



2015 DRINKING WATER QUALITY SUMMARY

Protecting Your Water Source

Health and Safety Standards

Longboat Key purchases its potable water from Manatee County Utility 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 to ensure that your drinking water is safe from contaminants and certain compounds. Longboat Key and Manatee County commit daily to provide the highest quality drinking water to their customers. This report reflects on that commitment and represents a summary of the drinking water quality from January through December 2015.

Drinking water for Longboat Key customers is a blend of purified groundwater and purified surface water. In 2015, Manatee County Utilities extracted an average of 15.44 million gallons per day of deep groundwater and used 22.52 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 2015 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. Eight 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 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.

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).

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, Town Hall and Public Works.



**TABLE KEY & DEFINITIONS**

AL	Action Level
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
N/A	Not Applicable
ND	Not Detected
NTU	Nephelometric Turbidity Units
pCi/L	Picocuries per liter (a measure of radioactivity)
ppb	Parts per billion or micrograms per liter (ug/L)
ppm	Parts per million or milligrams per liter (mg/L)
TT	Treatment Technique
LBK	Town of Longboat Key results
A	Total Coliform detections must not exceed 5% of all monthly samples.
B	Filter turbidity may never exceed 1 NTU and must not exceed 0.3 NTU in 95% of daily samples in any month.
C	MCL limit of Radium-226 and Radium-228 combined.
D	The value is the highest running annual average, computed quarterly.
E	These values represent values at individual sample sites.
F	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.
G	This value is the highest locational running annual average, computed quarterly.
H	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.
I	This value is the lowest running annual average, computed quarterly, of the monthly removal ratio.
J	The State allows us to monitor for some contaminants less than once per year because concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

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.



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	01/15-12/15	No	ND	0	>5% ^A	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)	01/15-12/15	No	0.44	99.4% ^B	N/A	TT ^B	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)	01/15-12/15	No	6.0	1.7-6.0	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	01/15-12/15	No	0.016	0.011-0.016	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	01/15-12/15	No	1.7	ND-1.7	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	01/15-12/15	No	0.9	0.4-0.9	4	4	Water additive which promotes strong teeth
Nickel (ppb)	01/15-12/15	No	1.4	1.1-1.4	N/A	100	Pollution from mining and refining operations; natural occurrence in soil
Nitrate (as Nitrogen) (ppm)	01/15-12/15	No	0.34	0.03-0.34	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	01/15-12/15	No	9.8	1.9-9.8	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppb)	01/15-12/15	No	18	15-18	N/A	160	Salt water intrusion; leaching from soil
SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES AND HERBICIDES							
Atrazine (ppb)	01/15-12/15	No	0.03	ND--0.03	3	3	Runoff from herbicide used on row crops
Dalapon (ppb)	01/15-12/15	No	0.49	ND-0.49	200	200	Runoff from herbicide used on rights of way
RADIOLOGICAL CONTAMINANTS							
Radium 226 (pCi/L)	01/15-12/15	No	0.7	0.6-0.7	0	5 ^C	Erosion of natural deposits
Radium 228 (pCi.L)	01/15-12/15	No	1.1	ND-1.1	0	5 ^C	Erosion of natural deposits
STAGE 2 DISINFECTANT AND DISINFECTION BY-PRODUCTS (D/DBP) PARAMETERS							
Disinfectant or Contaminant and Unit of Measurement	Dates of Sampling	Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Chloramines (ppm)	01/15-12/15	No	3.6 ^D	ND-5.8 ^E	MRDLG = 4	MRDL = 4 ^F	Water additive used to control microbes
Haloacetic acids (ppb)	01/15-12/15	No	33.4 ^G	15.5-44.4 ^E	N/A	MCL = 60	By-product of drinking water disinfection
Total trihalomethanes (ppb)	01/15-12/15	No	49.5 ^G	29.4-71.5 ^E	N/A	MCL = 80	By-product of drinking water disinfection
Total organic carbon (ratio) ^H	01/15-12/15	No	1.29 ^I	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 TH Percentile Results	No. of Sampling Sites Exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Lead (ppb)	2013 ^J	No	0.72	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits.
Copper (ppm)	2013 ^J	No	0.18	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.



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 2015.

Lead and Copper: Lead and Copper are sampled once every 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 2015 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.

