# Additional Information About Your 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, and can pick up substances resulting from the presence of animals or from human activity.

### Contaminants that may be present in **source water** include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- 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.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

- 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.
- 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.

Landlords and businesses are encouraged to share this report with non-billed water users. Additional copies for posting in common areas or on bulletin boards are available. Call MDWASD's Public Affairs Office at (786) 552-8088.

# What Should I Know About Certain

### Radon

Radon 222, or radon for short, is a colorless, odorless gas that occurs naturally in soil, air and water. Radon is formed from the radioactive decay products of natural uranium that is found in many soils. Most radon in indoor air comes from the soils below the foundation of the home, and in some locations can accumulate to dangerous levels in the absence of proper ventilation. In most homes, the health risk from radon in drinking water is very small compared to the health risk from radon in indoor air. For more information, call the EPA's Radon Hotline the MDWASD's water treatment plants. at 1-800-SOS-BADON.

We have detected radon in the finished water supply, as noted in the Radon Data Summary table. There is currently no federal regulation for radon levels in drinking water. In October 1999, the EPA proposed a maximum contaminant level (MCL) of 300 pCi/L or an alternative maximum contaminant level (AMCL) of 4000 pCi/L for radon. The AMCL requires development of a multimedia mitigation (MMM) program, which also addresses radon exposure from indoor air, as exposure to airtransmitted radon over a long period may cause adverse health effects. Action on a final rule is pendina.

## Cryptosporidium

Although the MDWASD uses the Biscayne Aguifer as a source of supply, the State has raised the issue that some groundwater sources may be under the direct influence of surface water (UDI) and therefore, are susceptible to the Cryptosporidium organism. As a result of the UDI issue and the sensitivity of the immuno-compromised, the MDWASD first tested for Cryptosporidium in 1993 and has continued testing monthly since 1994. To date, neither Cryptosporidium nor Giardia – another protozoan have been found in the source water supplying



ESTE FOLLETO CONTIENE INFORMACIÓN MUY IMPORTANTE SOBRE SU AGUA POTABLE. TRADÚZCALO O HABLE CON ALGUIEN QUE LO ENTIENDA BIEN. SI USTED PREFIERE RECIBIR ESTE FOLLETO EN ESPAÑOL, POR FAVOR LLAME AL TELÉFONO (786) 552-8300.

RAPÒ SA A GEN ENFÒMASYON ENPÒTAN SOU DIO WAP BWÈ AN, TRADUI LI, OSWA PALE AK YON MOUN KI KONPRANN LI. OSWA SI W TA PITO RESEVWA RAPÒ SA A AN KREYÒL, TANPRI RELE (786) 552-8300.

### Thirsty for more information about your water?

Feel free to call us at any of the numbers listed below:

### Public Affairs: 786-552-8088

- Alexander Orr Laboratory: 305-275-3170 (Residents south of SW 8 Street)
- John E. Preston Laboratory: 305-520-4738 (Residents north of SW 8 Street)

You may also get some of your questions answered on our website www.miamidade.gov/wasd.

For additional sources regarding water quality or health effects information in the local area, residents are encouraged to call the Department of Environmental Resources Management at (305) 372-6524 or the Florida Department of Health's Miami-Dade County Environmental Health Office at (305) 623-3500. Also, the Miami-Dade County Board of County Commissioners, charged with making decisions relating to the Department, meets regularly on Tuesdays and Thursdays at the Stephen P. Clark Center located in downtown Miami.

## Nitrate

Although the level of nitrate (refer to the table on water quality data) is consistently below the health effect level, the EPA requires the following information be included in this report: "Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue-baby syndrome. Nitrate levels may rise guickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider."

### Lead

Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed. replaced or reduced.

## Miami-Dade County's water consistently meets state and federal standards for both appearance and safety.



Water – Our most precious resource, Save it!

he Miami-Dade Water and Sewer Department (MDWASD) is pleased to present our Annual Water Quality Report. This report is designed to inform you about the excellent water and services we deliver to you every day. Our primary goal is to provide you with a safe and dependable supply of drinking water from our sole source, the Biscayne Aguifer. We want you to understand the constant efforts we make to improve the water treatment process and to protect our water resources.

The MDWASD routinely monitors for contaminants in your drinking water according to Federal and State laws, rules and regulations. Except where indicated otherwise, this water quality report is based on the results of our monitoring for the period of January 1, 2005 to December 31, 2005. Data obtained before January 1, 2005, and presented in this report are from the



most recent testing done in accordance with the laws, rules, and regulations. As you can see from the tables, our system has had no violations. The Department is proud to report that your drinking water meets or exceeds all federal and state requirements.

