

City of Dania Beach



2013 Annual Drinking Water Quality Report



This report is available at www.daniabeachfl.gov/ccr. If requested this document will be mailed to customers.

We're very pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. Our water source is: wells drawn from the Biscayne Aquifer at a depth of 65 feet.

Source Water Assessment Result

In 2013 the Department of Environmental Protection performed a Source Water Assessment on our system and a search of the data sources indicated no potential sources of contamination near our wells. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

Every year we collect monthly bacteriological samples and four quarterly chemical samples at our wells to test for contaminants associated with potential sources of ground water. Once the water is pumped from the ground, we treat it with a process called lime softening. This process precipitates the calcium and carbonates in the water, making it soft. We then filter the water to remove the remaining particulates. The water is disinfected to inactivate microbiological contaminants and fluoride is added to promote dental health. In November 2011, the City added and placed in service a new 2-mgd Nanofiltration membrane plant to the City's existing 3-mgd lime-softening plant. The flows from each process are mixed at approximately 50/50 ratio prior to discharge into the distribution system. We provide water to over 18,000 citizens of the City of Dania Beach.

This Report Shows Our Water Quality Results and What They Mean

*If you have any questions about this report or concerning your water utility, please contact **Philip W. Skidmore** at (954) 924-3747. We encourage our valued customers to be informed about their water utility.*

***The City of Dania Beach** 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, 2013 to December 31, 2013. Data obtained before January 1, 2013, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.*

In the table 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.*

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

Locational Running Annual Average (LRAA): *the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.*

Maximum residual disinfectant level or 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 or 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.*

Nephelometric Turbidity Unit (NTU): *measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.*

“ND”: *means not detected and indicates that the substance was not found by laboratory analysis.*

“N/A”: *means not available or not applicable*

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.*

Treatment Technique (TT): *A required process intended to reduce the level of a contaminant in drinking water.*

U: *means undetected or under minimum detection threshold limit.*

Source Water Microbiological Contaminants

Microbiological Contaminants

Contaminant and Unit of Measurement	Dates of sampling (mo. / yr.)	MCL Violation Y/N	Total Number of Positive Samples for the Year	MCL G	MCL	Likely Source of Contamination
E. Coli- (Untreated water at the groundwater source)	1/13-12/13	N	2 positive samples	0	0	Human and/or animal fecal waste
Fecal coliform and <i>E. Coli</i> in the distribution system (positive samples)	1/13-12/13	N	3 positive samples	0	0	Human and fecal waste

*The City of Dania Beach purchases raw untreated ground water from Broward County. On June 10, 2013, Broward county sampled the 3A-SRWF source well PW24 for the fecal-indicator, E. coli. Broward County was notified on June 11 that well PW24 tested positive for E. coli. On June 12, Broward County took five additional samples, subsequently disconnected a section of pipe to create an air gap, took the well PW24 off-line and the contamination was addressed. The well was rehabilitated, the air gap still exists and Broward County has not had to utilize the well PW24 since the rehabilitation was completed. In response, the City of Dania Beach sent notifications to all of our customers within 24 hours of learning of the positive sample. As required, follow-up samples were collected in the distribution system and results were satisfactory.

* On September 4, 2013 we collected a sample from the G well, one(1) plant sample and three(3) samples in the distribution system. These samples tested positive for E. coli. Follow-up samples collected on Friday, September 6, 2013 in all of the locations and additional locations nearby were satisfactory (no E. Coli or Total Coliform bacteria were detected). Additionally, 5 samples were collected on September 11, 2013, at the G well as required and results were satisfactory (no E. Coli or Total Coliform bacteria were detected).

Health Effects: Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Microbiological Contaminants

Contaminant and Unit of Measurement	Dates of sampling (mo. / yr.)	MCL Violation Y/N	Highest Monthly Number	MCL G	MCL	Likely Source of Contamination
Total Coliform Bacteria (positive samples)	1/13-12/13	N	4.2%	0	For systems collecting at least 40 samples per month: presence of coliform bacteria in >5% of monthly samples. For systems collecting fewer than 40 samples per month: presence of coliform bacteria in >1 sample collected during a month.	Naturally present in the environment. One organism detected in one sample in one month. Five fails at one location due to faulty sample point.

