



## 2016 DRINKING WATER QUALITY SUMMARY

*The Town of Longboat Key purchases its potable water from the Manatee County Utilities Department where it is treated for consumption prior to delivery to the Town. Manatee County and Longboat Key follow stringent U.S. Environmental Protection Agency (EPA) rules and guidelines and commit daily to provide the highest quality drinking water to its consumers. This report reflects on that commitment and represents a summary of the drinking water quality from January through December 2016.*

### Protecting Your Water Source

Drinking water for Longboat Key customers is a blend of purified groundwater and purified surface water. In 2016, Manatee County Utilities extracted an average of 14.65 million gallons per day of deep groundwater and used 25.50 million gallons per day of surface water.



Groundwater is pumped from the Floridan Aquifer from seven, 1,200-foot deep wells located in eastern Manatee County. This water is pumped through a 36-inch pipe approximately 13 miles to the Purification Plant. Surface water is taken from the Lake Manatee Reservoir located in central Manatee County.

In 2016 the Florida Department of Environmental Protection (FDEP) performed a Source Water Assessment on Manatee County's system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of Manatee County wells or surface water intakes. Thirteen potential sources of contamination were identified for the Manatee County Water Purification Plant with low susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp) or they can be obtained from the Manatee County Water Purification Plant at 941-746-3020.

The County takes stringent measures to protect these water sources. In the late 1980s Manatee County voters approved the purchase of 20,500 acres of the 82,000-acre watershed area, which drains into and includes the reservoir and well field. County and State agencies have continued to purchase additional watershed acreage, and today approximately 35,000 acres are in public ownership. This ownership insures that activities detrimental to water quality or quantity will not occur on these public lands.

### Health and Safety Standards

The sources of drinking water, both tap 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:

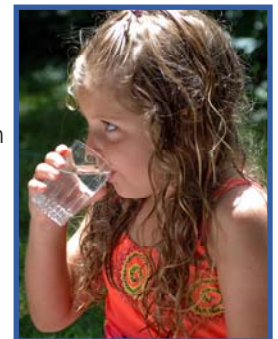
**Microbial contaminants** such as viruses and bacteria may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

**Inorganic contaminants** such as salts and metals 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** 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, are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

**Radioactive contaminants** can be naturally occurring or the result of oil and gas production and mining activities.



In order to ensure that tap water is safe to drink, EPA prescribes regulations that 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 providing 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline, (800)-426-4791.

## Table Key and Definitions

<b>AL</b>	Action Level
<b>MCL</b>	Maximum Contaminant Level
<b>MCLG</b>	Maximum Contaminant Level Goal
<b>N/A</b>	Not Applicable
<b>ND</b>	Not Detected
<b>NTU</b>	Nephelometric Turbidity Units
<b>pCi/L</b>	Picocuries per liter (a measure of radioactivity)
<b>ppb</b>	Parts per billion or micrograms per liter (ug/L)
<b>ppm</b>	Parts per million or milligrams per liter (mg/L)
<b>TT</b>	Treatment Technique
<b>LBK</b>	Town of Longboat Key results
<b>A</b>	Total Coliform detections must not exceed 5% of all monthly samples.
<b>B</b>	Filter turbidity may never exceed 1 NTU and must not exceed 0.3 NTU in 95% of daily samples in any month.
<b>C</b>	MCL limit of Radium-226 and Radium-228 combined.
<b>D</b>	The value is the highest running annual average, computed quarterly.
<b>E</b>	These values represent values at individual sample sites.
<b>F</b>	A public water system (PWS) is in compliance with the MRDL when the running annual average of monthly averages of samples taken in the distribution system, computed quarterly, is less than or equal to the MRDL.
<b>G</b>	This value is the highest locational running annual average, computed quarterly.
<b>H</b>	These values represent the % total organic carbon removal achieved at the treatment plant divided by the % removal required. This value must be above 1.0 for compliance.
<b>I</b>	This value is the lowest running annual average, computed quarterly, of the monthly removal ratio.

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

**Filter Turbidity (NTU):** Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of our filtration system. High turbidity can hinder the effectiveness of disinfectants.

**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.

**Total trihalomethanes:** Disinfection by-products expressed as the sum of chloroform, dibromochloromethane, bromodichloromethane and tribromomethane.

**Not Detected or ND:** Indicates the substance was not found by laboratory analysis.

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

**MONITORING VIOLATION:** Based on the number of customers served, utilities are required by federal regulation to collect 180 monthly samples from throughout the service area to be analyzed for total coliform bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. When one of the samples collected on August 10, 2016 was positive for total coliform bacteria we are required by rule to collect three repeat samples within 24 hours and analyze them for total coliform to determine if there were problems in the water treatment or distribution. These three samples were to include one repeat sample from the original location, and one from within five service connections upstream from the original location, and one from within five service connections downstream of the original location. On August 10, 2016 we did not collect the upstream and downstream samples, which violated monitoring requirements and initiated a Level 1 Assessment and corrective action. Although we cannot be sure of the quality of drinking water during that time, the result of the recollect and the results of the other samples collected on August 10, 2016 and throughout the month indicate the water met drinking water standards.