This report reflects the hard work and dedication of our employees who ensure that water delivered from the MDWASD's facilities meets all standards for safety, reliability and quality. We are committed to providing you this information about your water supply because customers who are well informed are our best supporters in any improvements necessary to maintain the highest drinking water standards. If you have any questions or concerns about the information provided, please feel free to call any of the numbers listed in this brochure.

### Where does Miami-Dade get its drinking water?

In Miami-Dade County, water is pumped from the Biscavne Aquifer to MDWASD's water treatment facilities: Hialeah, John E. Preston, Alexander Orr and the South Dade Water Supply System.

In general, the Hialeah and John E. Preston Plants treat water that is supplied to residents who live north of SW 8 Street up to the Miami-Dade/Broward Line. The Alexander Orr Plant serves residents south of SW 8 Street down to SW 264 Street. The three regional water plants supply treated water to a common distribution system, which runs throughout most of Miami-Dade County. Water from the Alex Orr plant receives lime treatment to reduce hardness, and is then disinfected, flouridated and filtered. Water from the Hialeah plant receives the same treatment, plus the addition of air stripping in order to remove volatile organic compounds. Because source water supplied to the Preston plant has a higher level of naturally occurring organic materials than the water at the other plants, it goes through a slightly different process called enhanced softening. It is then disinfected, fluoridated and filtered, then it goes through air stripping to remove volatile organic compounds. This new process has the added benefit of reducing the yellow tint once present in

water supplied by the Preston plant.

The South Dade Water Supply System is comprised of five smaller water treatment plants that serve residents south of SW 264 Street in the unincorporated areas of the county. These five plants pump treated water in a common distribution system, which is separate from the main system. Water from these plants is disinfected and stabilized for corrosion control.

Highly trained microbiologists, chemists, and water treatment specialists conduct or supervise more than 100,000 analyses of water samples each year. Water quality samples are collected throughout the county and tested regularly. Samples include untreated and treated water taken at our facilities, sample sites throughout the service areas

and at customers' homes. These tests are overseen by various federal, state and local regulatory agencies.

The Florida Department of Environmental Protection has performed a Source Water Assessment on our system. These assessments were conducted to provide information about any potential sources of contamination in the vicinity of our wells. Potential sources of contamination identified include underground petroleum storage tanks, dry cleaning facilities, a state-funded clean-up site and a federal Superfund site. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.



Listed in the 2005 Water Quality Data table below are 16 parameters detected in Miami-Dade County's water during the reporting period. All are below maximum contaminant levels allowed. Not listed are many others we test for, but that were not detected. Unless otherwise noted, all parameters were tested in 2005.

## Miami-Dade Water & Sewer Department 2005 Water Quality Data

PARAMETER	FEDERAL MCL (a)	FEDERAL GOAL (b)	STATE MCL	YEAR Tested	MAIN SYSTEM	SOUTH DADE WATER SUPPLY SYSTEM	AVENTURA/ Norwood	MAJOR SOURCES
MICROBIOLOGICAL CONTAMINANTS								
Total Coliform Bacteria (c)	5%	0	5%	05	0.2%	0%	0%	Naturally present in the environment
DISINFECTION BYPRODUCTS								
Total Trihalomethanes (ppb) (d)	80	NE	80	05	17 (ND - 49)	18 (4 - 82)	7 (7 - 15)	Byproduct of drinking water chlorination
Haloacetic Acids (ppb) (d)	60	NE	60	05	15 (ND - 26)	7 (ND - 11)	15 (3 - 51)	Byproduct of drinking water chlorination
DISINFECTANTS								
Chloramines (ppm)	MRDL=4	MRDLG=4	MRDL=4	05	2.4 (1.9 - 2.9)	N/A	1.9 (0.6 - 4.0)	Water additive used to control microbes
Chlorine (ppm)	MRDL=4	MRDLG=4	MRDL=4	05	N/A	1.2 (1.2 - 1.4)	N/A	Water additive used to control microbes
VOLATILE ORGANIC CONTAMINANTS								
cis-1, 2-Dichloroethylene (ppb)	70	70	70	05	ND	ND	0.8 (0 - 0.8)	Discharge from industrial chemical factories
INORGANIC CONTAMINANTS								
Barium (ppm)	2	2	2	05	ND	0.02 (0.01 - 0.02)	ND	Erosion of natural deposits
Copper (ppm) (e) (at tap)	AL = 1.3	1.3	AL = 1.3	05/03(f)	0.08, 0 homes out of 83 (0%) exceeded AL	1.0, 1 home out of 37 (2.7%) exceeded AL	0.09, 0 homes out of 105 (0%) exceeded AL	Corrosion of household plumbing systems
Cyanide (ppb)	200	200	200	05	ND	6 (ND - 6)	ND	Discharge from plastic and fertilizer factories
Fluoride (ppm)	4	4	4	05 (g)	0.7 (0.2 - 0.7)	0.1	1.0 (0.8 - 1.4)	Erosion of natural deposits; water additive which promotes strong teeth
Lead (ppb) (e) (at tap)	AL = 15	0	AL = 15	05/03(f)	4, 3 homes out of 83 (3.6%) exceeded AL	3, 1 home out of 37 (2.7%) exceeded AL	0.4, 1 home out of 105 (1%) exceeded AL	Corrosion of household plumbing systems
Nitrate (as N) (ppm)	10	10	10	05	ND	6 (ND - 6)	0.35	Erosion of natural deposits; runoff from fertilizer use
Sodium (ppm)	NE	NE	160	05	53 (22 - 53)	21 (12 - 21)	18	Erosion of natural deposits and sea water
RADIOACTIVE CONTAMINANTS								
Alpha Emitters (pCi/L)	15	0	15	03 (h)	4.7 (0.7 - 4.7)	7.2 (1.2 - 7.2)	4.5 (3.0 - 4.5)	Erosion of natural deposits
Combined Radium (pCi/L)	5	0	5	03 (h)	0.9 (0.3 - 0.9)	1.2 (0.4 - 1.2)	0.95 (0.1 -0 .95)	Erosion of natural deposits
Uranium (µg/L)	30	0	30	03 (h)	1.7 ( 0.2 - 1.7)	3.3 (ND - 3.3)	NT	Erosion of natural deposits

