



# Marco Shores Water Service Area

## 2020 Water Quality Report

### City of Marco Island

PWS ID# 5110182

This report shows the water quality results and what they mean. It also provides important information about your water and how it relates to your health. The information in this report is based on facts and figures from the City's Monitoring Program. However, the U.S. Environmental Protection Agency (EPA) does not require the City to perform all tests every year. When necessary, some data was obtained from prior years. As directed by the agencies that regulate our industry, only values from these tests that exceeded specified criteria are included. We will notify you immediately if there is any reason for concern about your water.

As of January 17, 2020 the potable water system in the Marco Shores community is supplied with water from the City of Marco Island water treatment plants. Prior to that date the system was supplied by water from the Collier County treatment facilities via an interlocal agreement with the City. The ability to connect to the Collier County system remains if needed in the case of an emergency.

Since Marco Shores was provided water by two utilities in 2020, both Marco Island and Collier County water quality testing results are included in this report. The first part includes 2020 test results for Marco Island and the second part, test results for Collier County for the same period.

### Marco Island Water System

The City operates the water treatment and distribution system serving Marco Island. The City's water is obtained from two sources: 1. surface water from the source water facility on the mainland and 2. groundwater from the brackish Floridan Aquifer on Marco Island. The water is treated via a thorough multi-step water treatment process that includes enhanced lime softening, membrane filtration, reverse osmosis, chloramine disinfection, and hardness blending for corrosion inhibition. The City also uses an underground water storage system known as Aquifer Storage and Recovery (ASR) to provide the needed water during the dry winter months. The City pumps water into the ASR wells during the rainy months to store it so that it can be recovered during the dry months. During the last several years the City has successfully stored and recovered millions of gallons of water from the ASR system.

If you have any questions about this report or concerns about your water utility, please contact the City of Marco Island at (239) 394-3880. You may also visit the Florida Department of Environmental Protection (FDEP) website at [www.myflorida.com](http://www.myflorida.com) or call the EPA Safe Drinking Water Hotline at (800) 426-4791. The City would like the community to be informed about its water utility. If you would like to learn more, then please call the City for information about the next opportunity for public participation in decisions about your drinking water.

### Groundwater System

In 2020 the Florida Department of Environmental Protection performed a Source Water Assessment of the City's system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of the City's wells. There are twelve potential sources of contamination identified for this system with 0.01 to 4.16 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 Scott Henriksson, tel: 239-389-3972.

### Surface Water System

In 2020 the Florida Department of Environmental Protection performed a Source Water Assessment of the City's system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of the City's surface water intakes. The surface water system is considered to be a high risk because of the many potential sources of contamination present in the assessment area. 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 Scott Henriksson, tel: 239-389-3972.

### HOW DO I READ THIS?

The table shows the results of the City's water-quality analyses. The column marked "Level Detected" shows the highest results from the last time tests were performed. "Likely Sources" shows where this substance usually originates. Descriptions below explain other important details. In this table you may find unfamiliar terms and abbreviations. To help you better understand unfamiliar terms and abbreviations the following definitions are provided:

**Maximum Contaminant Level (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 (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 (MRDL)** - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (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.

**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.

**Picocurie per liter (pCi/L)** - Measure of the radioactivity in water measured in trillionths of curies per liter.

“ND” means not detected and indicates that the substance was not found by laboratory analysis.

**Nephelometric Turbidity Unit (NTU)** - Measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

## WHAT CAN I EXPECT TO FIND IN MY DRINKING WATER?

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, 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 storm water 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 storm water 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 storm water 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.

## 2020 ANNUAL DRINKING WATER QUALITY TEST RESULTS

The City of Marco Island routinely monitors its treated drinking water for contaminants according to Federal and State laws, rules, and regulations. Except where indicated otherwise, this report is based on the results of monitoring for the period of January 1 to December 31, 2020 for Marco Island - PWS ID # 5110183. The Environmental Protection Agency (EPA) requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table below are the only contaminants detected in your drinking water. The testing results in the tables below reflect water produced from both city water treatment plants.

<b>Turbidity</b> is a measure of the cloudiness of the water. It is a good indicator of the effectiveness of the filtration system. High turbidity can hinder the effectiveness of disinfectants. Monitoring for turbidity is required by FDEP.							
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 2020	N	0.100	100%	N/A	TT	Soil runoff

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 2020	N	1.45	ND – 1.45	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
Arsenic (ppb)	Monthly 2020	N	0.71	ND - 0.89	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	4/20 5/20	N	0.0059	0.0044 - 0.0074	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide (ppm)	4/20 5/20	N	0.0313	ND - 0.0313	0.2	0.2	Discharge from steel/metal factories; discharge from plastic and fertilizer factories.
Fluoride (ppm)	4/20 5/20	N	0.14	ND - 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)	4/20 5/20	N	0.125	0.088 - 0.196	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen) (ppm)	4/20 5/20	N	0.010	0.010	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	4/20 5/20	N	72.1	65.2 - 78.9	N/A	160	Salt water intrusion, leaching from soil