**LEVEL 1 ASSESSMENT:** During 2016 Manatee County was required to conduct one Level 1 Assessment due to the monitoring violation on August 10, 2016. A Level 1 Assessment is a study of the water system to identify potential problems. The Level 1 Assessment was completed in September 2016 and determined that improperly following in-place sampling procedures was the cause of the missed samples. In addition, Manatee County was required to take corrective action, which included retraining the staff members responsible for the collection of water samples on proper sampling procedures to ensure all samples are collected as required. This corrective action was completed in September 2016.

## 2016 Drinking Water Quality Summary

MICROBIOLOGICAL							
Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Highest Monthly Percentage/Number	MCLG	MCL	Likely Source of Contamination	
Total Coliform Bacteria	01/16-12/16	No	2%	0	>5% <sup>A</sup>	Naturally present in the environment	
Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Highest Single Measurement	Lowest Monthly % of Samples Meeting Regulatory Limits	MCLG	MCL	Likely Source of Contamination
Filter turbidity (NTU)	01/16-12/16	No	0.44	99.4% <sup>B</sup>	N/A	TT <sup>B</sup>	Soil runoff

INORGANIC							
Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Max. Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Arsenic (ppb)	01/16-12/16	No	0.51	1ND-0.51	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics
Barium (ppm)	01/16-12/16	No	0.015	0.011-0.015	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	01/16-12/16	No	0.8	0.6-0.8	4	4	Water additive which promotes strong teeth
Nitrate (as Nitrogen) (ppm)	01/16-12/16	No	0.28	0.46-0.28	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppb)	01/16-12/16	No	17.3	13.5-17.3	N/A	160	Salt water intrusion; leaching from soil

SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES AND HERBICIDES							
Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Max. Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Atrazine (ppb)	01/16-12/16	No	0.03	ND-0.03	3	3	Runoff from herbicide used on row crops

RADIOLOGICAL CONTAMINANTS							
Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Max. Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Radium 226 (pCi/L)	01/16-12/16	No	0.8	ND-0.8	0	5 <sup>C</sup>	Erosion of natural deposits
Radium 228 (pCi/L)	01/16-12/16	No	1.07	ND-1.07	0	5 <sup>C</sup>	Erosion of natural deposits

STAGE 2 DISINFECTANT AND DISINFECTION BY-PRODUCTS (D/DBP) PARAMETERS							
Disinfectant or Contaminant and Unit of Measurement	Dates of Sampling	MCL or TT Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Chloramines (ppm)	01/16-12/16	No	3.8 <sup>D</sup>	ND-6.0 <sup>E</sup>	MRDLG = 4	MRDL = 4 <sup>F</sup>	Water additive used to control microbes
Haloacetic acids (ppb)	01/16-12/16	No	39.4 <sup>G</sup>	15.5-44.4 <sup>E</sup>	N/A	MCL = 60	By-product of drinking water disinfection
Total trihalomethanes (ppb)	01/16-12/16	No	51.3 <sup>G</sup>	29.4-71.5 <sup>E</sup>	N/A	MCL = 80	By-product of drinking water disinfection
Total organic carbon (ratio) <sup>H</sup>	01/16-12/16	No	1.33 <sup>I</sup>	1.09-1.57	N/A	TT	Naturally present in the environment

LEAD AND COPPER (TAP WATER)							
Contaminant and Unit of Measurement	Dates of Sampling	Violation Y/N	90 <sup>TH</sup> Percentile Results	No. of Sampling Sites Exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Lead (ppb)	2016 <sup>J</sup>	No	0.59	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits.
Copper (ppm)	2016 <sup>J</sup>	No	0.15	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

**If you need help in understanding water quality issues, have questions about this report, or have a water quality concern, please call us at 941-316-1988.**

## LONGBOAT KEY ADDITIONAL ANALYSIS

The Town of Longboat Key performs supplemental laboratory tests on a monthly basis. The following details the results of the Longboat Key water sampling program.

**Bacteriological Analysis:** The Town collected **150** samples in 2016.

**Lead and Copper:** Lead and Copper are sampled once every three (3) years. The maximum allowable limits for Lead is 0.015 mg/l and for Copper is 1.3 mg/l. The last analysis period was in August 2014 when 20 samples were collected from various locations. Based on the 90th percentile level the samples for both parameters were below the allowable levels set forth by the EPA.

**Asbestos Cement (AC) Pipeline Test:** A portion of the Town's water main is of AC material. Therefore a sample of tap water that receives water from the AC pipeline must be tested for asbestos a minimum of once every nine (9) years. The results of the 2010 tests were less than 0.180 million fibers per liter. The maximum allowable level is 7 million fibers per liter.

