

# Lee County Utilities 2016 Water Quality Report

Importante: Si usted tiene alguna pregunta sobre este informe favor de llamar a Lee County Utilities al 239-533-8181.



# Introduction

Lee County Utilities (LCU) is pleased to present a summary of the quality of the water provided to you, our customers, during 2016. This report is designed to inform you about your water quality and services that we provide every day. LCU is committed to delivering the safest and most reliable water supply possible. The Safe Drinking Water Act (SDWA) requires that utilities issue this annual Consumer Confidence Report in addition to other notices that may be required by law. We believe that informed consumers are our best allies in maintaining drinking water excellence.

LCU routinely monitors for contaminants in your drinking water according to federal and state laws, rules and regulations. LCU collects water samples and conducts water quality tests using the certified laboratories of the Lee County Department of Health and the Lee County Environmental Laboratory to ensure that the public water supply is safe for human consumption. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1, 2016 to December 31, 2016. Data obtained before January 1, 2016 and presented in the report are from the most recent testing done in accordance with the laws, rules, and regulations.



The U.S. Environmental Protection Agency (EPA) requires monitoring of over 80 drinking water contaminants. Those contaminants listed throughout the tables are the only contaminants detected in your drinking water. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently therefore, some of our data, though representative, are more than one year old.

## GET INVOLVED

We encourage our customers to become involved in decisions that may affect the quality of their drinking water by attending regularly scheduled meetings held by the Lee County Board of County Commissioners. Board meetings are held every 1<sup>st</sup> and 3<sup>rd</sup> Tuesday at the Lee County Courthouse at 2120 Main Street, Fort Myers. These meetings begin at 9:30 am and meeting agendas are available through Lee Cares at 2115 Second Street, Fort Myers, or on the Internet at [www.leegov.com](http://www.leegov.com). Additionally, the Board holds public hearings at 5:00 pm on the 1<sup>st</sup> and 3<sup>rd</sup> Tuesday of every month.

## QUESTIONS REGARDING THIS REPORT

For more information regarding this report or to request a hard copy please contact:

Patty DiPiero  
239-533-8534  
[dipierpm@leegov.com](mailto:dipierpm@leegov.com)



## QUESTIONS REGARDING YOUR BILL

For all other questions call:  
Customer Service Center  
239-533-8845  
1-800-485-0214  
[www.leegov.com/utilities](http://www.leegov.com/utilities)

# Service Areas & Water Resources

Below are descriptions of our source waters and the type of treatment at each of our facilities:

