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# WATER QUALITY REPORT 2015





## A WORD FROM OUR CEO & GENERAL MANAGER

This 2015 OUC Water Quality Report contains detailed information about your drinking water, the steps we take to ensure its safety and how we are working to conserve this resource for future generations.

At OUC, our top priority is delivering clean, safe, great-tasting water to our customers. We start with water from the Lower Floridan Aquifer, a well-protected reservoir located hundreds of feet below ground that is slowly fed by naturally filtered rainwater.

We treat this high quality water with ozone, the strongest disinfectant available. Our state certified water lab conducts more than 20,000 chemical and bacteriological water quality tests each year. A summary of those results is included in this report.

As part of OUC's commitment to water conservation, we'll also share how we're teaching our community's youth about the importance of being water wise.

This report features creative water conservation artwork developed by local elementary and high school students as part of our Water Color Project. In addition, OUC's award winning Project A.W.E.S.O.M.E. delivers interactive water workshops to fifth grade classrooms across our service territory.

With their help and yours, we can ensure a healthy supply of water for years to come.

— Kenneth P. Ksionek  
OUC General Manager & CEO



## SAFE, RELIABLE DRINKING WATER FOR GENERATIONS TO COME



### A Naturally Clean Water Source

OUC's water comes from the Lower Floridan Aquifer, an underground reservoir that in many places is a quarter of a mile below the earth's surface. The aquifer is fed by rainwater that is filtered through hundreds of feet of rock, undergoing a natural cleansing process. After pumping water from the aquifer to our water plants, OUC carefully treats the water to ensure its safety and enhance its quality.

### Using Ozone to Produce Great Tasting Water

OUC uses ozone treatment at its seven water treatment plants to produce high quality, great tasting tap water, proudly dubbed H2OUC. Ozone oxidizes hydrogen sulfide to improve taste and odor and reduce the amount of chlorine that must be added to the water. The result is clean, fresh tasting water with a sparkling appearance. As required by law, we still add chlorine to our water to maintain its high quality as it flows through pipes to our customers' taps. Fluoride is added to promote healthy teeth. We also add sodium hydroxide to

prevent copper and lead from leaching into the drinking water from customers' own plumbing, which is the primary source of these elements in our area.

### Securing Our Water Facilities

All OUC water plants are equipped with state-of-the-art security systems that include intrusion-detection systems, alarms, cameras and security fences around the perimeter of the properties. Armed security guards and law enforcement officers regularly patrol the facilities. You can be assured that OUC remains vigilant in monitoring and protecting our water facilities. The safety of your water is our highest priority.

### About OUC—The *Reliable One*

OUC is a municipal utility owned by the citizens of Orlando and governed by a board of commissioners. The utility provides electric and water services to more than 230,000 customers in Orlando, St. Cloud and parts of unincorporated Orange and Osceola counties. OUC is the second largest water utility in the state, serving a population of about 424,000.

# TEACHING THE IMPORTANCE OF WATER CONSERVATION



To ensure we continue to deliver great-tasting, clean water to our customers, OUC is teaching the next generation about the importance of conserving and protecting Florida's water supply through classroom programs such as the Water Color Project and the A.W.E.S.O.M.E. (Alternative Water & Energy Supply, Observation, Methods & Education) Project.

For the past nine years, OUC has been encouraging students to use their creativity to promote conservation via the Water Color Project. Elementary students compete to have their artwork featured in an annual calendar, while high school students decorate water-themed rain barrels for judging.

The A.W.E.S.O.M.E. Project delivers an interactive lab to fifth grade classrooms. Students learn about alternate sources and where their water comes from by building an aquifer.