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
Chloramines (mg/l)	1/16-12/16	No	3.14 <sup>LBK</sup>	.6—4.7 <sup>LBK</sup>	MRDLG= 4	MRDL = 4 <sup>F</sup>	Water Additive used to control microbes
Haloacetic acids (ppb)	1/16-12/16	No	32.29 <sup>LBK</sup>	28.80—35.40 <sup>LBK</sup>	N/A	MCL=60	Byproduct of drinking water disinfection
Total Trihalomethanes	1/16-12/16	No	42.61 <sup>LBK</sup>	40.40—45.10 <sup>LBK</sup>	N/A	MCL=80	Byproduct of drinking water disinfection

Contaminant and Unit of Measurement	Dates of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. Sampling Sites Exceeding AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (mg/l)	8/14	No	0.206 <sup>LBK</sup>	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ug/l)	8/14	No	0.003 <sup>LBK</sup>	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

## MICROBIOLOGICAL

Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Highest Monthly Percentage/ Number	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria	01/16-12/16	No	0%	0	>5% <sup>A</sup>	Naturally present in the environment



**Find Out the Facts** — Concerns about drinking water quality have caused many residents to use bottled water or to install home treatment devices. Be sure to learn about the quality of the alternate water or the expected water quality from home treatment devices. If you need help in understanding water quality issues, have questions about this report, or have a water quality concern, please call the Town of Longboat Key Public Works Department (941-316-1988) or visit our website at [www.LongboatKey.org](http://www.LongboatKey.org). For questions related directly to the water treatment, please call Manatee County (941-746-3020).

**Immuno-Compromised Individuals** — Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as those with cancer undergoing chemotherapy, undergone organ transplants, 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 microbial contaminants are available from the Safe Drinking Water Hotline, 800-426-4791. These precautions apply to publicly supplied water, bottled water, private well water or water from home treatment devices.



**Total Coliform** — The Total Coliform Rule requires water systems to meet a stricter limit for Coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When Coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply.

**Radon** — Manatee County constantly monitors the water supply for various contaminants. They have detected radon in the finished water supply in the January, April, July, and October quarterly samples. The maximum result was 115.0 pCi/L. There is no federal regulation for radon levels in drinking water; proposed MCL for radon is 300 pCi/L. Exposure to air-transmitted radon over a long period may cause adverse health effects.

**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. The Manatee County Water Purification Plant 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 at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

**HOW YOUR WATER IS PURIFIED.** The Manatee County Water Purification Plant, located on the shore of Lake Manatee, purifies both groundwater and surface water. The groundwater is purified by aeration, lime-softening and filtration. These processes remove odor, a portion of the hardness, and undesirable elements such as suspended matter and microbiological organisms. The surface water is purified by carbon adsorption, coagulation, sedimentation and filtration. These processes remove odor, color, and undesirable elements such as suspended matter and microbiological organisms. The filtered water from the two sources is then combined. The combined water is further enhanced before leaving the plant. The water is disinfected to destroy microbes and provide protection against microbial regrowth in the distribution system and your plumbing. The water is also made less corrosive, thus prolonging your home plumbing and fixtures. Natural fluoride levels are slightly increased to optimal levels as a public health measure to help develop decay resistant teeth and strong bones. The purification plant is staffed with dedicated, professionally trained, State certified operational, laboratory and maintenance personnel. This staff operates and maintains the advanced water purification facility as well as monitors and researches water quality issues. The Town of Longboat Key Water Treatment Operator monitors and tests water quality daily to ensure healthy and pleasant-tasting water on Longboat Key.

# 2016 DRINKING WATER QUALITY SUMMARY

**Get Involved** — Please get involved with discussions regarding drinking water quality. The Town of Longboat Key Town Commission welcomes written comments or public input at regularly scheduled Commission meetings concerning issues related to drinking water. Meeting and agenda information can be obtained from the Town website [www.LongboatKey.org](http://www.LongboatKey.org), or by calling 941-316-1999.

**Bottom Line** — *Your drinking water meets federal and state EPA drinking water health standards!* The Manatee County Water Purification Plant uses what is known as the multiple barrier approach to ensure water safety. This approach includes source protection, optimized particle removal at the purification plant and appropriate disinfection.

2016—2017 TOWN COMMISSION						
Irwin Pastor	Randy Clair	George Spoll	Terry Gans Mayor	Jack Daly	Ed Zunz Vice Mayor	Jim Brown
At Large	District 1	District 2	District 3	District 4	District 5	At Large

If you have questions or concerns about water quality, please call the Town of Longboat Key Public Works Department (941) 316-1988. The public is encouraged to participate in decisions that may affect quality of water policies. Town Commission Regular Meetings are held the first Monday of the month and Regular Workshops are held on the third Monday of the month. All meetings are held at 1PM in the Town Commission Chambers, 501 Bay Isles Road, Longboat Key, Florida. For more meeting information, see our website ([Meetings & Minutes](#)) or call (941) 316-1999.

## ATTENTION PROPERTY MANAGERS

If you are a property manager, please provide this water quality report to your residents. This report may be photocopied or posted in a prominent place at your facility. More copies are available on the web at [www.LongboatKey.org](http://www.LongboatKey.org), Town Hall and Public Works.