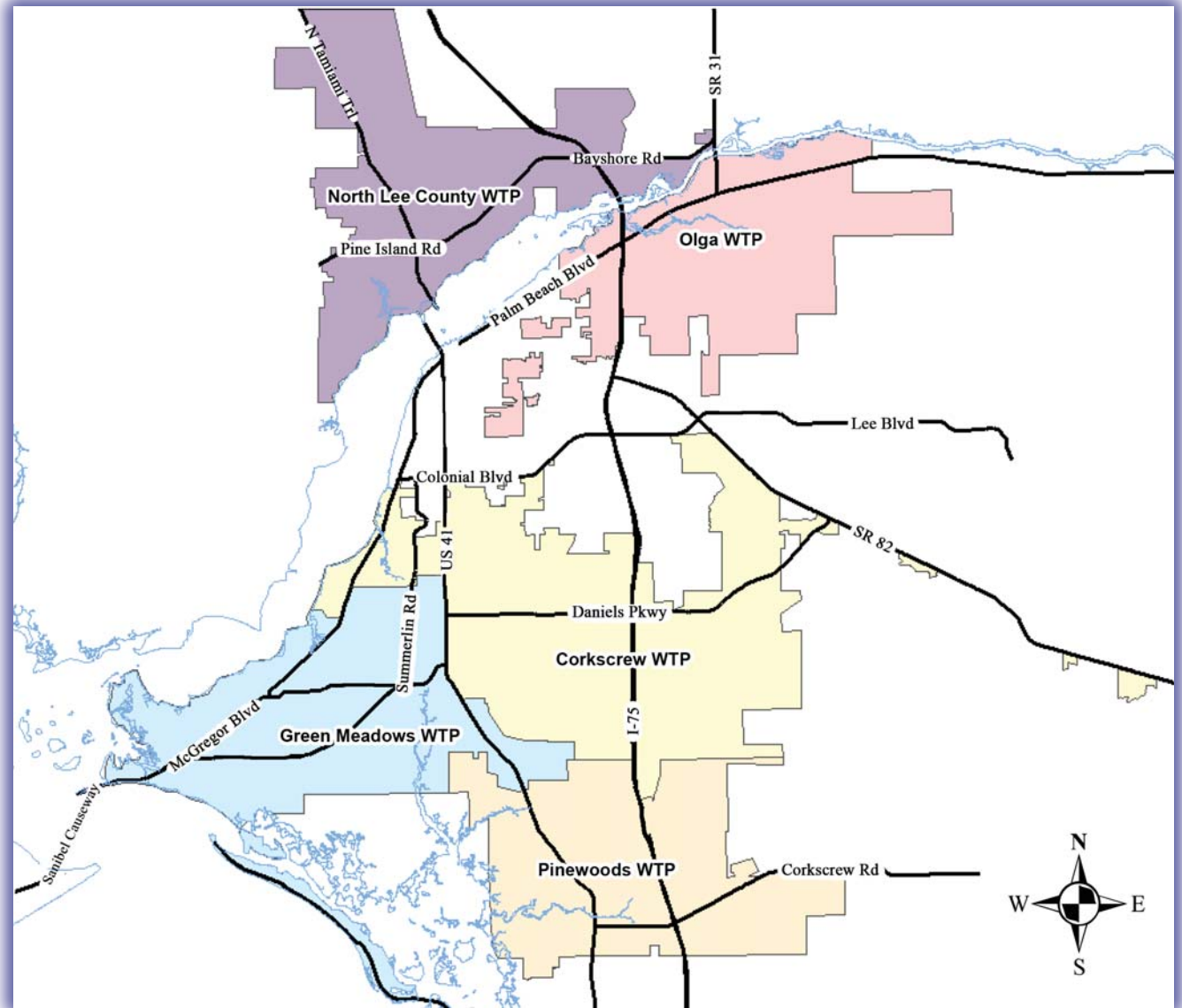
**Corkscrew Water Treatment Plant** treats groundwater obtained from the Sandstone, Surficial, and Lower Hawthorn aquifers from the Corkscrew wellfield. This water is lime softened, chlorinated for disinfection and then fluoridated for dental purposes. This water is then blended with water from the Green Meadows Water Treatment Plant.

**Green Meadows Water Treatment Plant** treats groundwater from the Sandstone and Surficial aquifers from the Green Meadows wellfield. This water is treated for color removal, lime softened, filtered and chlorinated for disinfection. This water is then blended with water from the Corkscrew Water Treatment Plant.

**North Lee County Water Treatment Plant** treats groundwater from the Lower Hawthorn aquifer from the North Lee County wellfield. This water is treated by reverse osmosis, chlorinated for disinfection and then fluoridated for dental purposes.

**Olga Water Treatment Plant** treats water obtained from the Caloosahatchee River. This water is treated for color removal and filtered. It is chlorinated for disinfection and then fluoridated for dental purposes.

**Pinewoods Water Treatment Plant** treats groundwater from the Sandstone and Surficial aquifers using nanofiltration and water from the Lower Hawthorn aquifer using reverse osmosis from the Pinewoods wellfield. The water from both treatment units is then blended together and sent to degasifiers, where hydrogen sulfide is removed. Fluoride is added for dental purposes and then the water is chlorinated for disinfection.



# Terms & Abbreviations

**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 which, if exceeded, triggers treatment or other requirements that a water system must follow.

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

**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.

**Locational Running Annual Average (LRAA):** The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

**pCi/L** = Picocurie Per Liter - measure of the radioactivity in water.

**NTU** = Nephelometric Turbidity Unit- measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. High turbidity can hinder the effectiveness of disinfectants.

**ppm** = Parts Per Million or Milligrams Per Liter (mg/L) - one part by weight of analyte to 1 million parts by weight of the water sample.

**ppb** = Parts Per Billion or Micrograms Per Liter (ug/L) - one part by weight of analyte to 1 billion parts by weight of the water sample.

