

2017 WATER QUALITY REPORT

Reliable Water for Our Communities



Este informe contiene información muy importante sobre su agua potable. Para leer este informe en español, visite NMBWater.com o llame al (305) 654-7137 para solicitar una copia en español.

Rapò sila gen infomasyon ki enpòtan sou dlo potab ou bwè a. Pou ou ka li yon kopi rapò sa an kreyòl, ale nan NMBWater.com oubien rele (305) 654-7137 pou ou kapab mande yon kopi an kreyòl.



WELCOME TO OUR 2017 WATER QUALITY REPORT



In May 2017, the City of North Miami Beach took a bold step to improve its water and wastewater services. We developed a unique combined operations, program management and construction contract—a one-of-a-kind model in the industry—to bring world-class operations, maintenance and program management services to our utility.

In less than a year, we have made considerable progress under this partnership, including improved water quality, more responsive customer service, and more effective management of our assets. These achievements are documented in our NMB Water 2017 Annual Water Quality Report.

During 2017, NMB Water continued to provide reliable, high-quality water to more than 180,000 customers in northern Miami-Dade County, including North Miami Beach, Miami Gardens, Aventura, Sunny Isles Beach, Golden Beach and portions of unincorporated Miami-Dade County. This was a milestone year for our regional utility, as we:

- Partnered with Jacobs Engineering Group, Inc., to implement systemwide improvements and best-in-class utility operations.
- Launched a 15-year, \$270 million master plan program to invest in our water and sewer systems.
- Implemented an initial group of 24 projects with a capital value of more than \$40 million.
- Maintained 100% uptime providing safe drinking water with no sewer overflows during Hurricane Irma.

The NMB Water 2017 Annual Water Quality Report provides information on the quality of water delivered to our customers between January 1, 2017 and December 31, 2017. We are proud to say that our drinking water meets or exceeds all state and federal regulatory requirements, including those of the U.S. Environmental Protection Agency and the Safe Drinking Water Act. After reviewing this report, you will have a better understanding of how our utility professionals are working every day to improve water quality and to protect our precious water resources.

This report also provides the roadmap for moving forward. While the achievements we have made in the past year are significant, they are just the start. We have developed an ambitious program of improvements in infrastructure, processes and training that will make NMB Water the benchmark—not only in Florida but nationwide—for reliable, efficient and sustainable utility operations.

The City's leadership and our utility—NMB Water—are committed to providing customers with high quality water/wastewater services at a reasonable cost. We welcome your opinion on how our water and wastewater utility is doing and how we can continue to improve and serve you better. Please contact us at (305) 654-7137, or visit us online at NMBWater.com.

Warmest Regards,

A handwritten signature in blue ink that reads "Jeffrey F. Thompson". The signature is fluid and cursive.

Jeffrey F. Thompson, P.E.
Director of NMB Water

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NMB WATER WINS “RESILIENT UTILITY OF THE YEAR” AWARD

Demonstrating the progress that NMB Water has made in the past year, the utility was awarded the “2018 Resilient Utility of the Year” award from the Resilient Utility Coalition for addressing significant operational and maintenance challenges that threatened the reliability of its water and wastewater systems. NMB Water was presented with the award at the 2018 Resilient Utility Coalition Summit on January 26.

“We were impressed with the work completed, from employee training to infrastructure improvements, the results of which helped your utility provide continuity in service through Hurricane Irma.” — **Resilient Utility Coalition**



Director Jeffrey F. Thompson, PE, accepts the 2018 Resilient Utility Award on behalf of NMB Water.

FUN FACTS ABOUT NMB WATER

- Serves more than 180,000 customers
- Produced more than 7.4 billion gallons of water from January to December 2017
- Maintains 603 miles of water pipelines and 132 miles of sewer pipeline
- Achieves 100% compliance with state and federal regulatory water quality parameters
- Substantially reduced customer wait times from 3:24 minutes in August 2017 to 19 seconds in January 2018
- The NMB Water color scheme is used to vibrantly paint our 3,056 fire hydrants



KEEPING YOUR WATER SAFE DURING EXTREME WET WEATHER EVENTS

In September 2017, NMB Water staff worked tirelessly before, during and after Hurricane Irma to ensure NMB Water’s customers had safe drinking water. By training staff in advance and implementing a Hurricane Emergency Response Plan, NMB Water was one of the few utilities in the area that did not issue a system precautionary boil water notice.

NMB Water staff manned both the Emergency Operations Center and the Norwood Water Treatment Plant (WTP) for 7 straight days. Critical resources were ready and in place in advance of the storm, including backup generators and plenty of fuel to operate the facilities until Florida Power & Light (FPL) resumed services. After the storm, repair teams repaired more than 15 line breaks to provide a sufficient, safe and reliable source of water to our customers at all times.

NMB Water’s response to Hurricane Irma will be used as a template for future storms, striving to ensure that water supplies stay safe during extreme weather events.

