



## TOWN OF LONGBOAT KEY

Volume XII

May 2011

# 2010 Drinking Water Quality Summary

### Protecting Your Water Source

The Town of Longboat Key purchases its potable water from the Manatee County Utilities Department where it is treated for consumption before delivery to the Town. Manatee County and Longboat Key follow strict rules and guidelines enacted by the U.S. Environmental Protection Agency (EPA) to ensure that your drinking water is free from contaminants and certain compounds. Longboat Key and Manatee County make a daily commitment 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 2010.



Drinking water for customers of Longboat Key is a blend of purified groundwater and purified surface water. In 2010, Manatee County Utilities extracted an average of 14.65 million gallons per day of deep groundwater and used 23.43 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 2009 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 to high susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at [www.dep.state.fl.us/swap](http://www.dep.state.fl.us/swap) 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 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 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 mining, or farming.
-  **Pesticides and herbicides** may come from a variety of sources such as agriculture, 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 which 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA's) Safe Drinking Water Hotline (800-426-4791).

*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).*

**ATTENTION PROPERTY MANAGERS:** If you are a property manager, please provide this water quality report to your tenants. 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.



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	01/10-12/10	No	0.9%	0	<5% <sup>A</sup>	Naturally present in the environment	
Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Total Number of Positive Samples for the Year	MCLG	MCL	Likely Source of Contamination	
Fecal coliform & <i>E.coli</i>	01/10-12/10	No	1	0	0 <sup>B</sup>	Human and animal fecal waste	
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)	01/10-12/10	No	0.50	97.2% <sup>C</sup>	N/A	TT <sup>C</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)	1/10-12/10	No	2.4	ND-2.4	N/A	10	Erosion of natural deposit; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	1/10-12/10	No	0.018	0.0096-0.018	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	1/10-12/10	No	0.94	0.30-0.94	4	4	Water additive which promotes strong teeth
Nitrate (as Nitrogen) (ppm)	1/10-12/10	No	0.29	0.11-0.29	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen) (ppm)	1/10-12/10	No	0.098	ND-0.098	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	1/10-12/10	No	8.9	ND-8.9	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	1/10-12/10	No	17	14-17	N/A	160	Salt water intrusion, leaching from soil
RADIOLOGICAL CONTAMINANTS							
Radium 226 (pCi/L)	1/10-12/10	No	0.6	ND – 0.6	0	5 <sup>D</sup>	Erosion of natural deposits
STAGE 1 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)	1/10-12-10	No	3.75 <sup>E</sup>	ND-6.0 <sup>F</sup>	MRDLG = 4	MRDL = 4 <sup>G</sup>	Water additive used to control microbes
Haloacetic acids (ppb)	1/10-12/10	No	28.2 <sup>E</sup>	13.5-44.3 <sup>F</sup>	N/A	MCL = 60	By-product of drinking water disinfection
Total trihalomethanes (ppb)	1/10-12/10	No	40.3 <sup>E</sup>	24.0-52.6 <sup>F</sup>	N/A	MCL = 80	By-product of drinking water disinfection
Total organic carbon (ratio) <sup>H</sup>	1/10-12/10	No	1.36 <sup>I</sup>	1.13-1.62	N/A	TT	Naturally present in the environment
LEAD AND COPPER (TAP WATER)							
Contaminant and Unit of Measurement	Dates of Sampling	AL Violation Y/N	90 <sup>th</sup> Percentile Result	No. of Sampling Sites Exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (ppm)	2010	No	0.26	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2010	No	ND	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

**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 matters.



**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 (µg/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** MCL for fecal coliform is 0 for acute violations only where a fecal or E.coli positive is followed by a repeat sample positive for fecal, E.coli or total coliform.
- C** Filter turbidity may never exceed 1 NTU and must not exceed 0.3 NTU in 95% of daily samples in any month.
- D** MCL limit of Radium-226 and Radium-228 combined.
- E** The value is the highest running annual average, computed quarterly.
- F** These values represent values at individual sample sites.
- G** 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.
- 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 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:** Means not detected and 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.

**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 148 samples in 2010.

**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 2008 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.)	AL Violation Y/N	90th Percentile Result	No. of Sampling Sites Exceeding AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (mg/l)	8/08	N	0.218LBK	0	1.3	1.3	Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives
Lead (ug/l)	8/08	N	3.0LBK	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits
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)	1/10-12/10	N	3.2 <sup>LBK</sup>	0.1-5.3 <sup>LBK</sup>	MRDLG	MRDL =	Water Additive used to control microbes
Haloacetic acids (ppb)	1/10-12/10	N	28.13 <sup>LBK</sup>	15.4-39.0 <sup>LBK</sup>	N/A	MCL=60	Byproduct of drinking water disinfection
Total Trihalomethanes	1/10-12/10	N	48.57 <sup>LBK</sup>	23.2-63.0 <sup>LBK</sup>	N/A	MCL=80	Byproduct of drinking water disinfection



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## 2011– 2012 Town Commission

Hal Lenobel	Lynn Larson	Jack Duncan	Dave Brenner Vice Mayor	Jim Brown Mayor	Pat Zunz	Phill Younger
At-Large	District 1	District 2	District 3	District 4	District 5	At-Large

If you have any questions or concerns about water quality contact the **Town of Longboat Key Public Works Department at (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 7 PM or Workshops held on the third Thursdays of the month at 2 PM. All meetings are held in the Town Commission Chambers, 501 Bay Isles Road, Longboat Key. For more meeting information see our website (Meetings & Minutes) or call 941-316-1999.

**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.

**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.

**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>.

**Radon** — We constantly monitor the water supply for various contaminants. We have detected radon in the finished water supply in the April and July quarterly samples. The maximum result was 46.8 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.

**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.

**“Every Drop Counts on Longboat Key!”**