**ND** = Means not detected and indicates that the substance was not found by laboratory analysis.

**n/a** = Not applicable

Note 1: For chloramines and chlorine, the level detected is the highest running annual average (RAA), computed quarterly, of monthly averages of all samples collected. For haloacetic acids and TTHM, the level detected is the highest RAA, computed quarterly, of quarterly averages of all samples collected if the system is monitoring quarterly. Range of results is the range of individual sample results for all monitoring locations.

Note 2: Results in the Level Detected column for radioactive contaminants and inorganic contaminants are the highest detected level at any sampling point.

Note 3: LCU performed a free chlorine flush from May 1 through May 29. Disinfection results include both chloramines and chlorine.

Note 4: The Olga Water Treatment Plant was not producing water during the month of June 2016.

# Additional Health Information

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).



# Additional Information



## AN IMPORTANT WORD 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.

Lee County Utilities 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>.

Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

## SOURCE WATER ASSESSMENTS

In 2016, the Florida Department of Environmental Protection (FDEP) conducted a statewide assessment of our public drinking system to identify any sources of contamination in the vicinity of our wells and our surface water intake. The assessment found there were 23 unique potential sources of contamination identified for our system.

The susceptibility of contamination for our ground water wells was low to moderate. The susceptibility of contamination for our surface water system was considered to be high due to many potential sources of contamination present in the assessment area. The complete 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 Lee County Utilities at 239-533-8534.

## HOW TO READ THE TABLES

LCU owns and operates five (5) water treatment plants. LCU has a combined distribution system which allows us the ability to ensure you safe and reliable water at all times. This flexibility allows us to shut down water treatment plants for annual maintenance or during emergency situations.

In the following tables, samples taken in the distribution system represent all five water treatment plants and include Microbiological Contaminants, Stage 1 & 2 Disinfectants & Disinfection By-Products, and Lead & Copper (Tap Water) unless otherwise noted. Sampling taken directly from a water treatment plant will be listed individually and include Radioactive Contaminants and Inorganic Contaminants.

## RADIOACTIVE CONTAMINANTS

Contaminant and Unit of Measurement	Water Treatment Plant	Sampling Date (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/L)	North Lee County	01/11	N	7.4		0	15	Erosion of natural deposits
	Pinewoods	4/14	N	6.7				
Radium 226 + 228 (pCi/L)	North Lee County	01/11	N	1.5		0	5	Erosion of natural deposits
	Olga	10/14	N	1.1				
	Pinewoods	4/14	N	2.5				

## INORGANIC CONTAMINANTS

Contaminant and Unit of Measurement	Water Treatment Plant	Sampling Date (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Arsenic (ppb)	Corkscrew	03/14	N	0.76		0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production waste
	Green Meadows	04/14	N	0.70				
	Pinewoods	04/14	N	0.50				
Barium (ppm)	Corkscrew	03/14	N	0.005		2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
	Green Meadows	04/14	N	0.008				
	North Lee County	02/14	N	0.003				
	Olga	10/16	N	0.020				
	Pinewoods	04/14	N	0.002				
Chromium (ppb)	Corkscrew	03/14	N	1.10		100	100	Discharge from steel and pulp mills; erosion of natural deposits
	Green Meadows	04/14	N	0.68				
	North Lee County	02/14	N	0.74				
	Pinewoods	04/14	N	0.73				

## INORGANIC CONTAMINANTS

Contaminant and Unit of Measurement	Water Treatment Plant	Sampling Date (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Cyanide (ppb)	North Lee County	02/14	N	3.0		200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
	Pinewoods	04/14	N	6.0				
Fluoride (ppm)	Corkscrew	1/16 - 12/16	N	0.41	0.18 - 0.41	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
	Green Meadows	04/14	N	0.12				
	North Lee County	1/16 - 12/16	N	0.69	0.55 - 0.69			
	Olga	1/16 - 5/16 & 7/16 - 12/16	N	0.33	ND - 0.33			
	Pinewoods	1/16 - 12/16	N	0.39	0.18 - 0.39			
Nickel (ppb)	Green Meadows	04/14	N	1.10		n/a	100	Pollution from mining and refining operations. Natural occurrence in soil
Nitrate (as Nitrogen) (ppm)	Corkscrew	10/16	N	0.043		10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
	Green Meadows	4/16	N	0.014				
	North Lee County	2/16	N	0.027				
	Olga	10/16	N	1.05				
	Pinewoods	2/16	N	0.013				
Nitrite (as Nitrogen) (ppm)	Corkscrew	10/16	N	0.095		1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
	Green Meadows	4/16	N	0.007				
	North Lee County	2/16	N	0.008				
	Olga	10/16	N	0.039				
	Pinewoods	2/16	N	0.008				



