2016 Flagler County Water Quality Report

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 is purchased from the City of Palm Coast. Their water source is groundwater drawn through fifty-eight wells from the Surficial and the Floridan Aquifers and is treated through a complex multi-step water treatment process that includes lime softening, filtration, membrane softening, forced draft aeration, corrosion control and chloramination for disinfection purposes at three different facilities. The Florida Department of Environmental Protection (DEP) has completed a Source Water Assessment for the Palm Coast watershed. The State has determined that seventeen of their fifty-eight wells have a low to moderate susceptibility to contamination based on their proximity to the three potential sources of contamination that were last evaluated in 2015. For additional information, please visit the DEP website at **www.DEP.state.fl.us/swapp.**

The following information will assist you in making adjustments to your water softener, washer or dishwasher:

Total Hardness: 100ppm = 5.8 grains/gal.
Calcium Hardness: 80ppm = 4.7 grains/gal.

We encourage our valued customers to be informed about their water utility. If you have any questions about this report or concerns about your water utility, please contact your **Flagler County Utility Department Representative at 386-313-4192.** You may also visit the **Flagler County website at www.flaglercounty.org** or call the **EPA Safe Drinking Water Hotline at 1-800-426-4791**.

What Can We Expect to Find in Our Drinking 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:

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 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, 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.**

How This Report Shows Our Water Quality Results and What They Mean

This report shows our water quality results and what they mean to you. It also provides important information about your water and how it relates to your health. The information in this report is based primarily on 2016 facts and figures. However, the U.S. Environmental Protection Agency (EPA) does not require us to perform all tests every year. When necessary, some data was obtained from prior years. As directed by the agencies that regulate our industry, only values from these tests that exceeded specified criteria are included. We will notify you immediately if there is any reason for concern.

How Do I Read This?

It's easy. The table shows the results of our water quality analyses. The column marked "Level Detected" shows the highest results from the last time tests were performed. "Likely Sources" shows where this substance usually originates. Descriptions below explain other important details. In this table 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.*

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 or analyte to 1 million parts by weight of the water sample.*

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.*

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

Action Level (AL): *The concentration of a contaminant that, 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.*

N/A: *Means not applicable*.

2016 ANNUAL DRINKING WATER QUALITY TEST RESULTS

The City of Palm Coast Utility Department and Flagler County Utilities routinely monitor for contaminants in your drinking water according to Federal and State laws, rules, and regulations. This report is based on the results of monitoring for the period of January 1 to December 31, 2016 by the ***City of Palm Coast –PWS #2180863****,*

*except for lead and copper results and monthly bacteriological analysis, which were performed by **Flagler County Utilities – PWS #2180002**. The Environmental Protection Agency (EPA) requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table below are the only contaminants detected in your drinking water.*

Results in the Level Detected column for radiological contaminants and inorganic contaminants are the highest detected level at any sampling point. Range of Results is the range of results (lowest to highest) at the individual sampling sites.

Radioactive 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
Alpha emitters (pCi/l)	10/11, 03/13, 5/13, 08/13	N	1.6	ND – 1.6	0	15	Erosion of natural deposits
Radium 226 or combined radium (pCi/l)	10/11, 03/13, 05/13, 08/13	N	0.4	ND – 0.4	0	5	Erosion of natural deposits

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)	08/14	N	0.0053	0.0030-0.0053	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	08/14	N	0.082	ND – 0.082	4	4	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.
Selenium (ppb)	08/14	N	4.6	ND – 4.6	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Sodium (ppm)	08/14	N	39	20 - 39	N/A	160	Salt water intrusion, leaching from soil

Stage 1 Disinfectant and Disinfection By-Product

For the following parameters monitored under Stage 1 D/DBP regulations, the level detected is the average of the individual sampling sites: Chloramines, Haloacetic Acids (MCL 60 ppb), and/or TTHM (MCL 80 ppb). Range of Results is the range of results (lowest to highest) at the individual sampling sites.

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
Chloramines (ppm)	01/16 – 12/16	N	4.1	0.6 – 5.8	MRDLG = 4.0	MRDL=4.0	Water additive used to control microbes
Chlorine (ppm)	2/16 – 3/16, 6/16 – 7/16, 9/16 – 10/16	N	3.0	0.6 – 5.1	MRDLG = 4.0	MRDL=4.0	Water additive used to control microbes

Periodically throughout the year the distribution system is maintained by conversion of Chloramine to Free Chlorine disinfection for additional microbiological control.

Stage 2 Disinfectant and Disinfection By-Product for the Beverly Beach Water system

Systems that took their annual sample(s) in the third quarter of 2015 and all of whose results were below the MCL can calculate compliance with the MCL under 40 CFR 141.620(d)(2) based on those results. Such systems shall report the highest LRAA as the level detected and the range of individual sample results as the range of results.

Disinfectant or Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL or MRDL Violation Y/N	Level Detected (LRAA)	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Haloacetic Acids (five) (HAA5) (ppb)	8/16	N	30.49	29.48 – 30.49	N/A	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	8/16	N	16.25	14.89 – 16.25	N/A	MCL = 80	By-product of drinking water disinfection

Lead and Copper (Tap Water) for Beverly Beach Water not required until 2018

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
Copper (tap water) (ppm)	08/15	N	0.078	0 of 20	1.3	1	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water)(ppb)	08/15	N	1.2	0 of 20	0	15	Corrosion of household plumbing systems, erosion of natural deposits

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. Flagler County 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

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer under-going 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 (1-800-426-4791).