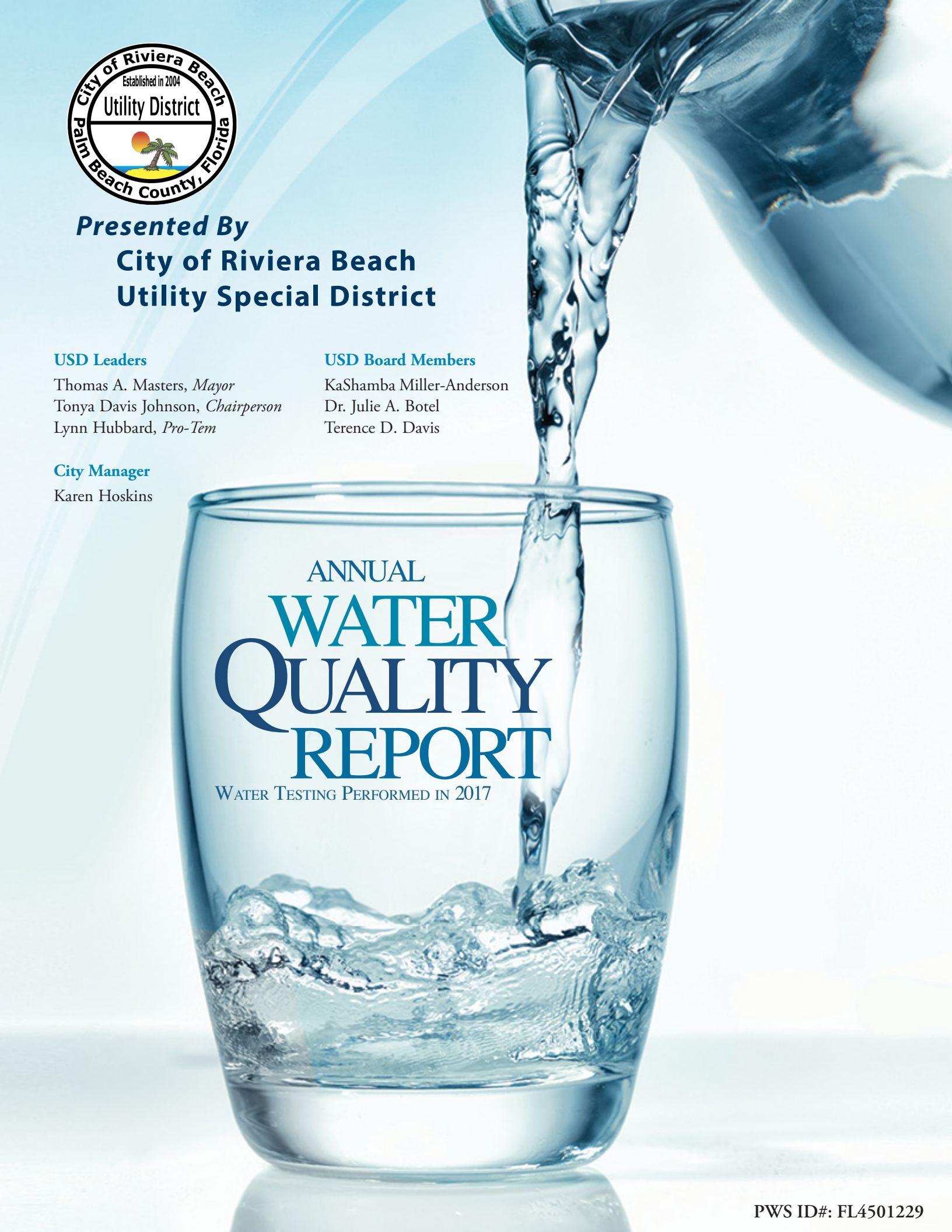

Presented By

City of Riviera Beach
Utility Special District

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Thomas A. Masters, *Mayor*
Tonya Davis Johnson, *Chairperson*
Lynn Hubbard, *Pro-Tem*

USD Board Members

KaShamba Miller-Anderson
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ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2017

PWS ID#: FL4501229

Quality First

The City of Riviera Beach Utility Special District (USD) is pleased to present our annual water quality report. Our mission is to protect the public's health, safety, and the environment. We are committed to delivering the safest and best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education, while continuing to serve the needs of all of our water users. Thank you for allowing us the opportunity to serve you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies.

