



## Important facts to know about the Water we drank in 2018

We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water source is drawn ground water from 6 wells. The wells draw water from the Floridan Aquifer. Treatment consists of aeration and chlorination for disinfection purposes.

This report shows our water quality results and what they mean. If you have any questions about this report, please contact Joshua Davis, Chief Water Plant Operator at (904)583-0080.

In 2018 the Department of Environmental Protection performed a Source Water Assessment on our system and a search of the data sources indicated 6 potential sources of contamination near our wells with a low susceptibility level. 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).

The City of Fernandina 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 to December 31, 2018. Data obtained before January 1, 2018, 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.

**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.

"ND" means not detected and indicates that the substance was not found by laboratory analysis.

**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.

**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.

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.*

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.

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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).

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 Fernandina 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 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>.

Our constant goal is to provide you with a safe and dependable water supply per John Mandrick, PE, Utilities Director. 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.

## TEST RESULT TABLE

* Results in the Level Detected column for radiological contaminants, inorganic contaminants, synthetic organic contaminants including pesticides and herbicides, and volatile organic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.							
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
<b>Inorganic Contaminants</b>							
Barium (ppm)	7/2017	N	0.036	0.028 - 0.036	2	2	Erosion of natural deposits
Beryllium (ppb)	7/2017	N	0.2	ND - 0.2	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Stage 2 Disinfection Byproducts	7/2017	N	0.46	0.43 - 0.46	4.0	2.0	Erosion of natural deposits; water additive which promotes strong teeth
Lead (point of entry) (ppb)	7/2017	N	1.4	ND - 1.4	0	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder
Sodium (ppm)	7/2017	N	35	16 - 35	N/A	160	Salt water intrusion, leaching from soil
<b>Stage 1 Disinfection</b>							
For the following parameters monitored under Stage 1 D/DBP regulations, the level detected is the annual average of the quarterly averages: Chlorine, Haloacetic Acids, and TTHM Range of Results is the range of results (lowest to highest) at the individual sampling sites.							
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
Chlorine (ppm)	01/2018-12/2018	N	0.51	0.43 - 0.78	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	MCLG	MCL	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	Quarterly 2018	N	21.8	6.78 - 23.32	N/A	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	Quarterly 2018	N	66.47	26.38 - 79.6	N/A	80	By-product of drinking water disinfection
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
<b>Lead and Copper (Tap Water) testing done every three years</b>							
Copper (tap water) (ppm)	09/2016	N	0.14	0	1.0	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	09/2016	N	3.8	1	15	15	Corrosion of household plumbing systems, erosion of natural deposits
<b>Secondary Contaminants-</b> Florida Source water is naturally high in dissolved minerals and Total Dissolved Solids exceeded the MCL in some of our sampling. The concentration found in our water only affects the aesthetic quality (look, smell, taste) and is not associated with any adverse health effects.							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination
Total Dissolved Solids (ppm)	7/2017, 10/2017	Y	650	470 - 650	N/A	500	Natural occurrence from soil leaching

### Unregulated Contaminants Information and Results Table

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. In 2018, the City of Fernandina Beach participated in the fourth round of the Unregulated Contaminant Monitoring Rule (UCMR4). For a copy of the results please call (904)583-0080.

Contaminants (Units)	Sample Year	Average Level Found	Range of Detections
Bromide (ppb)	2018	199.71	97.71 - 560.61
Haloacetic Acids (HAA5) (ppb)	2018	12.25	8.59 - 17.42
Haloacetic Acids (HAA6Br) (ppb)	2018	23.11	11.63 - 35.51
Haloacetic Acids (HAA9) (ppb)	2018	31.74	20.75 - 46.31
Manganese (ppb)	2018	0.72	0.48 - 1.12
Total Organic Carbon (TOC) ((ppb)	2018	2583.45	1919.2 - 2749.4