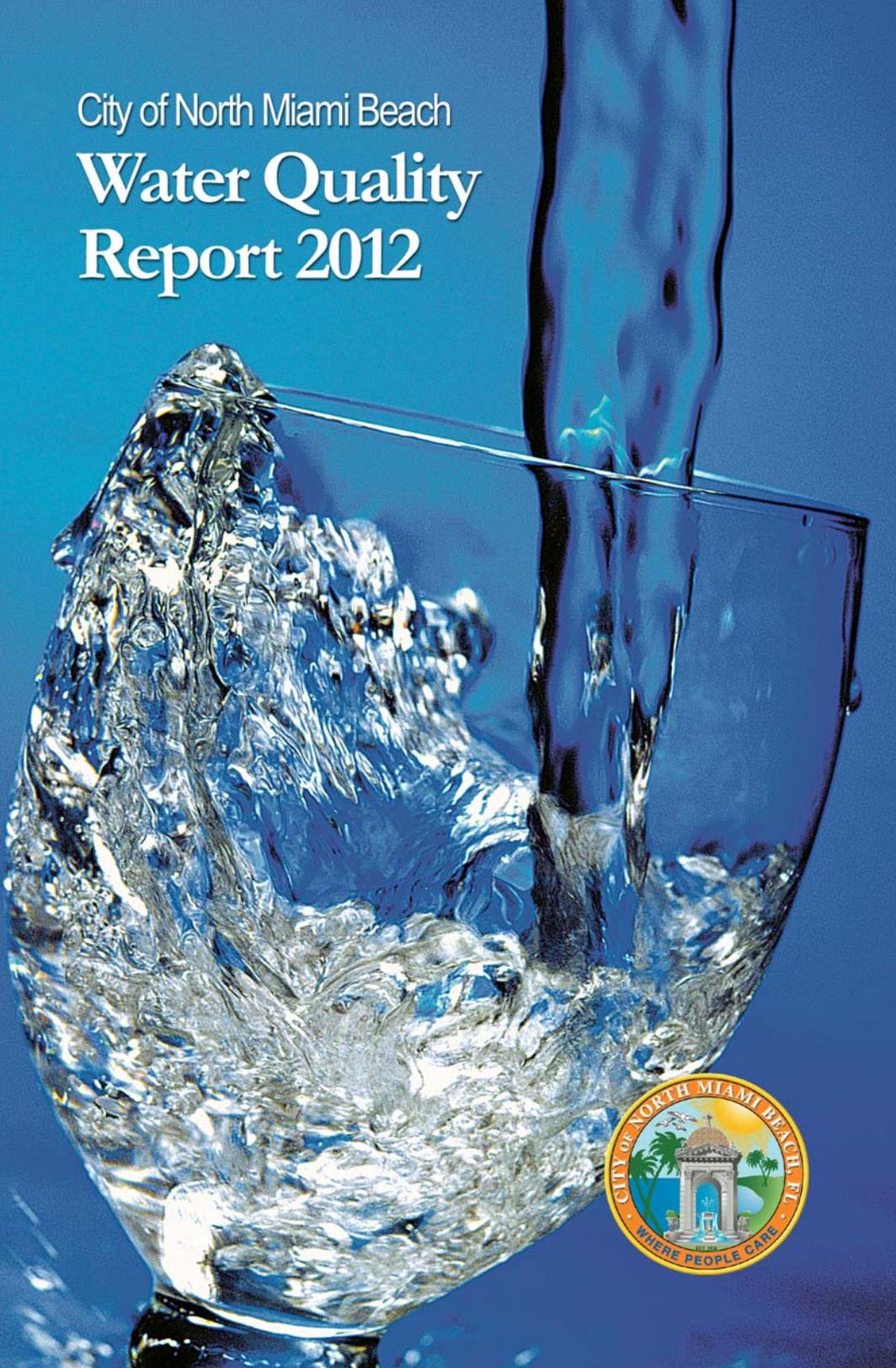


City of North Miami Beach

# Water Quality Report 2012





## Mayor's Message

I am pleased to announce that water treated at the City of North Miami Beach's Norwood Water Treatment Plant from January 1 through December 31, 2012, meets or exceeds all state and federal regulatory requirements.

In accordance with the U.S. Environmental Protection Agency's regulations and the Safe Drinking Water Act, our water utility prepares an annual consumer confidence report—also known as the water quality report—for its customers. Please take a moment and review this important publication. This report shows our water quality results and what they mean.

Our award-winning tap water comes from ground water sources, specifically, the Biscayne and Floridan aquifers. Our production wells pump water from these two aquifers, and it is then processed and prepared for public consumption through one of the following treatment processes—lime softening, nanofiltration, or 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 City of North Miami Beach's dedicated water professionals are committed to providing you with the highest-quality tap water available. I encourage you to contact us if you should have any questions or concerns about the water and/or services we provide.

*George Vallejo*

George Vallejo, Mayor  
City of North Miami Beach

## Water Sources

We obtain ground water from wells in the Biscayne and Floridan aquifers. 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 has issued a permit that allows the North Miami Beach water utility 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 or nanofiltration processes.

