



City of Margate

2013 Water Quality Report

For the period 1/1/13 - 12/31/13

June 2014

Mayor:
Lesla Peerman

Vice Mayor:
Joanne Simone

Commissioners:
Brian Donahue
Tommy Ruzzano
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Message from the Director

Reddy Chitepu, P.E., Director

We are pleased to provide you with the 2013 Water Quality Report, which shows our water quality results and what they mean. Our goal is to always provide you with a safe and dependable supply of drinking water, and as you will see from the results, our drinking water meets or exceeds all Federal and State requirements.

As always, it continues to be important to conserve water. By staying at or below the current levels of usage, the City will not have to spend millions in capital

improvement dollars to accommodate an increased water capacity, which directly affects you, the consumer. I encourage you to visit www.sfwmd.gov for excellent tips on water conservation, and take advantage of the rebate and free conservation device program described on page 4. Please also visit www.margatefl.com for links to other helpful sites, as well as to view our school poster contest winners' artwork promoting water conservation. Two of those posters are featured in this report (see below and page 4).

The average U.S. citizen uses 80-100 gallons of water per day.

At the City of Margate, we are committed to ensuring the quality of your water, continually improving the water treatment process and protecting our water resources. If you have any questions about this report or any of the services offered by the Department of Environmental and Engineering Services (DEES), please call (954) 972-0828 or visit us at www.margatefl.com/dees. For water billing questions, call (954) 972-6454.

On behalf of DEES' 80+ team members, we are proud to serve you!

You may be eligible to receive free low-flow showerheads and faucet aerators, and up to \$200 in rebates for installing high-efficiency toilets!
See page 4 for more information.

Water Source & Overview of Treatment Process

The sole source of drinking water supply for the City of Margate Water Treatment Plant is the Biscayne Aquifer.

The City of Margate owns and operates a 20-million gallon per day water treatment plant located at 980 NW 66th Avenue in the City of Margate. Well water enters the treatment plant for processing. The treatment process includes aeration, lime softening to reduce hardness, followed by multi-media

filtration, fluoride injection, and chlorination for disinfection purposes. Polymer is added at the softening units as a settling aid and orthophosphate is added to filters as a filter aid. The treated water is pumped to three aboveground storage tanks with a total capacity of 5.9 million gallons, and subsequently, into your homes and businesses through a network of pipes. A backup generator assures an uninterrupted supply of water even during power outages.



M. Roland, Grade 8,
School Poster Contest
City Winner, Div. 4

Source Water Assessment & Protection Program (SWAPP)

In 2013, the Florida Department of Environmental Protection performed a Source Water Assessment on our system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells. There are 66 potential sources of contamination identified for our system with low to moderate susceptibility levels, none of which have been detected in our source water samples. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp or they can be obtained from our office by calling (954) 972-0828 or emailing dees@margatefl.com.

The sources of drinking water (both tap 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 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 byproducts 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 (800) 426-4791.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disin-

fectant 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.

ppm (Parts Per Million): One part by weight of analyte to 1 million parts by weight of the water sample.

ppb (Parts Per Billion): One part by weight of analyte to 1 billion parts by weight of the water sample.

About the Table...

The City of Margate 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, 2013. Data obtained before January 1, 2013, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

DEES's Water Treatment Plant processes an average of 7 million gallons of water per day and utilizes a network of 212 miles of water mains to deliver water to our customers.

