



## 2013 Annual Drinking Water Quality Report for Reedy Creek Improvement District

### Water Conservation Measures Implemented at RCID

Water conservation practices at the Reedy Creek Improvement District (RCID) have continued their success resulting in a savings of over 3.42 million gallons of water per day (MGD), comparing the consumption of the base year 2000 to that of the year 2013. That is an annual savings of nearly 1.25 billion gallons of potable water, and demonstrates a sustainable level of savings since 2000. One of the major factors contributing to the conservation efforts at RCID is the use of a weather driven and computer controlled irrigation system. The system adjusts the irrigation cycles and frequencies to meet the optimum needs of the irrigated species. The system is able to sense a variety of factors, including rainfall and evapotranspiration, to achieve optimum irrigation efficiency and thereby ensure that no overwatering occurs. The system is employed on both potable and reclaimed water sources.

Rainfall measured at RCID during 2013 totaled 47.92", which is 3.73" below the average annual rainfall for the 2000 – 2013 time period (51.65").



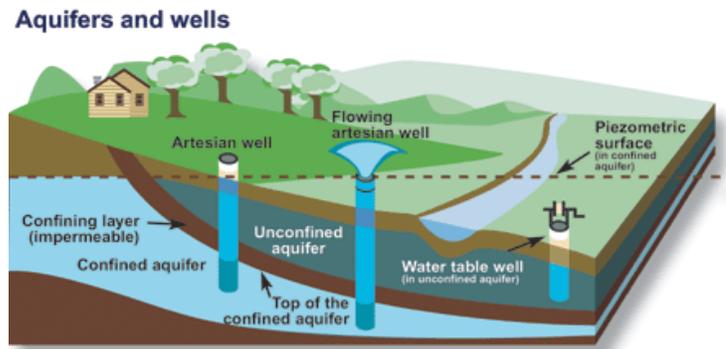
Water conservation efforts employed throughout the District include the use of reclaimed water for street and sidewalk wash-down and cooling tower make up, reducing pressure in select buildings, remaining diligent on leak detection and repair, and continuing to rely on reclaimed water for most non-potable demands. These practices ensure the future viability and sustainability of RCID's water supply and that of the Central Florida area. Using reclaimed water, not only helps the environment, it lowers your monthly utility bill.

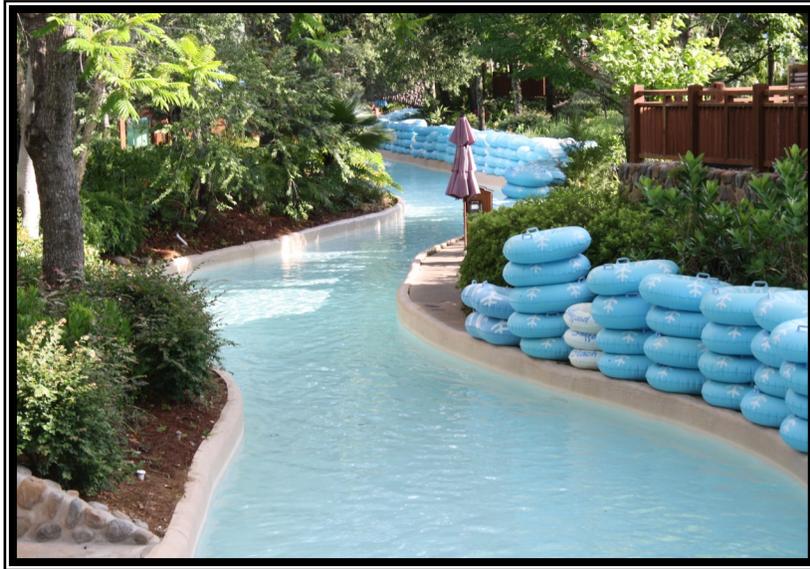
RCID routinely monitors for contaminants in your drinking water according to Federal and State laws, rules, and regulations. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1 to December 31, 2013. Data obtained before January 1, 2013, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations. The EPA requires monitoring of over 80 drinking water contaminants. The contaminants listed in the attached tables are only the contaminants that were detected in your drinking water.

