



2011 Annual Water Quality Report

We are pleased to report that our drinking water surpasses state and federal drinking water standards

Community at Work

Water plays an integral part in our everyday lives. The City of Boca Raton Utility Services Department continues to remain in the forefront of new and emerging water treatment technology as well as alternative water supply technologies in support of water conservation. Water conservation is the most cost-effective and environmentally sound way to reduce our demand for water. To promote environmental stewardship and public awareness, the Utility Services Department offers public outreach and education programs. These programs are offered to local schools, homeowners associations, civic groups, and through other venues. Some of the programs include tours of the Water Treatment Facility, Water Conservation programs, Water Pollution programs, and Water Quality programs including the use of our EnviroScope® Coastal Ecosystem model. For more information about our programs or to schedule a tour, please call 561-338-7310.

Also, we encourage public interest and participation in decisions affecting our community's drinking water. Regular City Council meetings usually occur on the second and fourth Tuesdays of each month at 6:00pm at City Hall. City Hall is located at 201 West Palmetto Park Road. For information on meeting schedules and agendas contact 561-393-7740 or visit the City's website at www.myboca.us.



Sitting left to right: CRA Chairman and City Council Member Constance Scott, Mayor Susan Whelchel, and Deputy Mayor Susan Haynie. Standing left to right: Council Member Anthony Majhess and Council Member Michael Mullaugh

Your Drinking Water Process

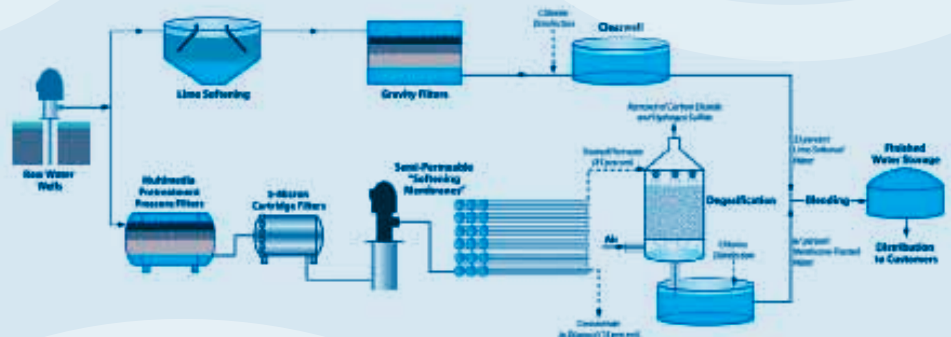
Once the water is pumped from our wells to our Glades Road facility, the City of Boca Raton uses two types of water treatment processes.

Traditional Lime Softening: involves the use of calcium oxide and other chemicals to remove minerals and particles. The water is then filtered to remove smaller impurities and then disinfected with a chlorine compound to destroy bacteria and other microorganisms.

State-of-the-Art Membrane Softening: involves pumping the water through multimedia pretreatment pressure filters, 5-micron cartridge filters, and finally semi-permeable membranes. Next, hydrogen sulfide and carbon dioxide are removed using a degasifying technology. The membrane softened water is also disinfected with a chlorine compound and blended with the lime softened water. The combined processes produce high quality water that is pumped through the distribution system to our customers.

Your Drinking Water SOURCE: The Biscayne Aquifer

The Biscayne aquifer is the primary source of drinking water for over six million people in South Florida and is the source of the drinking water for the City of Boca Raton. The City of Boca Raton's 50 raw water wells pump water from the Biscayne aquifer to our water treatment facility located on Glades Road by the I-95 interchange.



Source Water Assessments

In 2011, the Florida Department of Environmental Protection (DEP) performed a Source Water Assessment on the City's wellfield system in order to ensure our source water is protected. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of the City's wells. Potential sources of contamination are those facilities, sites, and activities that have the potential to affect the underlying ground water aquifers or nearby surface waters used for public drinking water supply. Many of these potential sources are regulated by DEP and the location and status of these sites are maintained within DEP databases. By utilizing in-house databases and a geographical information system (GIS), DEP can access and illustrate the relationships of potential contaminant sources to the approximately 12,000 public water supply intakes in Florida.

It should be noted that the potential sources of contamination identified by this assessment project are just that; potential sources. Many of these facilities are regulated and operate under stringent construction and maintenance requirements designed to protect both human health and the environment. The purpose of conducting the source water assessments is to provide information that will lead to actions to reduce current risks or avoid future problems.

The DEP has identified twenty-four potential sources of contamination for the City's wellfield system with a moderate susceptibility level and ten potential sources of contamination with a low susceptibility level. The assessment results and more information is available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp or can be obtained by calling the Utility Services Department at 561-338-7310.

Immuno-Compromised Person

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 microbial contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791 or by visiting the Environmental Protection Agency's Safe Drinking Water website at www.epa.gov/safewater.

