

# Water Quality Report 2016

## OUR MISSION: QUALITY SERVICE FOR OUR MEMBERS

*Bonita Springs Utilities is a not-for-profit water and wastewater utility dedicated to providing safe, reliable potable water and wastewater treatment, emphasizing responsible protection of our resources at the most effective cost to all members. At the same time, we will defend our policy of socially and environmentally sound management of employee, plant and fiscal resources. We are proud to continue to earn our community's trust as your locally owned and operated utility.*

*If you have any questions about this report, please call Bonita Springs Utilities at 239-992-0711.*

*Si usted tiene alguna pregunta sobre este informe favor de llamar a Bonita Springs Utilities al 239-992-0711.*

## THE WATER WE DRINK

In 1971, a group of residents formed Bonita Springs Utilities, Inc. (BSU) to provide potable water for a handful of homes. Since then, BSU has grown with Bonita Springs and Estero and now provides water service to more than 40,000 customers within its 60-square-mile service area.

This report, required by law, provides data about the quality of the water provided by BSU during 2016. BSU welcomes the opportunity to share this information with you. It's important that you know where our water comes from, what it contains and the risks that our water treatment is designed to prevent. Informed customers are our best allies in maintaining safe drinking water.

## WHERE OUR WATER COMES FROM

Production of Bonita Springs drinking water starts with water located deep beneath the ground. Groundwater for the lime-softening process comes from the Lower Tamiami Aquifer, a thick sequence of porous limestone and clay beneath the earth's surface. Groundwater for the reverse-osmosis process comes from the Lower Hawthorne Aquifer, which contains more brackish water.

For the lime-softening water process, Bonita Springs Utilities owns and operates two well fields with 19 wells. One well field is located near East Terry Street and the other is located east of Bonita Grande. The 19 lime-softening wells have an average depth of 100 feet.

To supply water for the reverse-osmosis water process, which began service in March 2004, Bonita Springs Utilities operates 11 additional wells at an average depth of 800 feet.

In 2016, the Florida Department of Environmental Protection (FDEP) performed a Source Water Assessment on our system as part of its Source Water Assessment and Protection Program. The assessment, which helps ensure that drinking water is safe, not just at the tap, but also at its source, provides information about potential sources of contamination in the vicinity of our wells. Thirteen potential sources of contamination, with low to moderate susceptibility levels, were identified. 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 assessment results are available on the FDEP Source Water Assessment and Protection Program website at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp), or they can be obtained by calling Bonita Springs Utilities Operations Director Andy Koebel at 239-992-0711.

This report will be mailed to customers only upon request and is available on our website:

[www.bsu.us](http://www.bsu.us)

## WATER TREATMENT PROCESSES

Our drinking water is a blend of two treatment processes. The lime-softening process includes hydrogen sulfide removal, hardness reduction, filtration and chlorination. The reverse-osmosis process includes membrane treatment, degasification and chlorination. A corrosion inhibitor also is added in each process to help prevent corrosion in the plumbing of our customers' homes and businesses.

The treated water from the two processes is then blended together to produce the final finished water pumped to all customers.

Bonita Springs Utilities follows the principles and practices recommended by many experts within the utility industry to ensure our members a safe, reliable and efficient water system. We test and monitor your water to ensure compliance with state and federal regulatory requirements and are committed to your health, safety and welfare.

We're happy to report that our drinking water meets all federal and state requirements. The board of directors and staff of Bonita Springs Utilities are pleased to present this report.

## IF YOU'D LIKE TO KNOW MORE ...

Bonita Springs Utilities is a member-owned utility, and we want you, our member-customers, to be informed about your water quality. Our governing body is an elected board of directors, which meets the first and third Tuesdays of every month at 5 p.m.

If you have questions about this report or your water utility, please contact Bonita Springs Utilities Director of Operations, Andy Koebel, at 239-992-0711.

Bonita Springs Utilities 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 through December 31, 2016. Data obtained before January 1, 2016, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.



## TERMS AND ABBREVIATIONS

*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 Maximum Contaminant Level Goals (MCLG's) 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.

**AN EXPLANATION:** MCLs are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink two liters of water a day at the MCL for a lifetime to have a one-in-a-million chance of having the described health effect.

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

**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 of health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**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 (One part per billion is the equivalent of one cent in \$10,000,000).