NMB Water staff worked around the clock during Hurricane Irma to keep your water safe. By anticipating impacts and switching to generator power prior to the storm, the plant remained fully operational despite being impacted by 110 mph winds.



STATE OF OUR WATER

WATER SOURCES

Groundwater that is withdrawn from the Biscayne and Floridan aquifers is our source for drinking water. Wells draw water from these aquifers, which is then treated at the Norwood Water Treatment Plant (WTP) using nano filtration, reverse osmosis, and lime softening before being distributed to homes and businesses in our service area.

The Florida Department of Environmental Protection (FDEP) has implemented a source water protection program with the intent to protect drinking water sources and ensure safe drinking water for citizens. Source water assessments identify areas where drinking water sources are susceptible to contamination. When a water system is rated susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water (such

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
HAA5	Haloacetic Acids
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
MCLG	Maximum Contaminant Level Goal – The level of a contaminant in drinking water below which there is no known or expected risk to health
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
NA	Not Applicable
ND	Not Detected – Indicates that the substance was not found by laboratory analysis
NR	Not Regulated
pCi/L	Picocurie per liter (pCi/L): measure of the radioactivity in water.
ppb	One part by weight of analyte to 1 billion parts by weight of the water sample
ppm	One part by weight of analyte to 1 million parts by weight of the water sample
TTHM	Total Trihalomethanes
µg/L	One part by weight of analyte to 1 billion parts by weight of the water sample



INORGANIC CONTAMINANTS

Parameter	MCLG	MCL	MCL Violation (Y/N)	NMB Water			Miami-Dade's Main System ²				Likely Source of Contamination	
				Sample Date	Level Detected	Range of Results		Sample Date	Level Detected	Range of Results		
						Low	High			Low		High
Antimony (ppb)	6	6	No	Apr-17	0.08	0.05	0.08	2017	0.1	ND	0.1	Discharge from fire retardants, electronics, solder
Arsenic (ppb)	0	10	No	Apr-17	0.4	0.4	0.4	2017	1.4	0.7	1.4	Erosion of natural deposits
Barium (ppm)	2	2	No	Apr-17	0.002	0.002	0.002	2017	0.006	0.005	0.006	Erosion of natural deposits
Chromium (ppb)	100	100	No	Apr-17	ND	ND	ND	2017	0.7	0.3	0.7	Erosion of natural deposits
Fluoride (ppm)	4	4	No	Apr-17	0.67	0.27	0.94	2017	0.8	0.5	0.8	Erosion of natural deposits; Water additive which promotes strong teeth
Nitrate (as N ppm)	10	10	No	Apr-17	ND	ND	ND	2017	0.5	0.01	0.5	Erosion of natural deposits; runoff from fertilizer
Nitrite (as N ppm)	1	1	No	Apr-17	ND	ND	ND	2017	0.41	ND	0.41	Erosion of natural deposits; runoff from fertilizer
Selenium (ppb)	50	50	No	Apr-17	ND	ND	ND	2017	0.7	0.6	0.7	Erosion of natural deposits
Sodium (ppm)	N/A	160	No	Apr-17	44	41	44	2017	43	28	43	Salt water intrusion, leaching from soil

SYNTHETIC ORGANICS

Parameter	MCLG	MCL	MCL Violation (Y/N)	NMB Water			Miami-Dade's Main System ²				Likely Source of Contamination	
				Sample Date	Level Detected	Range of Results		Sample Date	Level Detected	Range of Results		
						Low	High			Low		High
Dalapon (ppb)	200	200	No	Apr-17	ND	ND	ND	2017	1.1	ND	1.1	Discharge from chemical factories

STAGE 2 DISINFECTION BYPRODUCTS

Parameter	MCLG or MRDLG	MCL or MRDL ¹	MCL or MRDL ¹ Violation	NMB Water			Miami-Dade's Main System ²				Likely Source of Contamination	
				Sample Date	Level Detected	Range of Results		Sample Date	Level Detected	Range of Results		
						Low	High			Low		High
Chloramines (ppm)	4	4	No	2017	3.6	0.7	5	2017	2.7	ND	4.5	Water additive used to control microbes
Haloacetic Acids (ppb)	N/A	60	No	2017	19.4	9.3	33.1	2017	43	14	78	By-product of drinking water disinfection
Total Trihalomethanes (ppb)	N/A	80	No	2017	22.7	5.9	62.7	2017	49	4	61	By-product of drinking water disinfection

RADIOACTIVE CONTAMINANTS

Parameter	MCLG	MCL	MCL Violation (Y/N)	NMB Water			Miami-Dade's Main System ²				Likely Source of Contamination	
				Sample Date	Level Detected	Range of Results		Sample Date	Level Detected	Range of Results		
						Low	High			Low		High
Alpha Emitters (pCi/L)	0	15	No	Apr-17	ND	ND	ND	2017	ND	ND	ND	Erosion of natural deposits
Combined Radium (pCi/L)	0	5	No	Apr-17	ND	ND	ND	2017	ND	ND	ND	Erosion of natural deposits
Uranium (µg/L)	0	30	No	Apr-17	ND	ND	ND	2017	1.2	ND	1.2	Erosion of natural deposits
Radon (pCi/L) ⁴	NR	NR	No	Apr-17	7.9	3.1	7.9	2017	267	ND	267	Naturally occurring in soil and rock formations