Unregulated Contaminant Monitoring Regulation (UCMR3) - This monitoring provides a basis for future regulatory actions to protect public health.

The Town of Longboat Key has been monitoring for unregulated contaminants (UCs) as part of a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. At present, no health standards (for example, maximum contaminant levels) have been established for UCs. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. If you would like more information on the EPA’s Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

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)	1/15-12/15	No	3.30 ^{LBK}	1.6—4.7 ^{LBK}	MRDLG=4	MRDL = 4 ^F	Water Additive used to control microbes
Haloacetic acids (ppb)	1/15-12/15	No	35.70 ^{LBK}	22.90—48.80 ^{LBK}	N/A	MCL=60	Byproduct of drinking water disinfection
Total Trihalomethanes	1/15-12/15	No	45.63 ^{LBK}	32.20—55.10 ^{LBK}	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 ^{LBK}	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 ^{LBK}	0	0	15	Corrosion of household plumbing systems; erosion of natural

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	01/15-12/15	No	1%	0	No	Naturally present in the environment



What is the Third Unregulated Contaminant Monitoring Rule (UCMR 3)?

The 1996 amendments to the Safe Drinking Water Act (SDWA) require that once every five years, the U.S. Environmental Protection Agency (EPA) issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs).

The Unregulated Contaminant Monitoring Rule (UCMR) provides EPA and other interested parties with scientifically valid data on the occurrence of contaminants in drinking water. These data serve as a primary source of occurrence and exposure information that the agency uses to develop regulatory decisions.

The final rule "Revisions to the Unregulated Contaminant Monitoring Rule (UCMR 3) for Public Water Systems" was published in the *Federal Register* on May 2, 2012 (77 FR 26072). UCMR 3 monitoring will take place from 2013-2015, and includes monitoring for 28 chemicals and two viruses.

UCMR 3 includes Screening Survey monitoring for seven hormones using an EPA-approved analytical method. The Town of Longboat Key took quarterly samples within a 12-month period during 2015.

UCMR 3 List 2 Contaminants

HORMONES — EPA METHOD 539						
Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	MRL ² (µg/L)	Range of Results	Use of Environmental Source	Health Effects
17-β-estradiol 50-28-2	1/15-12/15	N	0.0004	0—0.0004	Estrogenic hormone naturally produced in the human body; and used in pharmaceuticals	Associated with estrogenic hormonal response in post-menopausal women
17-α-ethynylestradiol 57-63-6	1/15-12/15	N	0.0009	0—0.0009	Synthetic steroid; prepared from estrone	Associated with increased blood levels of enzymes related to liver function
estriol 50-27-1	1/15-12/15	N	0.0008	0—0.0008	Estrogenic hormone naturally produced in the human body; and used in veterinary and human pharmaceuticals	Hormone is similar to 17-β-estradiol
equilin 474-86-2	1/15-12/15	N	0.004	0—0.004	Estrogenic hormone derived from horses; and used in pharmaceuticals	Hormone is similar to 17-β-estradiol
estrone 53-16-7	1/15-12/15	N	0.002	0—0.002	Estrogenic hormone naturally produced in the human body; and used in veterinary and human pharmaceuticals	Hormone is similar to 17-β-estradiol
testosterone 58-22-0	1/15-12/15	N	0.0001	0—0.0001	Androgenic steroid naturally produced in the human body; and used in pharmaceuticals	Associated with adverse effects on the endocrine and reproductive systems
4-androstene-3,17-dione 63-05-8	1/15-12/15	N	0.0003	0—0.0003	Steroidal hormone naturally produced in the human body; and used as an anabolic steroid and a dietary supplement	Hormone is similar to testosterone

1. CASRN - Chemical Abstracts Service Registry Number
2. MRL - Minimum Reporting Level

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 safe and pleasant tasting water on Longboat Key.



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. 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>.

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 (<http://www.LongboatKey.org>) or by calling 941-316-1988.

Bottom Line — Your drinking water meets EPA and state 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.

2015—2016 TOWN COMMISSION						
Irwin Pastor	Armando Linde	Jack Duncan Mayor	Terry Gans Vice Mayor	Jack Daly	Ed Zunz	Phill Younger
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 the policies concerning the quality of water at Town Commission meetings held the first Monday of the month at 7PM or Workshops held on the third Monday of the month at 1PM. All meetings are held 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.