



CITY OF NORTH MIAMI BEACH WATER QUALITY REPORT 2016

Esta publicación contiene información importante sobre la calidad de su agua potable. Si no lo entiende, por favor busque a alguien que se lo traduzca o le explique su contenido.

Rapo sa-a gen enfòmasyon trè empotan so dlò potab ke ou bwè. Fè yon moun tradwi li pou ou oswa pale avek yon moun ki konprann sa-a.



NMB Water is pleased to present to you our Annual Water Quality Report, which shows that NMB Water met or surpassed all state and federal regulatory requirements in 2016.

NMB Water 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 our monitoring for the period of January 1 to December 31, 2016. The information shared in this report was prepared in accordance with the U.S. Environmental Protection Agency's regulations and the Safe Drinking Water Act.

Reviewing this report will provide you with a better understanding of how our utility professionals continually improve the water-treatment process and protect our water sources. In 2016, NMB Water introduced the customer web portal, which is a powerful online tool that allows our customers to view and monitor their water consumption. The customer web portal offers many other great features, including setting water consumption goals and alerts. Please visit www.NMBWater.com for more information.

Thank you for reviewing this important document. If you have any questions or concerns, please do not hesitate to contact us. Visit us online at www.NMBWater.com or call us directly; a list of contact numbers is provided inside this report.

Contact us

For technical questions about this report, call the Water Quality Manager at **(305) 650-0000**. For general questions, call the public information officer at **(305) 957-3657**. To learn more about NMB Water visit us on the web at www.NMBWater.com

Comuníquese

Esta publicación contiene información importante sobre la calidad de su agua potable. Si no lo entiende, por favor busque a alguien que se lo traduzca o le explique su contenido. Si usted tuviera alguna pregunta específicamente sobre este reporte, por favor llame al Gerente de Calidad del Agua al **(305) 650-0000**. Para preguntas en general, llame al Oficial de Información Pública al **(305) 957-3657**. Si desea más información sobre el NMB Water, le recomendamos que visite nuestra página de Internet www.NMBWater.com.

Kontaktè nou

Rapo sa-a gen enfòmasyon trè empotan so dlò potab ke ou bwè. Fè yon moun tradwi li pou ou oswa pale avek yon moun ki konprann sa-a. Pou keksyon teknik sou rapo sa-a, rele manajè pou kalite dlò lan **305-650-0000**. Pou keksyon jeneral, rele Ofisye pou enfòmasyon piblik lan **305-957-3657**. Pou aprann plis sou NMB Water, vizite nou lan entenet: www.NMBWater.com.

Water Sources

Our water begins its journey from ground water sources, specifically, the Biscayne and Floridan aquifers. Production wells pump water from these aquifers, and it is then processed through one or more of the following treatment processes: lime softening, nanofiltration, and reverse osmosis. The water is then blended, chlorinated for disinfection, fluoridated for dental-health purposes, and then distributed through our infrastructure to a water service population of approximately 170,000 people.

The Biscayne Aquifer is located approximately 10 to 200 feet below ground and is composed of porous limestone rock, which contains many tiny cracks and holes. When it rains, water percolates down through the ground and replenishes, or recharges, this aquifer. The South Florida Water Management District (SFWMD) has issued a permit that allows the City of North Miami Beach to withdraw up to 26.31 million gallons per day (MGD) from the Biscayne Aquifer. Water from the Biscayne Aquifer is treated by lime softening and/or nanofiltration processes.

Our second source of water is the Floridan Aquifer, located approximately 1,250 feet below ground. Our SFWMD permit allows us to withdraw up to 12 MGD of water from the Floridan Aquifer. This water is brackish (a combination of fresh and salt water) and is treated using reverse osmosis, a membrane treatment process that is capable of removing high concentrations of salt and other contaminants from the water.

Source Water Assessment and Protection Program (SWAPP)

In 2015 the Florida Department of Environmental Protection (FDEP) 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 eight potential sources of contamination identified for this system, all with low susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at: www.dep.state.fl.us/swapp (search PWS Number: 4131618) or by contacting the Public Information Officer at **(305) 957-3657**.

Quality Control

NMB Water's Quality Control staff collects and analyzes drinking water samples on an hourly, daily, monthly and annual basis. The Quality Control Laboratory is state certified for the analysis of Total Coliform bacteria in drinking water. Water samples from 66 locations throughout the service area are collected twice a month and are monitored for chlorine and total coliform bacteria. Through this on-going effort, our staff is able to ensure that the water delivered is in compliance with all drinking water regulations, is safe and high quality.

