# 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:

(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.

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.

## What if I want to **know more** about my water?

If you'd like to learn more about your water, or you have any questions about this report or about the Miami-Dade Water and Sewer Department, please feel free to call us at any of the numbers listed below:

**PUBLIC AFFAIRS SECTION (786) 552-8088**
**ALEXANDER ORR LAB (305) 275-3170**
**JOHN E. PRESTON LAB (305) 887-2007**

Or visit our web site at **WWW.MIAMIDADE.GOV**, click the link "Find a department," and click on "Water and Sewer Department."

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, Miami-Dade County Environmental Health Office at (305) 623-3500. Also, the Miami-Dade 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.

## There Are **No Detectable Levels of Lead** In The Water Produced By WASD

However, infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

Landlords and businesses are encouraged to share this report with non-billed water users. Additional copies of this report—for posting in common areas or bulletin boards—are available by calling the Department's Public Affairs Section at (786) 552-8088.

# What Should I Know About Certain CONTAMINANTS?

## 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 at 1-800-SOS-RADON.

In October 1999, the EPA proposed an 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. Action on a final rule is pending.

## NITRATE

Although the level of nitrate (refer to the table on water quality data) is consistently below the health effect level, 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 quickly 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."

## CRYPTOSPORIDIUM

In April of 1993, the cryptosporidosis outbreak in Milwaukee, Wisconsin alerted water utilities to the potential threat that this protozoan organism presents to public water supplies. There were an estimated 400,000 cases of diarrhea and several deaths associated with the disease in severely immuno-compromised persons. This organism is primarily associated with surface water sources.

Although WASD uses the Biscayne Aquifer 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, WASD 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 WASD's water treatment plants.

## did you know...

Did you know the average person in a developing country uses 13 gallons of water per day, which is about equal to two to three flushes of a toilet?

*(SOURCE: National Geographic Society website)*

SERVE • CONSERVE

# Water Quality REPORT

**MIAMI-DADE WATER & SEWER DEPARTMENT**
MIAMI-DADE COUNTY, FLORIDA

# 2003

*Water – Our most precious resource, Save it!*

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

**THE SOURCE**
Our sole source is groundwater from wells. The wells draw from the Biscayne Aquifer, an underground rock formation. Approximately 330 million gallons per day (mgd) of raw water are withdrawn from this underground source to meet the needs of the community.

**HOW AND WHERE YOUR WATER IS TREATED**
The raw water is pumped to WASD's water treatment facilities: Hialeah, John E. Preston, Alexander Orr and the South Dade Water Supply System (SDWSS). The Hialeah and Preston Plants serve residents who live north of Flagler Street up to the Miami-Dade/Broward Line. The Orr Plant serves residents south of Flagler Street to S.W. 248 Street. These three regional water plants supply treated water to a common distribution system throughout most of Miami-Dade County. Water from these plants receives lime treatment for hardness, and it is then disinfected and filtered.

The SDWSS is made up of five smaller water treatment plants that serve residents south of S.W. 248 Street in the unincorporated areas of the County. These five plants pump treated water into a common distribution system, which is separate from the main system. Water from these plants is disinfected and stabilized.

**TESTING FOR YOUR SAFETY**
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 regulatory agencies on a Federal, State and local level.

Customers judge the quality of their drinking water based on taste and appearance. The water delivered to residents in the northern part of the county originates from a region of the Biscayne Aquifer that contains natural organic material. These natural substances increase the color of the water. Although the water has a yellow tint, there is no harm associated with the color.

## It's Your Water, **Drink Up!**

**The Miami-Dade Water and Sewer Department (WASD) is proud to present you this year's Annual Water Quality Report.**

This report is designed to inform you about the quality water and services we deliver to you every day. Our continuous goal is to provide you with a safe, dependable supply of drinking water. We want you to understand the constant efforts we make to improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water!

WASD 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 to December 31, 2003. As you can see by the tables, our system had no violations. WASD is proud that your drinking water meets or exceeds all Federal and State requirements!

This report reflects the hard work and dedication of Department employees who ensure water delivered from WASD'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 phone numbers listed in this brochure.

Este folleto contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. O si usted prefiere recibir este folleto en español, por favor llame al telefono (786) 552-8300.

Rapò sa a gen enfòmasyon enpòtan sou dlo 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.