## **2005 Radon Data Summary**

PARAMETER	FEDERAL MCL (a)	FEDERAL GOAL (b)	STATE MCL	YEAR Tested	MAIN SYSTEM	SOUTH DADE WATER SUPPLY SYSTEM	AVENTURA/ Norwood	MAJOR SOURCES
Radon (pCi/L)	NE	NE	NE	05	138 (4 - 138)	119 (56 - 119)	ND	Naturally occurring in soil and rock formations

## The following notes, definitions and abbreviations refer to the data tables on the left.

### notes

(a) MCL = Maximum Contaminant Level

- prescribed corrosion control measures.

- monitoring framework.

### abbreviations

AL	Action Level
MRDL	Maximum Re
MRDLG	Maximum Re
N/A	Not Applicabl
ND	Not Detected
NE	None Establis
pCi/L	picoCuries pe
ppb	Parts per billi
ppm	Parts per mill
( )	Ranges (low - The value pre monitoring pe annual average
NT	Not Tested

### (b) Federal Goal = MCLG = Maximum Contaminant Level Goal

(c) The MCL for total coliform bacteria states that drinking water must not show the presence of coliform bacteria in  $\geq$  5% of monthly samples. A minimum of 390 samples for total coliform bacteria testing are collected each month from the Main distribution system (55 samples from the South Dade Water Supply distribution system) in order to demonstrate compliance with regulations.

(d) A total of 48 samples for Total Trihalomethane and Haloacetic Acid testing are collected per year from the Main distribution system (20 samples from the South Dade Water Supply distribution system) in order to demonstrate compliance with State regulations. Compliance is based on a running annual average. This is the value which precedes the parentheses.

(e) 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

(f) The 05/03 data presented for the Main System and South Dade System respectively is from the most recent testing conducted in accordance with regulations. Both systems are under reduced monitoring which only requires testing every 3 years.

(g) Fluoride testing to demonstrate compliance with State regulations is required every 3 years in accordance with the State's monitoring framework. However, fluoride levels are monitored daily for the Main System treatment plants where fluoride is added to promote strong teeth.

(h) Data presented is from the most recent testing conducted in accordance with regulations. Testing for this parameter is required every 3 years in accordance with the State's regulatory

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- high) are given in parentheses where applicable eceding the parentheses is the highest detected level reported for the eriod except for disinfection byproducts and disinfectants, where the running

age is reported.

### definitions

In the tables to your left, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

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 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 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.

### **Maximum Residual Disinfectant Level (MRDL)** - The highest level of a disinfectant allowed in

drinking water. There is convincing evidence that the addition of a disinfectant is necessary to control microbial contaminants.

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

**Detect –** The presence of a contaminant at or above the minimum detection level of the test method.

**ND** – Not detected; indicates that the substance was not found by laboratory analysis.

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/I) – 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 of water.

## For Customers With **Special Health Concerns**

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).



**hank you** for allowing us to continue providing your family with clean, quality water this year.