The utility monitors for numerous other contaminants. The results of this monitoring are listed on the table provided in this report. Our results are well within the regulatory standards set by the United States Environmental Protection Agency (EPA), the Florida Department of Health (FDOH), Miami-Dade Department of Health (MDOH) and the Florida Department of Environmental Protection (FDEP).

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. NMB Water is responsible for providing high quality drinking water, but cannot



Microbiological Water Quality Testing Results

Parameters	MCLG	MCL	MCL Violation	NMB WATER		MIAMI-DADE MAIN SYSTEM		Typical Source
				Sample Date	Highest Monthly %	Sample Date	Highest Monthly %	
Total Coliform*	0	5%	No	Jan. - March 2016	0%	Jan. - March 2016	0.20%	Naturally present in the environment
Parameters	MCLG	MCL	MCL Violation	Sample Date	Result	Sample Date	Result	Typical Source
Total Coliform**	TT	0	No	April - Dec. 2016	0	April - Dec. 2016	0	Naturally present in the environment

*Positive samples until March 31, 2016 **Positive samples beginning April 1, 2016

Inorganic Water Quality Testing Results

Parameters	MCLG	MCL	MCL Violation	NMB WATER				MIAMI-DADE MAIN SYSTEM				Typical Source
				Sample Date	Highest Level Detected	Range Low	Range High	Sample Date	Highest Level Detected	Range Low	Range High	
Antimony (ppb)	6	6	No	April 2016	ND	ND	ND	2016	0.2	ND	0.2	Discharge from fire retardants, electronics, solder
Arsenic (ppb)	0	10	No	April 2016	ND	ND	ND	2016	1.5	0.8	1.5	Erosion of natural deposits
Barium (ppm)	2	2	No	April 2016	0.003	0.003	0.003	2016	0.006	0.005	0.006	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium (ppb)	100	100	No	April 2016	ND	ND	ND	2016	ND	ND	ND	Erosion of natural deposits
Flouride (ppm)	4	4	No	April 2016	0.56	0.53	0.56	2016	0.9	0.2	0.9	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 N ppm)	10	10	No	April 2016	ND	ND	ND	2016	0.37	0.01	0.37	Erosion of natural deposits; runoff from fertilizer
Nitrite (as N ppm)	1	1	No	April 2016	ND	ND	ND	2016	0.04	ND	0.04	Erosion of natural deposits; runoff from fertilizer
Selenium (ppb)	50	50	No	April 2016	ND	ND	ND	2016	ND	ND	ND	Erosion of natural deposits
Sodium (ppm)	N/A	160	No	April 2016	40	35	40	2016	46	26	46	Salt water intrusion, leaching from soil

Synthetic Organic Water Quality Testing Results

Parameter	MCLG	MCL	MCL Violation	NMB WATER				MIAMI-DADE MAIN SYSTEM				Typical Source
				Sample Date	Highest Level Detected	Range Low	Range High	Sample Date	Highest Level Detected	Range Low	Range High	
Hexachlorocyclopentadiene (ppb)	50	50	No	April 2016	0.022	ND	0.022	2016	ND	ND	ND	Discharge from chemical factories

Stage 2 Disinfectants and Disinfection By-Products Water Quality Testing Results

Parameter	MCLG	MCL	MCL Violation	NMB WATER				MIAMI-DADE MAIN SYSTEM				Typical Source
				Sample Date	Level Detected	Range Low	Range High	Sample Date	Level Detected	Range Low	Range High	
Chloramines (ppm)	4	4	No	2016	3.48	0.7	4	2016	2.6	ND	4.5	Water additive used to control microbes

Parameters	MRDLG	MRDL	MRDL Violation	Locational Running Annual Average				Locational Running Annual Average				Typical Source
				Sample Date	Annual Average	Range Low	Range High	Sample Date	Annual Average	Range Low	Range High	
Haloacetic Acids (HAA5) (ppb)	N/A	60	No	2016	13	9.4	16.9	2016	39	8	45	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N/A	80	No	2016	19.3	7.8	33.4	2016	48	6	56	By-product of drinking water disinfection