### Stage 1 Disinfectants and Disinfection By-Products

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 2020	N	3.13	1.0 – 4.1	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

### Stage 2 Disinfectants and Disinfection By-Products

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
Haloacetic Acids (HAA5) (ppb)	Quarterly 2020	N	27.5	15.0 – 34.0	N/A	MCL = 60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	Quarterly 2020	N	57.3	47.0 – 67.0	N/A	MCL = 80	By-product of drinking water disinfection

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 (TOC)	Monthly 2020	N	1.05	1.05 – 1.10	N/A	TT	Naturally present in the environment

### Synthetic Organic Contaminants including Pesticides and Herbicides

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
Dalapon (ppb)	4/20 5/20 8/20 9/20	N	1.3	ND – 1.3	200	200	Runoff from herbicide used on rights of way

## Lead and Copper (Tap Water) Marco Island

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)	7/20 8/20	N	0.12	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	7/20 8/20	N	2.4	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 City 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](http://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/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).

The City would like you to understand the efforts it makes to continually improve the water treatment process and protect our water resources. The City is committed to ensuring the quality of your water. If you have any questions or concerns about the information provided, then please feel free to call any of the numbers listed above.

## For 2020 Collier County Water Quality Test Results See Below

### 2020 Annual Drinking Water Quality Report Collier County Water Division PWS ID: 5114069

This report shows the results of the monitoring period of January 1 to December 31, 2020. **Collier County only provided water to Marco Shores residents from January 1 to January 17, 2020.**

Inorganic Chemicals							
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
Fluoride (ppm)	3/20	N	0.44	NA	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum level of 0.7 ppm
Nitrate (as Nitrogen) (ppm)	3/20	N	0.030	ND-0.030	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	3/20	N	52.4	43.8-52.4	N/A	160	Salt water intrusion, leaching from soil
Barium (ppm)	3/20	N	0.0028	ND-0.0028	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits

Contaminant	Dates of sampling (mo/yr)	MCL Violation Y/N	Total Number of Positive Samples for the Year	MCLG	MCL	Likely source of contamination
<i>E. coli</i> *	Monthly 2020	N	1	0	Routine and repeat samples are total coliform positive and either is <i>E. coli</i> positive or system fails to take repeat samples following <i>E. coli</i> positive routine sample or system fails to analyze total coliform positive repeat sample for <i>E. coli</i>	Human and animal fecal waste

\* In July of 2020, a routine sample tested positive for *E. coli*. All repeat samples collected at the original, upstream, and downstream locations were negative for total coliform and *E. coli* therefore there was no MCL violation.

Stage 1 Disinfectants and Disinfection By-Products							
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 2020	N	3.2	1.2-4.1	MRDLG = 4	MRDL = 4	Water additive used to control microbes

Stage 2 Disinfectants and Disinfection By-Products							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	Quarterly 2020	N	20.6	13.6-25.3	NA	60	By-product of drinking water disinfection
Total trihalomethanes (TTHM) (ppb)	Quarterly 2020	N	37.1	24.2-44.1	NA	80	By-product of drinking water disinfection

### Synthetic Organic Contaminants including Pesticides and Herbicides

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
Hexachlorocyclopentadiene (ppb)	3/20, 9/20, 11/20	N	0.063	ND-0.063	50	50	Discharge from chemical factories

Lead and Copper (Tap Water)							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	AL Exceeded Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	8/20-9/20	N	0.057	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	8/20-9/20	N	1.4	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits

Collier County has been monitoring for Unregulated Contaminants (UC) as part of a study to help the U.S. Environmental Protection Agency (EPA) 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 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 (UCMR), please call the Safe Drinking Water Hotline at (800) 426-4791.

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

## Unregulated Contaminants

<b>Unregulated Contaminants</b>			
<b>Contaminant and Unit of Measurement</b>	<b>Dates of sampling (mo/yr)</b>	<b>Level Detected</b>	<b>Range of Results</b>
HAA5 (ppb)	2/18 and 10/18	17.9	12.2 – 17.9
HAA6Br (ppb)	2/18 and 10/18	11.9	8.0 – 11.9
HAA9 (ppb)	2/18 and 10/18	26.3	18.9 – 26.3
Manganese (ppb)	8/18	0.45	0.45
Bromide and Total Organic Carbon (TOC): These samples were taken at source water influent locations representing <b>untreated water entering the water treatment plant (i.e., a location prior to any treatment).</b>			
Bromide (ppm)	2/18 and 10/18	10.1	0.223 – 10.1
TOC (ppm)	2/18 and 10/18	8.33	1.94 – 8.33