**Parts per million (ppm) or Milligrams per liter (mg/l):** One part by weight of analyte to 1 million parts by weight of water sample (One part per million is the equivalent of one cent in \$10,000).

**Picocurie per liter (pCi/L):** Measure of the radioactivity in water.

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

## Microbiological Contaminants

Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL/TT Violation Y/N	Highest Monthly Percentage/Number (until March 31, 2016) or Result (beginning April 1, 2016)	MCLG	MCL/TT	Likely Source of Contamination
1a. Total Coliform Bacteria (positive samples until March 31, 2016)	Jan-Mar 2016 monthly	N	4.9%/4	0	Presence of coliform bacteria in >5% of monthly samples	Naturally present in the environment
1b. Total Coliform Bacteria (beginning April 1, 2016)	Apr-Dec 2016 monthly	N	1	N/A	TT	Naturally present in the environment

## Inorganic Contaminants

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
Barium (ppm)	2/26/14	N	0.0047 ppm	0.0047 ppm	2 ppm	2 ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	2/26/14	N	0.2 ppm	0.2 ppm	4 ppm	4 ppm	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive that promotes strong teeth when at the optimum level of 0.7 ppm.
Nitrate (ppm)	2/3/16	N	0.10 ppm	0.10 ppm	10 ppm	10 ppm	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Sodium (ppm)	2/26/14	N	79.3 ppm	79.3 ppm	NA	160 ppm	Saltwater 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 and Chloramines (ppm)*	1/16 – 12/16	N	3.48	0.5 – 4.6 ppm	MRDLG = 4	MRDL = 4.0 ppm	Water additive used to control microbes

\***BSU** conducted a free chlorine flush during 5/16. The results shown include both chloramine and chlorine results.

## STAGE 2 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
Haloacetic Acids (5) HAA5 (ppb)	11/16	N	23	17 – 23 ppb	NA	60 ppb	By-product of drinking water disinfection
Total Trihalomethanes TTHM (ppb)	11/16	N	25	23 – 25 ppb	NA	80 ppb	By-product of drinking water disinfection

## Lead and Copper (Tap Water)

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
Copper (tap water)	8/14	N	0.119 ppm	0	1.3	1.3 ppm	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives
Lead (tap water) **	8/14	N	3.4 ppb	1	0	15 ppb	Corrosion of household plumbing systems, erosion of natural deposits

\*\***Lead** – 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. Bonita Springs Utilities is responsible for providing high quality drinking water, but cannot control the variety of materials used in home 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 two 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 at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.



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## CONTAMINANTS

The sources of drinking water (both tap and bottled) 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 occur naturally or can 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 organics, which are by-products of industrial processes and petroleum production, and also can come from gas stations, urban stormwater runoff and septic systems.
- (E) **Radioactive contaminants**, which can occur naturally or result from 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.*

*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 healthcare providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA Safe Drinking Water Hotline at 1-800-426-4791.*

**Note:** Bonita Springs Utilities is not required to test for the unregulated contaminant Cryptosporidium because our source water is from wells, not surface waters.

## IN CONCLUSION

The Bonita Springs-Estero area has been one of the fastest-growing communities in Southwest Florida. To accommodate growth, in 2004 Bonita Springs Utilities completed and placed into service the first phase of a state-of-the-art reverse-osmosis (RO) plant with the capacity to produce 6.6 million gallons of potable water per day. The RO plant helps preserve our lime-softening well fields by drawing source water from a different, deeper aquifer and helps ensure that our member-customers will continue to enjoy an adequate supply of drinking water. The RO process, together with the lime-softening water process, can provide a total of 15.6 million gallons of water per day for our customers.

The Southeast Desalting Association honored our RO plant with the 2005/2006 Plant of the Year Award for the 10-state region, and in 2016, the American Water Works Association judged BSU's water the best-tasting in the three-county region.

BSU's Water Distribution Department was recognized by the Florida Section AWWA in 2009, 2011, 2012, 2014 and 2015 with awards for Outstanding Water Distribution System in Florida. Both the Water Plant and Distribution Departments won a Safety Commendation from FWPCOA "For Leadership, Promotion, Service and Performance rendered through an outstanding Safety Program for 2013."

As our population grows, demand for water will continue to increase. Our responsibility is to provide quality water to every tap. Everyone, however, must help protect our community's valuable water resources to maintain them in a usable form for present and future generations.