## Our Water Source

The water supply for Reedy Creek Improvement District comes from a safe, reliable, and protected underground source. The Upper Floridan Aquifer is one of the largest underground reservoirs of freshwater in the country. The aquifer is primarily fed by rainwater that is filtered through hundreds of feet of sand, clay and rock, undergoing a natural cleansing process. The water is of consistently high quality; therefore, no treatment other than chlorination is required. RCID's water system processed an average of 16.84 million gallons of water per day (MGD) for public use in 2013. An additional 5.7 MGD of reclaimed water was used for irrigation and other non-potable uses.

Drinking water for Reedy Creek Improvement is supplied from 9 wells that are strategically located throughout the District. These wells range from 340 to 900 feet deep into the Upper Floridan Aquifer.





## EPA Statement About Water Resources Contaminants

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:

**Microbiological 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 stormwater 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 stormwater 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 stormwater runoff, and septic systems.

**Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

## **RCID Water Surpasses All Drinking Water Standards**

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (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.

The Department of Environmental Protection has performed a Source Water Assessment on our system. This assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells. In 2013, there was one potential source of contamination identified for this system with a low susceptibility level (3.33). 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).

Reedy Creek Improvement District (RCID) is proud to present to you this year's Annual Water Quality Report. We are pleased to report that our drinking water meets all federal and state requirements. This report is designed to inform you about the quality of water provided during the year 2013. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. RCID is committed to providing you with a safe, reliable source of drinking water and useful information about your water supply. We believe that customers who are well informed are our best allies in protecting our water supply.

The Water Quality Data Tables presented in this report show that the Reedy Creek Improvement District system had no violations. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentration of these contaminants are not expected to vary significantly from year to year. Some of our data (e.g., for lead and copper tap samples), though representative, are more than one year old.

## Reedy Creek Improvement District 2013 Water Quality Test Results

Micro biological Contaminant	Date of Sampling	MCL/AL Violation? Y/N	Highest Monthly Percentage of Positive Samples	Range of Results	MCLG	MCL	Possible Sources
Total Coliform Bacteria	10/13	N	1.34%*	N/A	0	5%**	Naturally present in the environment.
*Highest monthly percentage of total Coliform positive samples. ** For systems collecting at least 40 samples/month: MCL = Presence of Coliform bacteria in more than 5% of monthly positive samples.							

Radiological Contaminant	Date of Sampling	MCL/AL Violation? Y/N	Highest Level Detected	Range of Detected	MCLG	MCL	Possible Sources
Alpha Emitters (pCi/L)	03/08*	N	3.8	1.8 - 3.8	0	15	Erosion of natural deposits.
Radium 226 (pCi/L)	03/08*	N	0.5	0.3 - 0.5	0	5	Erosion of natural deposits.
* Most recent required sampling conducted 03/08.							

Inorganic Contaminants	Date of Sampling	MCL/AL Violation? Y/N	Highest Level Detected	Range of Detected	MCLG	MCL	Possible Sources
Arsenic (ppb)	03/11*	N	0.76	ND - 0.76	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Barium (ppm)	03/11*	N	0.0131	0.0102 - 0.0131	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium (ppb)	03/11*	N	0.70	0.45 - 0.70	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	03/11*	N	0.05	0.03 - 0.05	4	4.0	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.
Lead (point of entry) (ppb)	03/11*	N	0.74	ND - 0.74	N/A	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder.
Nickel (ppb)	03/11*	N	0.335	ND - 0.335	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil.
Nitrate (as Nitrogen) (ppm)	5/13	N	2.0	ND - 2.0	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Selenium (ppb)	03/11*	N	1.62	ND - 1.62	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Sodium (ppm)	03/11*	N	9.0	5.0 - 9.0	N/A	160	Salt water intrusion, leaching from soil
Thallium (ppb)	03/11*	N	0.327	0.301 - 0.327	0.5	2	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
* Most recent required sampling conducted 03/11.							

Volatile Organic Compounds	Date of Sampling	MCL/AL Violation? Y/N	Highest Level Detected	Range of Detected	MCLG	MCL	Possible Sources
Dichloro-methane (ppb)	03/11*	N	0.34	0.21 – 0.34	0	5	Discharge from pharmaceutical and chemical factories
* Most recent required sampling conducted 03/11.							

Synthetic Organics	Date of Sampling	MCL/AL Violation? Y/N	Highest Level Detected	Range of Detected	MCLG	MCL	Possible Sources
Dalapon (ppb)	03/11*	N	0.54	ND – 0.54	200	200	Runoff from herbicide used on rights of way
* Most recent required sampling conducted 03/11.							