In contrast, our second source of water is the Floridan Aquifer, located approximately 1,250 feet below ground. Our 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 processed with 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 2012, the Florida Department of Environmental Protection (FDEP) performed a Source Water Assessment on our system. This assessment provides the utility with information about any potential sources of contamination near our wells. The results identify two unique potential sources of contamination for this system, with low to moderate susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program web site at: [http://www.dep.state.fl.us/swapp/DisplayPWS.asp?pws\\_id=413161&odate=01-OCT-12](http://www.dep.state.fl.us/swapp/DisplayPWS.asp?pws_id=413161&odate=01-OCT-12) or by contacting the

Public Information Officer at  
(305) 919-3756.

## Quality Control



North Miami Beach's water quality control division oversees the laboratory that conducts a multitude of tests to ensure the produc-

tion and distribution of safe drinking water. The laboratory is state certified in microbiology and ensures that the water delivered to our customers is of the highest quality possible. Water samples from 138 different locations throughout the water service area are tested monthly for bacteria, chlorine, cloudiness, and iron.

The utility is required to monitor a multitude of substances, of which 11 were detected in our treated water. The results are listed on the chart in this report. These results are significantly below the regulatory standards set by the United States Environmental Protection Agency (EPA) and the State of Florida. The city reports the results to the Florida Department of Health and the Florida Department of Environmental Protection.

## 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 North Miami Beach water utility 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 con-

cerned 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>.

## 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.

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**.

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).

## Conservation & Education

The Public Services Department promotes water conservation awareness and education of water issues through its community outreach and education initiatives. Water education presentations are available, free of charge, for any school, civic, church, or neighborhood group in the water utility service area. To schedule a speaker or presentation, please call (305) 919-3756.

# City of North Miami Beach 2012 Water Quality Report

*(Finished water sampling and results from January 1 - December 31, 2012)*

PARAMETER	MCL Violation	Federal Goal MCLG	Federal/State MCL	North Miami Beach's Norwood-Oeffler Plant	Year Tested	Major Sources
<b>Inorganic Contaminants</b>						
Copper (tap water) (ppm)	N	1.3	AL=1.3	0.09 (0 home out of 103 homes exceeded the AL)(b)	2012	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride (ppm)	N	4	4	0.82 (0.17 - 0.82)(a)	2012	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7ppm
Lead (tap water) (ppb)	N	0	AL=15	3.6 (1 home out of 103 homes exceeded the AL)(b)	2012	Corrosion of household plumbing systems, erosion of natural deposits
Nitrite (as N) (ppm)	N	1	1	0.19 (0.16-0.19) (a)	2012	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits
Barium (ppm)	N	2	2	0.0035 (0.0031-0.0035) (a)	2012	Erosion of natural deposits, discharge of drilling wastes; discharge from metal refineries
Sodium (ppm)	N	N/A	160	37 (33-37) (a)	2012	Salt water intrusion, leaching from soil
<b>Stage 1 Disinfectants and Disinfection By-Products</b>						
Haloacetic Acids (five) (HAA5) (ppb)	N	N/A	60	(10.1 - 14.5) (c)	2012	By-product of drinking water disinfection
Total Trihalomethanes (ppb)	N	N/A	80	(15.4 - 19.3) (c)	2012	By-product of drinking water disinfection
<b>Stage 2 Disinfectants and Disinfection By-Products</b>						
	MCL or MRDL Violation	MCLG or MRDLG	MCL or MRDL			
Haloacetic Acids (five) (HAA5) (ppb)	N	N/A	60	(8.0 - 23.1) (d)	2012	By-product of drinking water disinfection
Total Trihalomethanes (ppb)	N	N/A	80	(11.1 - 19.4) (d)	2012	By-product of drinking water disinfection
Chloramines (ppm)	N	4	4	3.05 (0.6 - 4.0) (e)	2012	Water additive used to control microbes
<b>Radioactive Contaminants</b>						
Alpha Emitters (pCi/L)	N	0	15	1.3 (0.3-1.3)	2012	Erosion of natural deposits
Combined Radium (pCi/L)	N	0	5	1.7 (0.3-1.7)	2012	Erosion of natural deposits

## LEGEND

- (a) The lowest and highest values measured during the year are in parentheses. The number outside the parentheses is the highest detected level reported for the monitoring period, except for Disinfectant Residuals, where the running annual average is reported.
- (b) 90th percentile value reported. If the 90th percentile value does not exceed the AL (less than 10% of the homes have levels above the AL), the system is in compliance and uses the prescribed corrosion control measures.
- (c) A total of 2 samples per quarter were collected under the Stage 1 D/DBP Rule for Total Trihalomethanes and Haloacetic Acids 5, only the range of individual results reported.
- (d) A total of 6 samples per quarter were collected under Stage 2 D/DBP Rule for Total Trihalomethanes and Haloacetic Acids 5, only the range of individual results reported.
- (e) The level detected is the highest running annual average of monthly average of all samples collected.

## DEFINITIONS

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

**Disinfection:** In treating water, it is the process by which water is exposed to a chemical for a specified time period to kill pathogenic organisms.

**Disinfection By-product:** A chemical produced by the disinfection process. Disinfection by-products are regulated and are indicators of potential carcinogenic substances.

**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 addition of a disinfectant is necessary for 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.

**Picocurie per liter (pCi/L):** Measure of the radioactivity in water.

**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.

**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.

**Not Applicable (N/A)**



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## **Attention Condominium and Apartment Managers - Please share this report with your members and tenants.**

Additional copies of this report are available by calling the City of North Miami Beach Public Services Department at **(305) 919-3756**.

Mayor **George Vallejo**  
Councilman **Anthony F. DeFillipo**  
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