# Miami-Dade Water & Sewer Department

# 2003 Water Quality Data

| PARAMETER | FEDERAL MCL (a) | FEDERAL GOAL (b) | STATE MCL | YEAR TESTED | MAIN SYSTEM WATER TREATMENT PLANTS: ALEXANDER ORR, JR. | HIALEAH | JOHN E. PRESTON | SOUTH DADE WATER SUPPLY SYSTEM TREATMENT PLANTS: ELEVATED TANK | EVERGLADES LABOR CAMP | LEISURE CITY | NARANJA | NEWTON | AVENTURA/ NORWOOD | MAJOR SOURCES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Microbiological Contaminants** | | | | | | | | | | | | | | |
| Total Coliform Bacteria (c) | 5% | 0 | 5% | 2003 | 0% | 0% | 0.52% | Distribution System Wide = 0% | | | | | 0% | Naturally present in the environment |
| **Volatile Organic Contaminants** | | | | | | | | | | | | | | |
| Total Trihalomethanes (ppb) (d) | 100 | N/A | 100 | 2003 | 24 (16 – 31) | 18 (1 – 56) | 39 (22 – 59) | Distribution System Wide = 30 (6 – 84) | | | | | 11 (2 – 57) | Byproduct of drinking water chlorination |
| cis-1, 2-Dicholoroethylene (ppb) | 70 | 70 | 70 | 2003 | ND | ND | ND | ND | ND | ND | ND | ND | 1 (0 – 2) | Discharge from industrial chemical factories |
| **Inorganic Contaminants** | | | | | | | | | | | | | | |
| Arsenic (ppb) | 50 | NE | 50 | 2002 (h) | 0.6 | 1 | 1 | 0.5 | 0.7 | 0.8 | 0.6 | 1 | ND | Erosion of natural deposits |
| Barium (ppm) | 2 | 2 | 2 | 2002 (h) | 0.008 | 0.007 | 0.008 | 0.018 | 0.032 | 0.018 | 0.014 | 0.018 | 0.004 | Erosion of natural deposits |
| Chromium (ppb) | 100 | 100 | 100 | 2002 (h) | 0.1 | 0.2 | 0.1 | ND | ND | 0.1 | 0.06 | 0.1 | ND | Erosion of natural deposits |
| Copper (ppm) (e) | AL=1.3 | 1.3 | AL=1.3 | 2002/03 (f) | 0.08, 0 homes out of 111 (0%) exceeded AL | | | 1.0, 1 home out of 37 (2.7%) exceeded AL | | | | | 0.15, 0 homes out of 101 (0%) exceeded AL | Corrosion of household plumbing systems |
| Fluoride (ppm) | 4 | 4 | 4 | 2002 (g) | 0.7 | 0.9 | 0.7 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 1.0 | Erosion of natural deposits; water additive which promotes strong teeth |
| Lead (ppb) (e) | AL=15 | 0 | AL=15 | 2002/03 (f) | 4, 3 homes out of 111 (2.7%) exceeded AL | | | 3, 1 home out of 37 (2.7%) exceeded AL | | | | | 3, 0 homes out of 101 (0%) exceeded AL | Corrosion of household plumbing systems |
| Nickel (ppb) | NE | NE | 100 | 2002 (h) | ND | ND | ND | 0.6 | 0.5 | 0.6 | 0.6 | 0.4 | ND | Corrosion of bronze |
| Nitrate (as N) (ppm) | 10 | 10 | 10 | 2003 | ND | ND | ND | 6 (5 – 6) | 1 | 6 (5 – 6) | 7 (5 – 7) | 2 | 0.12 | Erosion of natural deposits; runoff from fertilizer use |
| Nitrite (as N) (ppm) | 1 | 1 | 1 | 2003 | ND | ND | ND | ND | ND | ND | ND | ND | 0.05 | Erosion of natural deposits; runoff from fertilizer use |
| Selenium (ppb) | 50 | 50 | 50 | 2002 (h) | ND | ND | ND | ND | ND | 0.3 | ND | ND | ND | Erosion of natural deposits |
| Sodium (ppm) | NE | NE | 160 | 2002 (h) | 27 | 31 | 35 | 17 | 14 | 14 | 21 | 24 | 19 | Erosion of natural deposits and seawater |
| Thallium (ppb) | 2 | 0.5 | 2 | 2002 (h) | ND | ND | ND | ND | ND | 0.4 | ND | ND | ND | Discharge from electronics, glass and drug factories |
| **Radiological Contaminants** | | | | | | | | | | | | | | |
| Alpha Emitters (pCi/L) | 15 | 0 | 15 | 2002 (h) | 0.3 | 1.3 | 1.1 | 0.8 | 1.0 | 0.7 | 0.8 | 0.6 | 5 | Erosion of natural deposits |

Listed above are 16 parameters detected in Miami-Dade's water during this reporting period. All are below maximum contaminant levels allowed. Not listed are many others we test for, but were not detected.

Unless otherwise noted, all parameters were tested in 2003.

## abbreviations

**AL** Action Level
**N/A** Not Applicable
**ND** Not Detected
**NE** None Established
**WTP** Water Treatment Plant
**SDWSS** South Dade Water Supply System of five smaller water treatment plants, includes the following plants: Elevated Tank; Everglades Labor Camp; Leisure City; Naranja; Newton

**ppm** Parts per million or milligrams per liter (mg/L)
**ppb** Parts per billion or micrograms per liter (µg/L)
**pCi/L** picoCuries per Liter
**( )** Ranges (low - high) are given in parentheses where applicable

## definitions

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

**Maximum Contaminant Level or 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 or 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.

**ND**: "ND" means not detected and 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/l)**: 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 in water.

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

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

## did you know...

Did you know dripping faucets, leaky toilets and other leaking fixtures that waste water can account for as much as 14 percent of your water usage?

*(SOURCE: American Water Works Association website)*

## 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 (1-800-426-4791).

# 2003 Radon Data Summary

| PARAMETER | FEDERAL GOAL | FEDERAL MCL | STATE MCL | YEAR TESTED | MAIN SYSTEM WATER TREATMENT PLANTS: ALEXANDER ORR, JR. | HIALEAH | JOHN E. PRESTON | SOUTH DADE WATER SUPPLY SYSTEM TREATMENT PLANTS: ELEVATED TANK | EVERGLADES LABOR CAMP | LEISURE CITY | NARANJA | NEWTON | AVENTURA/ NORWOOD | MAJOR SOURCES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radon (pCi/L) | NE | NE | NE | 2003 | 190 | 4 | 4 | 51 | 124 | 115 | 44 | 60 | 59 | Naturally occurring in soil and rock formations |

## footnotes

(a) MCL– Maximum Contaminant Level

(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 ≥ 5% of monthly samples.

A minimum of 390 samples for total coliform bacteria testing are collected each month from the Main distribution system (50 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 testing are collected per year from the Main distribution system (16 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 prescribed corrosion control measures.

(f) The 02/03 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. The Norwood plant was tested in 2003.

(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 monitoring framework. The Norwood plant system was tested in 2003.