Stage 1 Disinfection/ (D/DBP) Parameters							
Contaminant	Date of Sampling	MCL/ MRDL Violation? Y/N	Level Detected	Range of Results	MCLG or MRDL G	MCL or MRDL L	Disinfection By-Product Possible Sources
Chlorine (ppm)	01/13 - 12/13	N	1.16*	1.11 – 1.21	MRDL G=4	MRDL L=4	Water additive used to control Microbes
Haloacetic Acids (five) (HAA5) (ppb)	10/07 – 07/11	N	8.25**	0.55 – 59.6***	N/A	60	By-product of drinking water disinfection.
THM (Total trihalome-thanes) (ppb)	10/07 – 07/11	N	29.69**	8.7 – 106.30**	N/A	80	By-product of drinking water disinfection.
*Annual average based on monthly chlorine residual averages for 2013. **Level = Annual average based on annual samples collected 07/11. ***Range of detected includes results of IDSE monitoring 10/07-10/09.							

Stage 2 Disinfectants and Disinfection By-Products/ (D/DBP)							
Contaminant	Dates of Sampling	MCL Violation? Y/N	Highest Detected	Range of Results	MCLG	MCL (Action Level)	Likely Source of Contamination
Haloacetic Acids (five) (HAA5) (ppb)	1/8/13, 4/9/13, 7/9/13, 10/8/13	N	24.3**	4.8 – 30.0***	N/A	60	By-product of drinking water disinfection.
THM (Total trihalome-thanes) (ppb)	1/8/13, 4/9/13, 7/9/13, 10/8/13, 11/12/13	N	64.9**	23.0- 110.0***	N/A	80	By-product of drinking water disinfection.
**Highest Detected = Highest locational running annual average (LRAA) calculated using 4 sampling quarters in 2013. ***Range of detected includes individual samples at each of the Stage 2 D/DPB sampling locations.							

Lead & Copper Tap Water Samples							
Contaminant	Date of Sampling	AL Violation? Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Disinfection By-Product Possible Sources
Copper (ppm)	6/12	N	0.390	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead (ppb)	6/12	N	2.8	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits.

**Abbreviation Key:**

**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.

**MCL:** Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCL are set as close to the MCLGs as feasible using the best available treatment technology.

**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 benefit of the use of disinfectants to control microbial contaminants.

**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.

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

**IDSE:** Initial Distribution System Evaluation is an important part of the Stage 2 Disinfection Byproducts Rule (DBPR). The ISDE is a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from IDSE in conjunction with their Stage 1 DBPR compliance monitoring data, to select monitoring locations for Stage 2 DBPR.

**ppm:** Parts per million. One part by weight of analyte to 1 million parts by weight of the water sample.

**ppb:** Parts per billion. One part by weight of analyte to 1 billion parts by weight of the water sample.

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

**N/A:** Not applicable.

**N/D:** Not Detected.

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. RCID 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>.

Immune-compromised persons: Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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 EPA's Safe Drinking Water Hotline 1-800-426-4791).



## Unregulated Contaminants

Reedy Creek Improvement District has been monitoring for unregulated contaminants (UCs) as part of a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. At present, no health standards (for example, maximum contaminant levels) have been established for UCs. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. If you would like more information on the EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791

Unregulated Contaminants			
Contaminant	Average Level Detected	Range	Likely Source of Contamination
Molybdenum (ppm)	9.6	6.3 - 13.2	Naturally-occurring element found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide used as a chemical reagent
Strontium (ppm)	150.8	96.3 - 195.0	Naturally-occurring element; historically, commercial use of strontium has been in the face-plate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium (ppm)	2.9	0.1 - 5.8	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
Chlorate (ppm)	200.9	126.0 - 256	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide
1,4 Dioxane (ppm)	0.21	ND - 0.38	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos.
Hexavalent Chromium (ppm)	0.02	ND - 0.05	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Chromium (ppm)	0.28	0.23 - 0.34	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation.

This report contains important information about the quality of water in your community.

Este informe contiene información importante sobre la calidad del agua en su comunidad.

If you have any questions about this report or concerning your water utility, please contact Jerry Hubbard at 407-824-4841