Collier County
Public Utilities Division
Water

Collier County Annual Drinking Water Quality Report 2019
Goodland Water District

We are pleased to present the 2019 Annual Drinking Water Quality Report. This report is designed to inform you about the quality of water that we deliver to you – every day. Our goal is to provide a safe, dependable supply of drinking water to you, our customer.

In order to ensure that your drinking water is safe to drink, the United States Environmental Protection Agency (USEPA) prescribes specific limits for the amount of certain contaminants which drinking water may contain. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these small amounts of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and their potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

The Collier County Water Department has an extensive and continuous testing program to routinely monitor for contaminants in your drinking water in accordance with 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, 2019 to December 31, 2019. Data obtained before January 1, 2019, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

The Florida Department of Environmental Protection (FDEP) has performed a Source Water Assessment on City of Marco Island Utilities, where we purchased our water from. This assessment was conducted to provide information about any potential sources of contamination in the vicinity of the wells and surface water intakes that are the source of the water that is treated for your consumption. There are 14 potential sources of contamination identified for this system with low to high susceptibility levels. Potential sources of contamination identified include underground petroleum storage tank and dry cleaning facilities. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

The Collier County Water Department services Goodland by redistributing water received from Marco Island Utilities. Marco Island Utilities obtains its water from two sources; surface water from the Marco Lakes on the mainland and groundwater from the Floridian Aquifer. The water is treated through a complex multi-step water treatment process that includes enhanced lime softening, filtration, and reverse osmosis, chlorination and corrosion inhibition. To provide additional water during the dry winter months, Marco Island Utilities also utilizes an underground water storage system known as Aquifer Storage and Recovery (ASR) wells. The portion of water received and redistributed by Collier County for use by the Goodland Water District is treated with additional disinfectant.

2019 Annual Drinking Water Quality Report
Goodland Water District

In this report you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (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 (µg/L) – one part by weight of analyte to 1 billion parts by weight of the water sample,

Picocuries per liter (pCi/L) - measure of the radioactivity in water.

"N/A": means not applicable.

Nephelometric Turbidity Unit (NTU) – nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

Turbidity – Turbidity is a measure of the cloudiness of the water. Since the lime plant source water is surface water, we measure turbidity to comply with the surface water treatment requirements. Turbidity is also an indicator of filtration effectiveness. 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. MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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.

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, as in the case with the Collier County Water Supply, 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, 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 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.

2019 Annual Drinking Water Quality Report
Goodland Water District

Goodland Water Quality Test Results PWS ID # 5110118

This report shows the results of our monitoring for the period of January 1st to December 31st 2019. Federal and state regulations allow 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, may be more than one-year-old. The EPA requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table below are the only contaminants that are required to be reported in your drinking water.

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

Contaminant and Unit of Measurement	Dates of sampling (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)	Continuous 2019	N	0.110	100%	N/A	TT	Soil runoff

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.

Results in the Level Detected column for radiological contaminants, inorganic contaminants, synthetic organic contaminants including pesticides and herbicides, and volatile organic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.

Radiological Contaminants

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
Radium 226 + 228 or combined radium (pCi/l)	Monthly 2019	N	1.58	ND – 4.59	0	5	Erosion of natural deposits

Inorganic Contaminants

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
Antimony (ppb)	4/19	N	0.78	0.78	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	Monthly 2019	N	0.88	ND – 1.10	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	4/19	N	0.0082	0.0082	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	4/19	N	0.14	0.14	4	4	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
Nitrate (as Nitrogen) (ppm)	4/19 5/19 11/19	N	0.167	0.103 – 0.223	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage;

							erosion of natural deposits
Nitrite (as Nitrogen) (ppm)	4/19 5/19 11/19	N	0.085	ND – 0.09	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	4/19	N	0.62	0.62	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	4/19	N	81.3	81.3	NA	160	Salt water intrusion, leaching from soil
Stage 1 Disinfectant/Disinfection By-Products (D/DBP) Parameters							
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 (ppm)	Monthly 2019	N	2.98	1.0 – 4.2	MRDLG = 4	MRDL= 4	Water additive used to control microbes
Stage 2 Disinfectant/Disinfection By-Products (D/DBP) Parameters							
Haloacetic Acids (five) (HAA5) (ppb)	Quarterly 2019	N	27.8	18.0 – 32.0	N/A	MCL=60	By-product of drinking water disinfection
TTHM (Total Trihalomethanes) (ppb)	Quarterly 2019	N	56.8	45.0 – 63.0	N/A	MCL=80	By-product of drinking water chlorination
The monthly TOC removal ratio is the ratio between the actual TOC removal and the TOC rule removal requirements.							
Contaminant and unit of measurement	Dates of sampling (mo/yr)	TT Violation Y/N	Lowest Running Annual Average, Computed Quarterly, of Monthly Removal Ratios	Range of Monthly Removal Ratios	MCLG	MCL	Likely Source of Contamination
Total Organic Carbon	Monthly 2019	N	1.06	1.06 – 1.09	N/A	TT	Naturally present in the environment

Lead and Copper (Tap Water)							
Contaminant and unit of measurement	Dates of sampling (mo/yr)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	6/18 7/18	N	0.0625	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead(tap water) (ppb)	6/18 7/18	N	2.80	0	0	15	Corrosion of household plumbing systems, erosion Of natural deposits; leaching from wood preservatives

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 Collier County Water Department 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 (800-426-4791) or at www.epa.gov/safewater/lead.

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 and Center for Disease Control (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 at (800) 426-4791.

The Collier County Water Department team members would like you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the excellent quality of your water. If you have any questions or concerns about the information that we have provided, please contact the Collier County Water Department Laboratory staff at (239) 252-4159. You can also visit the Collier County Water Department web site at:

www.colliergov.net/water

Other sources of information include:

Florida Department of Environmental Protection web site at www.dep.state.fl.us/water
United States Environmental Protection Agency Safe Drinking Water Hotline at 1-800-426-4791
US EPA Office of Water web site at www.epa.gov/safewater
The American Water Works Association web site at www.awwa.org

Unregulated Contaminants
City of Marco Island has been monitoring for UC (including the raw water indicators of Total Organic Carbon ((TOC) and Bromide) as part of a study to help the U.S. Environmental Protection Agency (EPA) to determine the occurrence in drinking water of UC and whether or not these contaminants need to be regulated. At present, no health standards (for example, maximum contaminant levels) have been established for UC. However, we are required to publish 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 (UCMR), please call the Safe Drinking Water Hotline at (800) 426-4791.

2019 Annual Drinking Water Quality Report
Goodland Water District

Below is the table of UCMR4 parameters that were detected in the water system:

Contaminant and unit of Measurement	Dates of sampling (mo/yr)	Level Detected (Average)	Range	Likely source of Contamination
1-Butanol (ppb)	9/19	7.55	3.6 – 11.5	Industrial manufacturing waste or fermentation of biomass from bacteria
TOC (ppm)	3/19 6/19 9/19	9.67	8.91 – 11.00	Naturally present in the environment
Bromide (ppm)	3/19 6/19 9/19	0.418	0.301 – 0.581	Naturally present in the environment
HAA5 (ppb)	3/19 6/19 9/19	49.74	14.9 – 120.6	By-product of drinking water disinfection
HAA6BR (ppb)	3/19 6/19 9/19	35.46	14.1 – 68.7	By-product of drinking water disinfection
HAA9 (ppb)	3/19 6/19 9/19	78.0	27.9 – 174.9	By-product of drinking water disinfection