> **Water treatment is a complex, time-consuming process.**

Community Participation

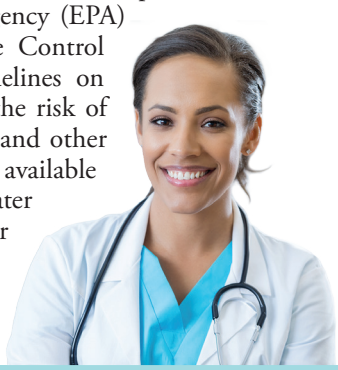
We invite you to participate in our public forum and voice your concerns about your drinking water. Our meetings are held on the third Monday of each month, beginning at 6:00 p.m. at City Hall Council Chambers, 600 West Blue Heron Blvd., Riviera Beach, FL.

Where Does My Water Come From?

The City of Riviera Beach Utility Special District's Water Treatment Plant obtains raw water from the East Coast Surficial aquifers and pumped out of the ground by 27 wells located throughout the city.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. Department of Environmental Protection Agency (EPA) and the Centers for Disease Control and Prevention (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 at (800) 426-4791 or http://water.epa.gov/drink/hotline.



Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water;
- Monitoring and inspecting machinery, meters, gauges, and operating conditions;
- Conducting tests and inspections on water and evaluating the results;
- Maintaining optimal water chemistry;
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels;
- Documenting and reporting test results and system operations to regulatory agencies; and
- Serving our community through customer support, education, and outreach.

So, the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

Source Water Assessment

The Florida 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 2017, and there were 19 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 source. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

Level 1 Assessment Update

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. Since our last Consumer Confidence Report (CCR) we found coliforms, triggering the need to look for potential problems in the water treatment or distribution system. When this occurs, we are required to conduct an assessment to identify problems, and to correct any problems that were found during these assessments.

In 2017 our water distribution system was in violation of Federal and State water-quality standards for Total Coliform Bacteria for the months of July and September 2017. Coliform bacteria are generally not harmful in themselves. During testing in the months of July and September 2017, coliforms colonies were found in more samples than allowed by regulatory standards. This serves as an alert 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 USD has undertaken a program of operational changes, through capital projects, which include dedicated Sampling Stations, the development of a flushing program for the distribution system, and additional monitoring to eliminate future violations of chlorine residual standards. Weekly reporting to the Health Department is also being required.

During the past year, we were required to conduct one Level 1 assessment. This assessment was completed. In addition, we were required to take seven corrective actions, and we completed all seven of those actions.

What Does This Mean?

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments such as iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use, and avoid using hot water to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

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. We are 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 www.epa.gov/safewater/lead.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call (561) 845-4185.

Substances That Could Be in Water

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. It can also pick up substances resulting from the presence of animals or 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 storm-water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

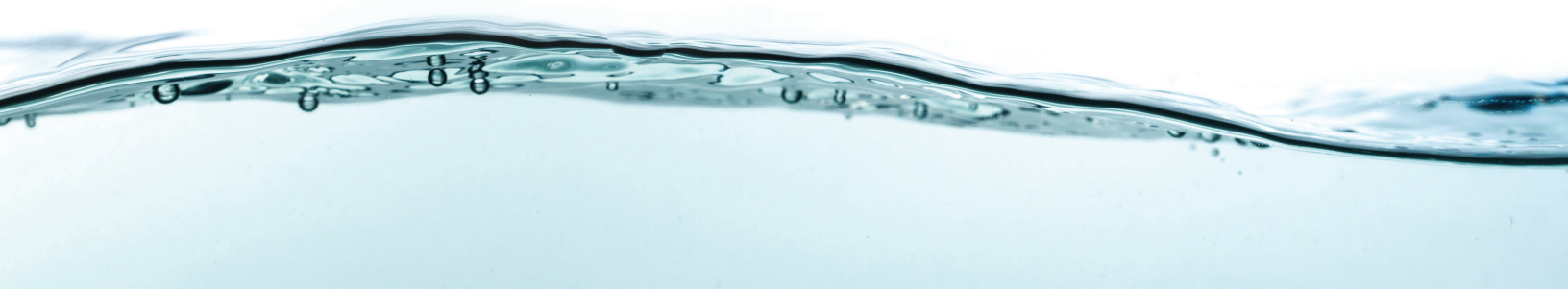
Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban storm-water runoff, and residential uses.