## INORGANIC CONTAMINANTS

Contaminant and Unit of Measurement	Water Treatment Plant	Sampling Date (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Selenium (ppb)	Corkscrew	03/14	N	2.2		50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
	Green Meadows	04/14	N	0.9				
	North Lee County	02/14	N	1.3				
	Olga	10/16	N	4.1				
	Pinewoods	04/14	N	1.3				
Sodium (ppm)	Corkscrew	03/14	N	96.8		n/a	160	Salt water intrusion; leaching from soil
	Green Meadows	04/14	N	43.6				
	North Lee County	02/14	N	81.5				
	Olga	10/16	N	37.9				
	Pinewoods	04/14	N	80.6				

## LEAD & COPPER (TAP WATER)

Contaminant and Unit of Measurement	Sampling Date (mo/yr)	AL Violation Y/N	90th Percentile	No. of Sampling Sites Exceeding the AL	MCLG	AL	Likely Source of Contamination
Copper (tap water)(ppm)	8/16	N	0.05	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water)(ppb)	8/16	N	1.4	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

## MICROBIOLOGICAL CONTAMINANTS

Contaminant and Unit of Measurement	Sampling Date (mo/yr)	MCL Violation Y/N	Highest Monthly Percentage of Positive Sample	MCLG	MCL		Likely Source of Contamination
Total Coliform Bacteria (positive samples until March 31, 2016)	1/16 - 3/16	N	1.2%	0	For systems collecting at least 40 samples per month: presence of coliform bacteria in >5% of monthly samples.		Naturally present in the environment
Contaminant and Unit of Measurement	Sampling Date (mo/yr)	TT Violation Y/N	Result	MCLG	TT		Likely Source of Contamination
Total Coliform Bacteria (beginning April 1, 2016)	4/16 - 12/16	N	N/A	N/A	TT		Naturally present in the environment
Contaminant and Unit of Measurement	Sampling Date (mo/yr)	MCL Violation Y/N	The Highest Single Measurement	The Lowest Monthly Percentage of Samples Meeting Regulatory Limits	MCLG	MCL	Likely Source of Contamination
Turbidity (NTU) (Olga WTP)	1/16 - 5/16 & 7/16 - 12/16	N	0.22	100%	n/a	TT	Soil runoff

Note Turbidity: The result in the lowest monthly percentage column is the lowest monthly percentage of samples reported in the Monthly Operating Report meeting the required turbidity limits.

## STAGE 1 DISINFECTANTS & DISINFECTION BY-PRODUCTS

Disinfectant and Unit of Measurement	Sampling Date (mo/yr)	MRDL Violation Y/N	Level Detected	Range of Results	MRDLG	MRDL	Likely Source of Contamination
Chlorine & Chloramines (ppm)	1/16 - 12/16	N	3.5	0.4 - 5.8	4	4.0	Water additive used to control microbes
Contaminant and Unit of Measurement	Sampling Date (mo/yr)	TT Violation Y/N	Level Detected	Range of Monthly Removal Ratios	MCLG	MCL	Likely Source of Contamination
Total organic carbon (TOC) [Olga WTP]	1/16 - 5/16 & 7/16 - 12/16	N	1.93	1.57 - 2.48	NA	TT	Naturally present in the environment

Note TOC: The monthly TOC removal ratio is the ratio between the actual TOC removal and the required TOC removal.

## STAGE 2 DISINFECTANTS & DISINFECTION BY-PRODUCTS

Contaminant and Unit of Measurement	Sampling Date (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Haloacetic Acids (HAA5)(ppb)	1/16, 4/16, 7/16, & 10/16	N	21.3	0.27 - 29	n/a	60	By-product of drinking water disinfection
Total trihalomethanes (TTHM)(ppb)	1/16, 4/16, 7/16, & 10/16	N	24.3	1.2 - 36	n/a	80	By-product of drinking water disinfection