

# **2016 Annual Drinking Water Quality Report**

**Cedar Key Water and Sewer District**

**PWSID#: 2380178**

*We are 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 ground water from three wells. The wells draw from the Surficial aquifer. The water is treated using a magnetic ionic exchange process (MIEX) and also includes lime softening, filtration and chlorination.*

*In 2016, the Department of Environmental Protection performed a Source Water Assessment on our system and search of the data sources indicated no potential sources of contamination near our wells. The assessment results are available on the DEP Source Water Assessment and Protection Program website at <http://www.dep.state.fl.us/swapp>.*

*This report shows our water quality results and what they mean.*

*If you have any questions about this report or concerning your water utility, please contact John McPherson at 352-543-5285. We encourage our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the second Monday of each month.*

*Cedar Key Water and Sewer District 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, 2016. Data obtained before January 1, 2016, and presented in the report are from the most recent testing done in accordance with the laws, rules, and regulations.*

*As authorized and approved by EPA, the State has reduced the monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of our results [e.g. lead and copper], though representative, is more than one year old.*

*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.*

*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.*

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

*“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.*

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

\* Results in the Level Detected column for inorganic contaminants are the highest detected level at any sampling point.

| <b>Radioactive Contaminants</b>     |                             |                   |                 |                  |      |     |                                |
|-------------------------------------|-----------------------------|-------------------|-----------------|------------------|------|-----|--------------------------------|
| 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)              | 7/2012                      | N                 | 3.4             | N/A              | 0    | 15  | Erosion from natural deposits  |
| Combined Radium (pCi/L)             | 7/2012                      | N                 | 3.0             | N/A              | 0    | 5   | Erosion from natural deposits  |

| <b>Inorganic Contaminants</b>       |                             |                   |                 |                  |      |     |   |
|-------------------------------------|-----------------------------|-------------------|-----------------|------------------|------|-----|---|
| 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  |
| Antimony (ppb)                      | 6/2015                      | N                 | 0.0003          | N/A              | 6    | 6   | Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder         |
| Barium (ppm)                        | 6/2015                      | N                 | 0.0049          | N/A              | 2    | 2   | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits  |
| Nitrate (as Nitrogen) (ppm)         | 12/2016                     | N                 | 0.05            | N/A              | 10   | 10  | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Sodium (ppm)                        | 6/2015                      | N                 | 16              | N/A              | N/A  | 160 | Salt water intrusion, leaching from soil  |

| <b>Stage 1 Disinfectants and Disinfection By-Products</b> For chlorine, the level detected is the highest running annual average (RAA), computed quarterly, of monthly average of all samples collected. |                             |                           |                |                  |               |             |   |
|--|-----------------------------|---------------------------|----------------|------------------|---------------|-------------|---|
| 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   | Monthly 2015                | N                         | 0.85           | 0.65 – 0.99      | MRDLG = 4     | MRDL = 4    | Water additive used to control microbes |

| <b>Stage 2 Disinfectants and Disinfection By-Products</b> The level detected is the highest running annual average (RAA), computed quarterly, of monthly average of all samples collected. |                           |                     |                |                  |      |     |   |
|--|---------------------------|---------------------|----------------|------------------|------|-----|---|
| 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 (five) (HAA5) (ppb)   | 07/2016 – 12/2016         | N                   | N/A            | 17.22 – 17.66    | NA   | 60  | By-product of drinking water disinfection |
| Total trihalomethanes (TTHMs) (ppb)  | 07/2016 – 12/2016         | N                   | N/A            | 92.65 – 145.30   | NA   | 80  | By-product of drinking water disinfection |

| <b>Lead and Copper (Tap Water)</b>  |                             |                  |                        |  |      |                   |  |
|-------------------------------------|-----------------------------|------------------|------------------------|--|------|-------------------|--|
| 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)            | 10/2015                     | N                | 0.15                   | 0                                      | 1.3  | 1.3               | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead (tap water) (ppb)              | 10/2015                     | N                | 1.1                    | 0                                      | 0    | 15                | Corrosion of household plumbing systems, erosion of natural deposits                                   |

## SECONDARY CONTAMINANTS TABLE

| <b>Secondary Contaminants</b>       |                           |                   |                |                  |      |     |                                       |
|-------------------------------------|---------------------------|-------------------|----------------|------------------|------|-----|---------------------------------------|
| 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        |
| Aluminum (ppm)                      | 6/2015                    | Y                 | 0.27           | N/A              | N/A  | 0.2 | Natural occurrence from soil leaching |

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. Our water system was in violation of federal and state water quality standards for ALUMINUM from 6/2015 through 3/2016. The levels of ALUMINUM are shown in the Test Results Table. Aluminum was resampled on 3/29/2016, and was not detected.

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. Our water system was in violation of federal and state water quality standards Total trihalomethanes (TTHMs) during the July through December compliance period. The levels of TTHMs are shown in the tables above. However, the system did not incur an MCL violation, because all annual average results at all sites were at or below the MCL. Some people who drink water containing TTHMs in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. Our system is correcting the violation by installing a new disinfection system.

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. Cedar Key Water and Sewer 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>.

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.

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

**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).**

We at Cedar Key Water and Sewer District would like you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to insuring the quality of your water. If you have any questions or concerns about the information provided, please feel free to call any of the numbers listed.