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 storm-water 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, 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 (800) 426-4791.



Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shown below are only those substances that were detected between January 1 and December 31, 2017. Remember that detecting a substance does not necessarily mean the water is unsafe to drink; our goal is to keep all contaminants below their respective maximum allowed levels. The State recommends monitoring for certain substances less 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. 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. 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)	TOTAL NUMBER OF POSITIVE SAMPLES FOR THE YEAR	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Total Coliform Bacteria (positive samples)	7/26/17	Yes	13	NA	TT	Naturally present in the environment

Radioactive 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
Radium 226 + 228 [Combined Radium] (pCi/L)	11/28/17	No	0.4	0.4–0.4	0	5	Erosion of natural deposits

Inorganic Contaminants

Nitrate [as Nitrogen] (ppm)	11/14/17	No	0.0	0.0–0.0	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite [as Nitrogen] (ppm)	11/14/17	No	0.04	0.04–0.04	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	11/14/17	No	27	27–27	NA	160	Saltwater 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)	Quarterly 2017	No	2.48	0.7–4.0	[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 2017	No	7.60	4.07–14.87	NA	60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	Quarterly 2017	No	30.69	16.27–45.25	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 EXCEEDANCE (YES/NO)	90TH PERCENTILE RESULT	NO. OF SAMPLING SITES EXCEEDING THE AL	MCLG	AL (ACTION LEVEL)	LIKELY SOURCE OF CONTAMINATION
Copper [tap water] (ppm)	10/2/17	No	0.083	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead [tap water] (ppb)	10/2/17	No	0.42	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

SECONDARY CONTAMINANTS

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	HIGHEST RESULT	RANGE OF RESULTS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Aluminum (ppb)	11/14/17	Yes	0.26	0.26–0.26	NA	200	Natural occurrence from soil leaching

UNREGULATED CONTAMINANTS

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	AVERAGE RESULT	RANGE OF RESULTS
1,2-Dichloroethane (ppb)	5/18/16	0.010	0.010–0.010
1,2,3-Trichloropropane (ppb)	5/18/16	0.010	0.010–0.010
1,3-Butadiene (ppb)	5/18/16	0.033	0.033–0.033
Bromochloromethane (Halon 1011) (ppb)	5/18/16	0.020	0.020–0.020
Bromomethane (Methyl Bromide) (ppb)	5/18/16	0.067	0.067–0.067
Chlorate (ppb)	5/18/16	10	10–10
Chlorodifluoromethane (HCFC-22) (ppb)	5/18/16	0.027	0.027–0.027
Chloromethane (Methyl Chloride) (ppb)	5/18/16	0.067	0.067–0.067
Chromium-6 (ppb)	5/18/16	0.36	0.36–0.36
Cobalt (ppb)	5/18/16	0.33	0.33–0.33
Molybdenum (ppb)	5/18/16	0.33	0.33–0.33
Perfluorobutanesulfonic Acid (PFBS) (ppb)	5/18/16	0.030	0.030–0.030
Perfluoroheptanoic Acid (PFHpA) (ppb)	5/18/16	0.0044	0.0044–0.0044
Perfluorohexanesulfonic Acid (PFHxS) (ppb)	5/18/16	0.010	0.010–0.010
Perfluorononanoic Acid (PFNA) (ppb)	5/18/16	0.00067	0.00067–0.00067
Perfluorooctanesulfonate Acid (PFOS) (ppb)	5/18/16	0.026	0.026–0.026
Perfluorooctanoic Acid (PFOA) (ppb)	5/18/16	0.012	0.012–0.012
Strontium (ppb)	5/18/16	788	788–788
Vanadium (ppb)	5/18/16	0.53	0.53–0.53

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which 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.

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.

pCi/L (picocuries per liter): A measure of radioactivity.

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).

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