Radioactive Water Quality Testing Results

Parameters	MCLG	MCL	MCL Violation	NMB WATER				MIAMI-DADE MAIN SYSTEM				Typical Source
				Sample Date	Highest Level Detected	Range Low	Range High	Sample Date	Highest Level Detected	Range Low	Range High	
Alpha Emitters (pCi/L)	0	15	No	April 2016	ND	ND	ND	2016	ND	ND	ND	Erosion of natural deposits
Combined Radium (pCi/L)	0	5	No	April 2016	ND	ND	ND	2016	ND	ND	ND	Erosion of natural deposits
Radon (pCi/L)	NE	NE	NE	2015	20.9	5.6	20.9	2016	241	ND	241	Naturally occurring in soil and rock formations
Uranium (µg/L)	0	30	No	April 2016	ND	ND	ND	2016	1.2	ND	1.2	Erosion of natural deposits

Lead & Copper (Tap water) Water Quality Testing Results

Parameters	AL	Sampling Date	NMB WATER			MIAMI-DADE MAIN SYSTEM			Typical Source	
			AL Exceeded	90th Percentile Results	Number of sampling sites exceeding the AL	AL Exceeded	90th Percentile Results	Number of sampling sites exceeding the AL		
Copper* (tap water) (ppm)	AL=1.3	2015	No	0.1	0	2016	No	0.06	0	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	AL=15	2015	No	3.4	3 (3 out of 91 homes sampled)	2016	No	2.1	1	Corrosion of household plumbing systems; erosion of natural deposits

90th Percentile Results: 90th Percentile value reported. If the 90th percentile value does not exceed the AL (i.e., less than 10% of the homes have levels above the AL) the system is in compliance and is utilizing the prescribed corrosion control measure.

ABBREVIATIONS AND DEFINITIONS

AL	Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
LRAA	Locational Running Annual Average - The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.
MCL	Maximum Contaminant Level - 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.
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 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.
ND	Not Detected - Indicates that the substance was not found by laboratory analysis.
NE	Not Established
pCi/L	Picocurie per liter (pCi/L): measure of the radioactivity in water.
POE	Point of Entry
PPB	(ppb) or Micrograms per liter (µg/l): one part by weight of analyte to 1 billion parts by weight of the water sample.
PPM	(ppm) or Milligrams per liter (mg/l): one part by weight of analyte to 1 million parts by weight of the water sample.
mg/l	Micrograms per liter - one part by weight of analyte to 1 billion parts by weight of the water sample.
TT	Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

Data obtained before January 1, 2016, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

control the variety of materials used in home 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 1-800-426-4791** or at: <http://www.epa.gov/safewater/lead>.

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 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.

Important Numbers

It is important to us that you are able to access the services you need most. We have provided a list of helpful contact numbers for each of our major services. Please feel free to contact us with any questions you may have.

After Hours/Emergency	(305) 652-6460
NMB Water	(305) 948-2967
Call Before You Dig	811
Customer Service	(305) 948-2960
Norwood Water Treatment Plant (Office)	(305) 650-0000
Public Information Officer	(305) 957-3657
Water Quality Control	(305) 654-7137
Director of NMB Water	(305) 948-2983
Public Utilities Commission (PUC)	(305) 948-2983

The PUC has an advisory role for the City's Mayor and Council. PUC meetings are normally held the third Wednesday of each month in the North Miami Beach City Hall, second floor, Council Chambers, 17011 NE 19th Avenue, at 6 p.m. Please call to confirm.

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**.

Vulnerable Populations

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 at Hotline **1-800-426-4791**.

Conservation & Education

NMB Water promotes water conservation and education through its community outreach program. Water education presentations are available, free of charge, to any school, civic, church, synagogue or neighborhood group in the NMB Water service area. To schedule a speaker or presentation at your location, please call **(305) 919-3756**.

Attention Condominium and Apartment Managers:
Please share this report with your members and tenants.

Additional Copies:
Additional copies of this report are available by calling NMB Water at **(305) 957-3657**.

This report will be mailed to customers only upon request and is also available in the North Miami Beach City Hall lobby, 17011 NE 19th Avenue, and in the lobby of NMB Water's main office, 17050 NE 19th Avenue, in North Miami Beach.

- George Vallejo, Mayor
- Anthony F. DeFillipo, Commissioner
- Barbara Kramer, Commissioner
- Marlen Martell, Commissioner
- Frantz Pierre, Commissioner
- Phyllis S. Smith, Commissioner
- Beth E. Spiegel, Commissioner
- Ana M. Garcia, ICMA-CM, City Manager
- Jose Smith, City Attorney
- Pamela Latimore, CMC, City Clerk



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(305) 948-2967

www.NMBWater.com