Water Quality Testing Results

For the period January 1—December 31, 2013

Microbiological Contaminants							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly Percentage	MCLG	MCL	Likely Source of Contamination	
Total Coliform Bacteria (positive samples)	1/2013 – 12/2013	N	2.4%	0	Presence of coliform bacteria in >5% of monthly samples	Naturally present in the environment	
Inorganic Contaminants							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination	
Arsenic (ppb)	9/2012	N	0.34	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	
Barium (ppm)	9/2012	N	0.0062	2	2	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries	
Chromium (ppb)	9/2012	N	1.48	100	100	Erosion of natural deposits; discharge from steel and pulp mills	
Fluoride (ppm)	9/2012	N	0.63	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)	8/2013	N	0.2	10	10	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks, sewage	
Sodium (ppm)	9/2012	N	44.2	N/A	160	Salt water intrusion, leaching from soil	
Disinfectants							
Disinfectant and Unit of Measurement	Dates of sampling (mo/yr)	MCL or MRDL Violation (Y/N)	Level Detected*	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Chlorine and Chloramines (ppm)	1/2013-12/2013	N	2.76	1.0-3.7	MRDLG=4	MRDL=4	Water additive used to control microbes.
Disinfection By-Products							
Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL or MRDL Violation (Y/N)	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Haloacetic Acids 5 (HAA5) (ppb)	1/2013-12/2013	N	15.1	5.9-25.9	N/A	MCL=60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	1/2013-12/2013	N	15.2	3.2-35.1	N/A	MCL=80	By-product of drinking water disinfection
Lead and Copper (Tap Water)							
Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	AL Exceeded (Y/N)	90 th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (ppm)	7/2012	N	0.028	0	1.3	1.3	Erosion of natural deposits; corrosion of household plumbing systems; leaching from wood preservatives
Lead (ppm)	7/2012	N	0.0009	0	0	0.015	Erosion of natural deposits; corrosion of household plumbing systems
Unregulated Contaminants**							
Contaminant and Unit of Measurement	Level Detected	Range of Results	Draft Reference Concentration	Likely Source of Contamination			
Chromium (ppb)	0.535	0.53-0.54	100	Chromium is a naturally occurring element. Chromium is also used in making steel and other alloys, in chrome plating, dyes and pigments, leather tanning, and wood preservation.			
Chromium 6 (ppb)	0.175	0.17-0.18	N/A	Chromium is a naturally occurring element. Chromium is also used in making steel and other alloys, in chrome plating, dyes and pigments, leather tanning, and wood preservation.			
Chlorate (ppb)	305.5	303-308	210	Chlorate is an agricultural defoliant or desiccant, and is a disinfectant byproduct.			
Molybdenum (ppb)	1.5	1.5	40	Molybdenum is naturally occurring element found in ores and present in plants, animals, and bacteria. Its commonly used form, molybdenum trioxide, is used as a chemical reagent.			
Strontium (ppb)	447.5	445-450	4000	Strontium is a naturally occurring element. Historically, the commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions.			
Vanadium (ppb)	0.935	0.92-0.95	21	Vanadium is a naturally occurring elemental metal. It is commonly used as vanadium pentoxide which is a chemical intermediate and a catalyst.			

*The level detected is the highest running annual average (RAA), computed quarterly, of monthly averages of all samples collected.

** The City of Margate has been monitoring for unregulated contaminants (UCs) as part of a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. At present, no health standards (for example, maximum contaminant levels) have been established for UCs. 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, please call the Safe Drinking Water Hotline at (800) 426-4791.



Facts on 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 City of Margate 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>.



City of Margate Water Treatment Plant Lime Softening Treatment Unit.



General Health Information

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.



Other Interesting Facts

- Do NOT flush medications down toilets or sink drains. For information on how to dispose of medications safely, visit www.epa.gov/ppcp.
- Little leaks add up in a hurry. A faucet drip or invisible toilet leak that totals two tablespoons a minute comes to 15 gallons/day. That's 105 gallons a week and 5,460 wasted gallons of water a year.
- You can test if your toilet is leaking by putting 10 drops of food coloring in the tank. Don't flush for at least 15 minutes. If the colored water shows up in the bowl, the tank is leaking.
- Sprinklers that throw large drops in a flat pattern are more effective than those with fine, high sprays, which can be blown about and evaporated quickly.

Water Conservation Corner

Conserve Water to Earn Rebates or Free Conservation Devices!

The City of Margate has partnered with the Broward Water Partnership to offer residents FREE low-flow showerheads and faucet aerators, and/or rebates of up to \$200 for installing two high-efficiency toilets in place of toilets that use more than 1.6 gallons per flush. Businesses and non-profits are now eligible for the high-efficiency toilet rebates. Food service establishments can also take advantage of the free, low-flow pre-rinse spray valves being offered. Only a limited number of rebates and devices are available each fiscal year and preapproval is required for the rebates. For more information, visit: www.conservationpays.com/partners/city-of-margate or call (954) 972-0828.

Permanent Two-Day Watering Restrictions In Place

You may water before 10 a.m. or after 4 p.m. as follows:

- Odd-numbered addresses: Wednesday, Saturday
- Even-numbered addresses, no street address, and those that irrigate both even and odd addresses within the same zones (e.g., multi-family units and HOAs): Thursday, Sunday.

For more information, visit www.sfwmd.gov/conserve (click on 'Year-Round Conservation Measures', 'Broward County') or call the Water Conservation Hotline at (800) 662-8876.



L. Solano-Costa, Gr. 4, School Poster Contest City Winner, Div. 3

This report will be available on the internet at www.margatefl.com/ccr2013. This report will be mailed to customers only upon request and is also available at City of Margate facilities including City Hall, the Margaret Catherine Young Library, Department of Environmental and Engineering Services Administration Building, Northwest Focal Point Senior Center, and various parks and recreation facilities throughout the City.