Marco Island Water and Sewer Dept
2014 Water Quality Report
MARCO ISLAND

This report shows the City's 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 primarily on 2014 facts and figures. 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 the industry, only values from these tests that exceeded specified criteria are included. The City will notify you immediately if there is any reason for concern about the water.

The Marco Island Water and Sewer Department operates the water treatment and distribution system serving Marco Island. The City's water is obtained from two sources, surface water from the source water facility 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, membrane filtration, reverse osmosis, chlorination, and corrosion inhibition. To provide additional water during the dry winter months, the City uses an underground water storage system known as Aquifer Storage and Recovery (ASR) wells. In the rainy months, the City pumps and stores water underground. During the last several years the City has successfully recovered millions of gallons from the ASR storage.

If you have any questions about this report or concerns about your water utility, please contact the Marco Island Water and Sewer Department at (239) 394-3880. You may also visit the Florida Department of Environmental Protection (FDEP) web site at 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 Water and Sewer Department for information about the next opportunity for public participation in decisions about your drinking water.

HOW DO I READ THIS?

It's easy. 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.

Maximum Residual Disinfectant Level Goal (MRDLG) – The level of a drinking water disinfectant below which there is no known or expected risk to health**.**

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.

Not Detected (ND) – Indicates that the substance was not found by laboratory analysis.

Nephelometric Turbidity Unit (NTU) - Measure of the clarity of water. Turbidity in excess of 3 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.**

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.

2014 ANNUAL DRINKING WATER QUALITY TEST RESULTS

The Marco Island Water and Sewer Department routinely monitors for contaminants in your drinking water 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, 2014 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.

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 2014	N	.19	100%	N/A	TT	Soil runoff

Turbidity *is a measure of the cloudiness of the water. The City monitors it since it is a good indicator of the effectiveness of the 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 2014	N	1.8	ND - 1.8	0	5	Erosion of natural deposits
Alpha Emitters (pCi/l)	Monthly 2014	N	7.7	ND – 7.7	0	15	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 2014	N	2.0	ND – 2.0	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	3/14	N	0.0089	0.0064 - 0.0089	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (as Nitrogen) (ppm)	3/14 4/14 10/14	N	0.09	0.07 – 0.09	10	10	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Nitrite (as Nitrogen) (ppm)	3/14 4/14 10/14	N	0.01	N/A	1	1	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Selenium (ppb)	3/14	N	2.7	ND – 2.7	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	3/14	N	75.5	73.5 – 75.5	N/A	160	Salt water intrusion; leaching from soil

Stage 2 Disinfectant/Disinfection By-Products (D/DBP)

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MDRL	Likely Source of Contamination
Chloramines (ppm)	1/14 5/14 8/14 11/14	N	3.0	2.5 - 3.3	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	1/14 5/14 8/14 11/14	N	22.3	15.9 - 25.1	N/A	MCL = 60	By-product of drinking water disinfection
TTHM [Total - trihalomethanes] (ppb)	1/14 5/14 8/14 11/14	N	58.7	51.3 - 64.6	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	Annual Average Monthly Removal Ratio	Range of Monthly Removal Ratios	MCLG	MCL	Likely Source of Contamination
Total Organic Carbon	Monthly 2014	N	Less than 2.0	N/A	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)	7/14 8/14	N	0.0729	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	7/14 8/14	N	1.80	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

UNREGULATED CONTAMINANTS MONITORING

Unregulated contaminants are those that do not yet have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard.

Unregulated Contaminants (UCMR-3 testing per EPA)

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
Chlorate (ppb)	3/14 6/14	N/A	N/A	ND - 351	N/A	N/A	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide
Chromium (ppb)	3/14 6/14	N/A	N/A	0.32 - 0.71	N/A	N/A	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium, Hexavalent (ppb)	3/14 6/14 8/14	N/A	N/A	0.18 - 0.48	N/A	N/A	Naturally-occurring element; used in making steel and other alloys; used for chrome plating, dyes and pigments, leather tanning, and wood preservation; erosion of natural deposits
Molybdenum (ppb)	3/14 6/14	N/A	N/A	2.1 – 3.7	N/A	N/A	Naturally-occurring element found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide used as a chemical reagent; erosion of natural deposits
Strontium (ppb)	3/14 6/14	N/A	N/A	180 - 303	N/A	N/A	Naturally-occurring element; commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions; erosion of natural deposits
Vanadium (ppb)	3/14 6/14	N/A	N/A	0.62 – 1.3	N/A	N/A	Naturally-occurring elemental metal; used as a chemical intermediate and a catalyst; erosion of natural deposits

UCMR- Unregulated Contaminants Monitoring Rule

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.

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.