Drop Savers

The Utility Services Department held a Drop Savers Water Conservation Poster Contest in which over 700 children, grades K - 5, from seven local schools participated. The children designed amazing water conservation themed posters. The three winning posters were selected for entry in the Florida Section of the American Water Works Association's statewide poster contest. These children were awarded gift cards and certificates by Mayor Susan Whelchel during the April 24, 2012 City Council meeting in conjunction with the Mayor's proclamation of April 2012 as Water Conservation Month, May 6th - 12th as Drinking Water Week, and May 13th - 19th as Water Reuse Week. We are pleased to announce that our 2-3 state entrant Scarlett Goldberg, from Pine Crest School, was chosen for first place and our 4-5 state entrant Natalie Navarrete, from Addison Mizner Elementary, was chosen for second place in the statewide competition! Congratulations to Scarlett and Natalie and the other statewide entrants!! The statewide entrants were:

"When the well's dry, we know the worth of water."

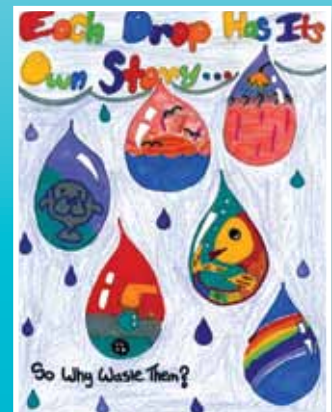
- Benjamin Franklin,
(1706-1790),
Poor Richard's
Almanac.



K-1 Entrant: Sofia Firic
Pine Crest School



2-3 Entrant and First Place State
Winner: Scarlett Goldberg
Pine Crest School



4-5 Entrant and Second Place
State Winner: Natalie Navarrete
Addison Mizner Elementary

2011 Water Quality Table

Contaminant	Unit of Measurement	Test Date	AL Exceeded Yes/No	90th Percentile	Sites Exceeding the AL	MCLG	AL	Likely Source of Contamination
Lead and Copper (Tap Water)								
Copper	ppm	7/11	No	0.123	0	1.3	1.3	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservative.
Lead	ppb	7/11	No	2.39	0	0	15	Corrosion of household plumbing; erosion of natural deposits.
Contaminant	Unit of Measurement	Test Date	MCL Violation Yes/No	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants								
Fluoride	ppm	2/11	No	0.11	N/A	4.0	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels between 0.7 and 1.3 ppm
Sodium	ppm	2/11	No	29.3	N/A	N/A	160	Saltwater intrusion; leaching from soil
Nitrate (as Nitrogen)	ppm	2/11	No	0.07	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Contaminant	Unit of Measurement	Test Date	MCL or MRDL Violation Yes/No	Highest Monthly Percentage	Range	MCLG/ MRDLG	MCL/ MRDL	Likely Source of Contamination
Microbiological Contaminants								
Total Coliform Bacteria	N/A	4/11	No	3.0%		0	5%	Naturally present in the environment
Contaminant	Unit of Measurement	Test Date	MCL or MRDL Violation Yes/N	Level Detected	Range	MCLG/ MRDLG	MCL/ MRDL	Likely Source of Contamination
Stage 1 Disinfectants and Disinfection By-Products								
Chloramines ¹	ppm	2011	No	2.42	0.68-3.5	4.0	4.0	Water additive used to control microbes
Haloacetic Acid (five) (HAA5) ²	ppb	8/11	No	33.6	N/A	N/A	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) ²	ppb	8/11	No	69.2	N/A	N/A	80	By-product of drinking water disinfection

1. Running Annual Average 2. Level detected is one sample per year in accordance with state approved reduced monitoring schedule

An Explanation of the Water Quality Data Table

The City of Boca Raton Utility Services Department routinely monitors for contaminants in your drinking water according to Federal and State laws, rules, and regulations. The table on the next page shows the results of our water quality analysis. Except when indicated otherwise, this report is based on the results of our monitoring for the period of January 1, 2011 to December 31, 2011. Data obtained before January 1, 2011 and presented in this report

are from the most recent testing done in accordance with laws, rules, and regulations. The table contains: the name of each substance; the maximum contaminant level (MCL) or the highest level allowed by regulation; the ideal goals for public health; the amount detected; the usual sources of such contamination; footnotes that explain our findings; and a key to units of measurement. The MCLs are set at very stringent levels.

Data Table Key, Definitions, and Abbreviations

Action Level (AL):

The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

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 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 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.

Not Applicable (N/A):

Does not apply

Parts Per Billion (ppb) or Micrograms per Liter (ug/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.





Standard
U.S. Postage
PAID
Boca Raton, FL
Permit #182



your 2011 Water Quality Report

Customer Services/Billing: (561) 393-7750 | General Inquiries: (561) 338-7300

Water and Sewer Emergencies: Monday through Friday 8:00am to 5:00pm: (561) 338-7339 All other times or holidays: (561) 338-7325

Potential Contaminants in Source 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.

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 Boca Raton Utility Services Department 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 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>.