.2 - 37.7	N/A	160 ppm	Salt water intrusion, leaching from soil

Stage 1 Disinfectants and Disinfection By-Products							
*Data from analysis of test results for Lake Clarke Shores							
For bromate, chloramines, or chlorine, the level detected is 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.							
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
Chlorine and Chloramines (ppm)	1/16-12/16	N	2.63	0.6 - 4.8	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

Stage 2 Disinfectants and Disinfection By-Products

*Data from analysis of quarterly test results for Lake Clarke Shores

For chloramines, or chlorine, the level detected is the highest running annual average (RAA), computed quarterly, of monthly averages of all samples collected. For halo-acetic acids or TTHM, 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, including Initial Distribution System Evaluation (IDSE) results as well as Stage 2 compliance results.

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 (TTHM) (ppb) (Site 1)	01/16 - 12/16	N	76.6	60.3 – 100.5	N/A	80	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM) (ppb) (Site 2)	01/16 - 12/16	N	73.1	57.6 – 94.4	N/A	80	By-product of drinking water disinfection.
Haloacetic Acids (HAA5) (ppb)	01/16 - 12/16	N	33.2	18.8 – 57.7	N/A	60	By-product of drinking water disinfection.

Two samples during 2016 (1821 Caribbean Rd, May) had a TTHM result of 100.5 ppb and (7504 Pine Tree Lane, May) had a TTHM result of 94.4 ppb. However the system did not incur an MCL violation because the annual average results at all sites were at or below the MCL. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have increased risk of getting cancer.

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.

Lead and Copper (Tap Water)

*Data from analysis of Lead and Copper test results from 2015 sampling for Lake Clarke Shores

Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	AL Exceeded Y/N	90 th Percentile Result	No. of Sampling Sites Exceeding the AL	MCLG	AL (Action Level)	Likely source of Contamination
Copper (tap water) (ppm)	08/15	N	0.024	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead (tap water) (ppb)	08/15	N	11.0	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits

ADDITIONAL INFORMATION

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 Town of Lake Clarke Shores 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>.

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.

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.

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) or at <http://www.epa.gov/safewater/lead>.

Please DO NOT FLUSH your unused/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>.

CONCLUSION

We at The Town of Lake Clarke Shores Utilities work around the clock to provide top quality water to every tap. We ask that our customers help protect our water sources, which are the heart of our community, our way of life and our children's future.

The Town of Lake Clarke Shores would like you to understand the efforts we make to continually improve our Water Utility Department. We are committed to insuring 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.

Village of Palm Springs Public Service Department 2016 Drinking Water Quality Results

TEST RESULTS TABLE

Contaminant and Unit of Measure	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 and Copper (Tap Water)							
Copper (ppm) (Tap Water)	07/14-08/14	N	0.009	0	1.3	1.3	Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives.
Lead (ppb) (Tap Water)	07/14-08/14	N	1.53	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits.
Contaminant and Unit of Measure	Dates of Sampling (Mo./Yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants							
Nitrate (as Nitrogen) (ppm)	2/16	N	0.065	0.050-0.065	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.
Nitrite (as Nitrogen) (ppm)	2/16	N	0.025	0.025	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.
Sodium (ppm)	2/14	N	37.7	31.2-37.7	N/A	160	Salt water intrusion, leaching from soil.
Barium (ppm)	2/14	N	0.0049	0.00378 - 0.00491	2	2	Erosion of Natural deposits; discharge of drilling wastes; discharge of metal refineries.

Total Coliform Bacteria: The Highest Monthly Number is the highest monthly number of positive samples for systems collecting fewer than 40 samples per month. The Highest Monthly Percentage is the highest monthly percentage of positive samples for systems collecting at least 40 samples per month.

An **acute violation** of the Total Coliform Rule (TCR) exists when:

- any system collects a fecal-positive or *E. Coli*-positive sample that is followed by any positive repeat sample; **or**
- if any total coliform-positive sample is followed by a repeat sample that tests positive for either fecal coliform or *E. Coli*.

A **non-acute violation** of the TCR exists when:

- a system which collects at least 40 samples per month has a presence of total coliform in more than 5.0 percent of its monthly samples; **or**
- a system which collects fewer than 40 samples per month has more than 1 sample test positive for total coliform

Possible Scenarios:

- A fecal-positive or *E. Coli*-positive followed by proper repeat sampling absent of any contamination does not generate a violation as long as the TCR has not been violated. For a system taking over 40 samples per month, this result is then totaled with any total coliform positive compliance results for the month to determine percentage compliance with the TCR
- A system that collects more than 40 samples per month and has one positive sample followed by two positive repeat samples, with at least one of those being either fecal-positive or *E. coli*-positive would have an MCL violation (acute), even if the total number of positive samples is less than 5% of the total for the month.

Microbiological Contaminants

Contaminant and Unit of Measurement	Dates of sampling (Mo./ Yr.)	MCL Violation Y/N	Highest Monthly Percentage/ Number	MCLG	MCL /TT	Likely Source of Contamination
1a. Total Coliform Bacteria (positive samples until March 31, 2016)	01/16-03/16	N	0	0	Presence of coliform bacteria in >1 sample collected during a month.	Naturally present in the environment
1b. Total Coliform Bacteria (beginning April 1, 2016)	04/16-12/16	N	N/A	N/A	TT	Naturally present in the environment

Stage 2 Disinfectant and Disinfection By-Product

For bromate, chloramines, or chlorine, the level detected is 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 (Mo./ Yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
HAA5 (ppb) (Haloacetic Acids)	01/16-12/16	N	34.625	22.4-44.5	N/A	60	By-product of drinking water chlorination.
THM (ppb) (Total Trihalomethanes)	01/16-12/16	N	45.25	19.1-65.9	N/A	80	By-product of drinking water chlorination.