



ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2015

Presented By
City of Riviera Beach



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Meeting the Challenge

Once again we are proud to present our annual drinking water report, covering all drinking water testing performed between January 1 and December 31, 2015. Over the years, we have dedicated ourselves to producing drinking water that meets all State and Federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to your homes and businesses. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users. We at the Riviera Beach Utility District work around the clock to provide top-quality water to every tap. 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.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the third Monday of each month, beginning at 5:30 p.m., at City Hall Council Chambers, 600 West Blue Heron Blvd., Riviera Beach, FL.

Substances That Could Be in 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 U.S. EPA prescribes regulations that 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 that 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 (800) 426-4791.

Where Does My Water Come From?

The City of Riviera Beach Utility District Water Treatment Plant obtains raw water from aquifers pumped from 27 wells throughout the city.

About Our Violations

Lead and Copper Monitoring

We failed to complete required tap water sampling for lead and copper on time and therefore were in violation of monitoring and reporting requirements in 2014. Because we did not take the required number of samples on time, we did not know whether the contaminants were present in your drinking water, and possible adverse health effects are unknown. Thirty samples were required for each contaminant. The monitoring period was 01/01/14 through 05/31/14. Sampling resumed on 12/12/14.

Disinfectant Residual Violation

We constantly monitor for various contaminants in the water supply to insure that we meet all regulatory standards. In 2015 our water system was in violation of Federal and State water quality standards for failure to maintain a minimum chloramines residual of 0.6 milligrams per liter, primarily in the far reaches of the Southwestern portion of our distribution system. These violations occurred during the months of January, February, March, April, June, August, and October. Chloramines residuals below the State minimum may allow bacteria to form in the distribution system. Twice a year, we conduct a Free Chlorine Flush to disinfect the distribution system. The Riviera Beach Utility District has undertaken a program of operational changes, capital projects, additional flushing in the distribution system, and additional monitoring to eliminate future violations. Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.

Total Coliform MCL Violation

Our water system was also in violation of Federal and State water quality standards for Total Coliform Bacteria for the months of January, March, April, and October 2015. Coliform bacteria are generally not harmful in themselves. Coliforms are bacteria that are naturally present in the environment. However, they are used as an indicator that other, potentially harmful bacteria may be present. Coliforms were found in more samples than allowed, and this was a warning of potential problems. Long-term exposure to coliform bacteria does not have potential health threats. However, people with severely compromised immune systems, infants, and some elderly may choose to seek advice about drinking water from their health care providers. The Riviera Beach Utility District has undertaken a program of operational changes, capital projects, additional flushing in the distribution system, and additional monitoring to eliminate future violations of both the combined chlorine residual and total coliform standards.

Source Water Assessment

The State Department of Environmental Protection (FDEP) 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, and wastewater treatment plants. The assessment was done in 2015, and there were 11 potential sources with low to moderate levels of susceptibility. This inventory only identifies potential sources of contamination. It does not mean that these sites are actively causing contamination of the drinking water sources. The assessment results are available on the FDEP Source Water Assessment and Protection Program Web site at www.dep.state.fl.us/swapp.

How Do We Treat Our Water?

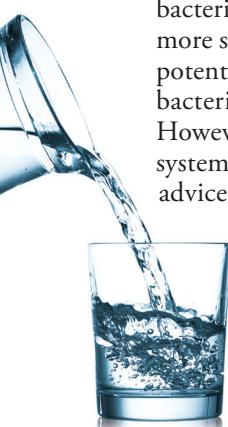
Currently, the City of Riviera Beach Utility District operates a lime-softening treatment plant. Raw water from the well field is first air-stripped to eliminate volatile organic compounds. The water is then treated with chemicals (lime, alum, and polymer), and disinfected with a combination of chlorine and ammonia. This treatment occurs in a treatment unit that both softens and clarifies the water. The water is then filtered to remove turbidity and pumped to our consumers throughout our distribution system. Ensuring that a disinfection residual remains in our water pipes throughout the distribution system is an important outcome of treatment.

Lead in Home Plumbing

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. Riviera Beach Utility District 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>.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Ms. Maryann Guarascio at (561) 845-3489.



Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The State requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We have been monitoring for unregulated contaminants (UCs) as part of a study to help the U.S. Environmental Protection Agency (U.S. EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. For example, we participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. 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 U.S. EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

PRIMARY REGULATED CONTAMINANTS										
Microbiological Contaminants										
CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	HIGHEST MONTHLY PERCENTAGE	MCLG	MCL		LIKELY SOURCE OF CONTAMINATION			
Total Coliform Bacteria (% positive samples)	1/15, 3/15, 4/15, 9/15, 10/15	Yes	31.7	0	Presence of coliform bacteria in 5% of monthly samples		Naturally present in the environment			
Inorganic Contaminants										
CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED	RANGE OF RESULTS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION			
Nitrate [as Nitrogen] (ppm)	12/17/15	No	0.88	NA	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Nitrite [as Nitrogen] (ppm)	12/16/15	No	0.00	NA	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Sodium (ppm)	12/30/14	No	20	NA	NA	160	Salt water intrusion; leaching from soil			
Stage 1 Disinfectants and Disinfection By-Products										
CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED	RANGE OF RESULTS	MCLG OR [MRDLG]	MCL OR [MRDL]	LIKELY SOURCE OF CONTAMINATION			
Chloramines (ppm)	Daily 2015	No	2.59	0.08–4.0	[4]	[4.0]	Water additive used to control microbes			
STAGE 2 DISINFECTANTS AND DISINFECTION BY-PRODUCTS										
CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED	RANGE OF RESULTS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION			
Haloacetic Acids (five) [HAA5] (ppb)	Quarterly 2015	No	24.86	5.30–42.40	NA	60	By-product of drinking water disinfection			
TTHM [Total trihalomethanes] (ppb)	Quarterly 2015	No	27.69	7.39–41.30	NA	80	By-product of drinking water disinfection			
Lead and Copper (Tap water samples were collected from sites throughout the community.)										
CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	AL EXCEDDANCE (YES/NO)	90TH PERCENTILE RESULT	NO. OF SAMPLING SITES EXCEEDING THE AL	MCLG	AL (ACTION LEVEL)	LIKELY SOURCE OF CONTAMINATION			
Copper [tap water] (ppm)	12/15/2014	No	0.18	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives			
Lead [tap water] (ppb)	12/15/2014	No	1.6	1	0	15	Corrosion of household plumbing systems; erosion of natural deposits			
UNREGULATED CONTAMINANT MONITORING RULE PART 3 (UCMR3)										
CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	LEVEL DETECTED		RANGE OF RESULTS						
Chromium [Total] (ppb)	11/30/15	0.305		0.3–0.31						
Chromium-6 (ppb)	12/29/15	0.1485		0.077–0.22						
Strontium (ppb)	11/30/15	819.5		766–873						
Vanadium (ppb)	11/30/15	0.525		0.47–0.58						

Definitions

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

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Level Detected values for Stage 2 TTHMs and HAAs are reported as LRAAs.

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).