Contaminant and Unit of Measurement	Dates of sampling (mo. / yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCL G	MCL	Likely Source of Contamination
Inorganic Contaminants							
Barium (ppm)	8/12	N	0.0025	N/A	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide (ppb)	8/12	N	5	N/A	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	8/12	N	0.7640	N/A	4	4.0	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
Sodium (ppm)	8/12	N	22.2	N/A	N/A	160	Salt water intrusion, leaching from soil
Stage 1 Disinfectants and Disinfection By-Products							
Disinfectant or Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL or MRDL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Chlorine (ppm) LRAA	1/13-12/13	N	3.06	0.2/4.0	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

Contaminant and Unit of Measurement		Dates of sampling (mo. / yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCL G	MCL	Likely Source of Contamination
Haloacetic Acids (five) (HAA5) (ppb)	1/13- 9/13	N	28.68	8.7-30.89	NA	MCL = 60		By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	1/13-9/13	N	27.64	5.3-31.43	NA	MCL = 80		By-product of drinking water disinfection

Stage 2 Disinfectants and Disinfection By-Products

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Haloacetic Acids (five) (HAA5) (ppb)	Oct.-Dec 2013	N	*	20-31.9	N/A	60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	Oct.-Dec 2013	N	*	16.8-25.3	N/A	80	By-product of drinking water disinfection

*Not enough data available to calculate running average (RAA) for Haloacetic acids or TTHM. For these contaminants the level detected is the highest locational RAA.

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	AL Exceeded (Y/N)	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Lead and Copper (Tap Water)							
Copper (tap water) (ppm)	09/13	N	0.046	0	0	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead** (tap water) (ppm)	09/13	N	1.8	0	0	0.015	Corrosion of household plumbing systems; erosion of natural deposits

Unregulated Contaminants Monitoring Round 3 (UCMR3)

The City of Dania Beach has been monitoring for unregulated contaminants (UCs) as part of a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. At present, no health standards (for example, maximum contaminant levels) have been established for UCs. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. If you would like more information on the EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

Contaminant	Level Detected	Range	Draft Reference Concentration (ug/L)	Likely Source of Contamination
Chromium, Total (ppb)	0.33	0-0.33	100	Chromium is used in making steel and other alloys. Chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation. Chromium-3 is an essential nutrient.
Molybdenum (ppb)	0.73	ND-1.0	40	Molybdenum is a naturally-occurring element found in ores and present in plants, animals, and bacteria. Its commonly used form, molybdenum trioxide, is used as a chemical reagent.
Strontium	199	ND ND - 199	4000	Strontium is a naturally-occurring element. Historically, the commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions, to block x-ray emissions.

“The reference concentrations are based on publically-available health information found in the following EPA resources: 2012 Drinking Water Standards and Health Advisories, the CCL 3 (Contaminant Candidate List) Information Sheets or the Human Health Benchmark for Pesticides (HHBPs). The draft reference concentration does not represent an “action level” nor should the draft reference concentration be interpreted as any indication of an Agency intent to establish a future drinking water regulation for the contaminant at this or any other level. Decisions as to whether or not to regulate the contaminant in drinking water will continue to be made following the EPA’s Regulatory Determination process.”

****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.*

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 City of Dania Beach 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 up 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 or at <http://www.epa.gov/safewater/lead>.

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.

The Environmental Protection Agency (EPA) requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table above are the only contaminants detected in your drinking water.

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](tel:1-800-426-4791).

The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio.

In our continuing efforts to maintain a safe and dependable water supply, it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply, we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

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).

*“We at **The City of Dania Beach** work around the clock to provide top quality water to every tap that is both bacteriologically sound as well as aesthetically pleasing,” said **Philip W Skidmore**. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children’s future.*

The City of Dania Beach would like you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to insuring the quality of your water. If you have any questions or concerns about the information provided, please feel free to call any of the numbers listed.