LEAD AND COPPER (TAP WATER)

Parameter	MCLG	AL	AL Exceeded (Y/N)	NMB Water			Miami-Dade's Main System ²				Likely Source of Contamination
				Sample Date	90th Percentile Result	Sites Exceeding the AL ³	Sample Date	AL Exceeded	90th Percentile Result	Sites Exceeding the AL	
Copper (tap water) (ppm)	1.3	1.3	No	2015	0.1	0	2017	No	0	0	Corrosion of household plumbing systems; erosion of natural deposits
Lead (tap water) (ppb)	0	15	No	2015	3.4	3	2017	No	2	1	Corrosion of household plumbing systems; erosion of natural deposits

¹The MRDL for chloramines is based on a running annual average calculated quarterly.

²NMB Water received 0.01% of its water from Miami-Dade's Main system

³3 out of 91 homes (3%) were above the AL. 10% or more above the AL would have resulted in an AL exceedance.

⁴We have detected radon in the finished water supply as noted in the table above. There is currently no federal regulation for radon levels in the drinking water. Exposure to the air-transmitted radon over a long period of time may cause adverse health affects

as a nearby gas station), not the existence of contamination. NMB Water monitors for regulated contaminants to ensure the quality of your water. In 2017, 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 39 potential sources of contamination identified for this system, with low to high susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

SAMPLING AND ANALYSIS

NMB Water staff collect and analyze drinking water samples for numerous contaminants on an hourly, daily, monthly, and annual basis. NMB Water operates a State- and NELAC-certified laboratory that tests for total coliform bacteria in drinking water and analyzes chlorine and total coliform bacteria twice per month at 66 locations throughout the service area. Through this ongoing effort, our staff are able to ensure that the water distributed to customers complies with all drinking water regulations, is safe, and is high quality.

A summary of detected contaminants are listed on the table found on page 4. These results are well within the regulatory standards established by the FDEP.

ABOUT 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.

“2017 was a milestone year for NMB Water, as we launched a series of capital improvements that ensures sustainable and high-quality water delivery and lays the foundation for future economic growth.”

Jeffrey F. Thompson, P.E.
Director of NMB Water

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 byproducts 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. To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. Also, 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 EPA's Safe Drinking Water Hotline at (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 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 Centers for Disease Control and Prevention (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.

ABOUT 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 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 (800) 426-4791 or at <http://www.epa.gov/safewater/lead>.

PUBLIC PARTICIPATION

NMB Water promotes water conservation and education through community outreach. We partner with local schools and participate in community events to encourage conservation. To learn more about water conservation and education, visit our conservation page at NMBWater.com.

We encourage our customers to be informed about their water utility. You can learn more about plans for the utility by attending monthly meetings of the Public Utilities Commission, which acts as an advisory committee to the City of North Miami Beach's Mayor and City Commission regarding decisions on water utility rates, expansions, and expenditures. Public Utilities Commission meetings are normally held the second Wednesday of each month in the North Miami Beach City Hall, second floor, Commission Chambers, 17011 NE 19th Avenue, at 6 p.m. Please call (305) 948-2967 ext. 7975 to confirm.

ATTENTION CONDOMINIUM AND APARTMENT MANAGERS

Please share this report with your members and tenants. This report is available at NMBWater.com and additional copies of this report are available by calling NMB Water at (305) 654-7137.

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

CONTACT US

For questions about this report, call the Water Quality Manager at (305) 654-7137. To learn more about NMB Water, visit us on our website at NMBWater.com.

NORWOOD WTP GROUNDBREAKING LAUNCHES RELIABILITY IMPROVEMENTS

To continue to provide high-quality service and plan for growth, NMB Water is implementing system-wide improvements to deliver safe and reliable water for regional customers. The Reliability Improvements Project will enhance operations and long-term viability of NMB Water's water supply and treatment system.

This \$11 million investment will upgrade the following critical systems, including:

- Generators and electrical components
- Chemical feed systems and filtration system
- Instrumentation and control systems
- Pumping systems
- Finished water storage
- Various other components of the water treatment plant

On December 14, 2017 honored guests from the City of North Miami Beach and partner municipalities officially broke ground on construction of the improvements at the Norwood WTP. The Reliability Improvements Project is anticipated to be completed in late 2018.

The \$11 million Reliability Improvements Project will enhance operations and long-term viability of NMB Water's drinking water supply and treatment system. Dignitaries from the City of North Miami Beach and partner municipalities officially broke ground on construction of the improvements at the Norwood WTP.





NMB Water

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