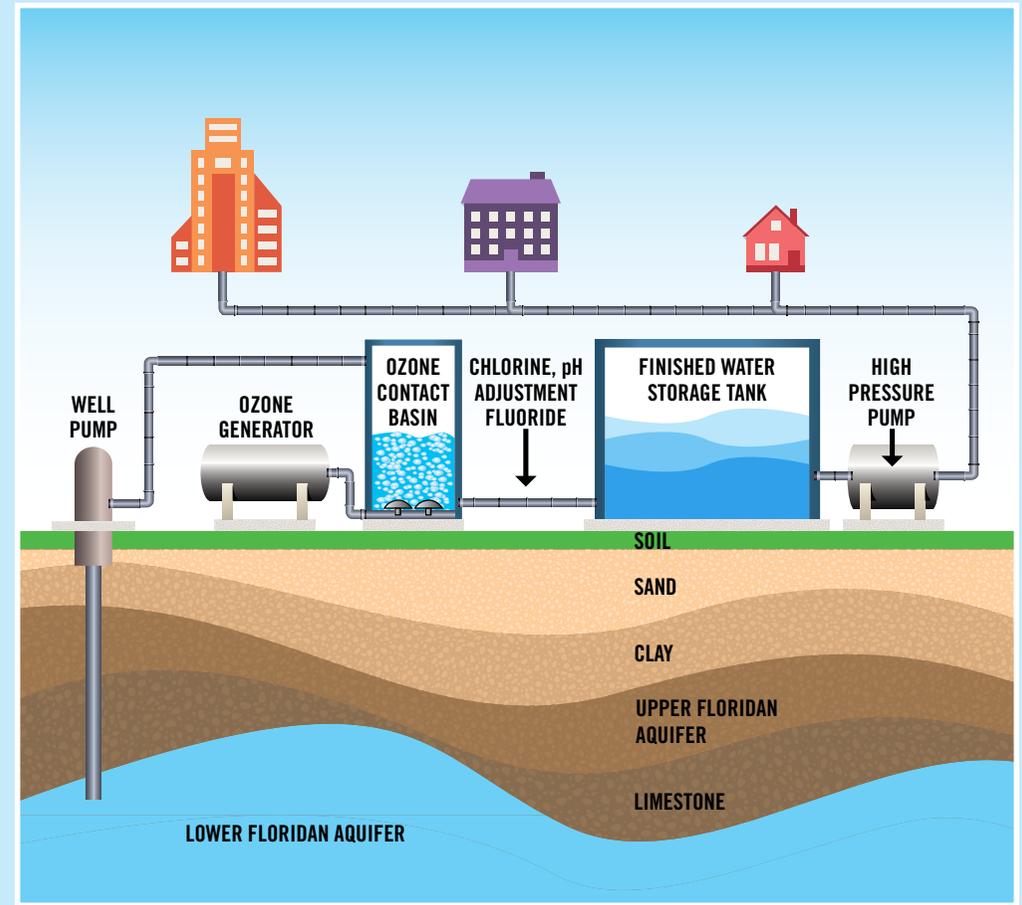
OUC has taken a leadership role in the search for innovative, reliable solutions. OUC is also focusing on reclaimed water—highly treated wastewater safe for human contact—to supply anticipated landscape and lawn irrigation needs. Through regional

partnerships with the City of Orlando and other Central Florida water utilities, OUC is planning alternative water sources to meet future drinking water demand.

Even small steps add up to big savings, lowering your monthly utility bill while preserving our water supply. Here are a few to start you saving:

- Water your lawn before 10 a.m. or after 4 p.m. to minimize the amount lost to evaporation
- Water just once a week in cooler months and twice a week in warmer months to maintain healthy grass
- Water your lawn for just 30–45 minutes per session
- Repair leaking faucets and toilets
- Install water-saver shower heads and take shorter showers

For more ways to save water, visit [conservefloridawater.org](http://conservefloridawater.org).



## WHERE YOUR WATER COMES FROM

Well pumps at OUC's water treatment plants draw water from a natural underground reservoir called the Lower Floridan Aquifer. After being sent through ozone treatment basins, the water is treated with chlorine and fluoride. The water is then pumped to

a finished water storage tank, where it waits for distribution to residential, commercial and industrial customers. Currently, OUC delivers nearly 29 billion gallons of water annually to customers across a 200 square mile territory.

These rain barrels were painted by local high school students as part of OUC's Water Color Project.



# WATER QUALITY TEST RESULTS

## ALL TEST RESULTS WELL BELOW ALLOWABLE LEVELS

As shown in the following tables, the water that OUC delivers to your tap surpasses all federal and state requirements for safe drinking water. Of the more than 135 regulated and unregulated substances for which we test annually, only several have been detected, and the detection levels were below allowable levels. Except where otherwise noted, the following results are from tests conducted in March of 2014 (the most recent available in accordance with DEP regulations).

### Inorganic Contaminants

Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Sources of Contamination
Asbestos (MFL)	07/2011	N	0.75	ND-0.75	7	7	Decay of asbestos cement water mains, erosion of natural deposits
Barium (ppm)	03/2014	N	0.033	0.009-0.033	2	2	Erosion of natural deposits
Fluoride (ppm)	03/2014	N	0.76	0.44-0.76	4	4	Erosion of natural deposits; water additive that promotes strong teeth
Nitrate (ppm)	03/2014	N	0.12	ND-0.12	10	10	Runoff from fertilizer, erosion of natural deposits
Sodium (ppm)	03/2014	N	12.9	5.52-12.9	N/A	160	Salt water intrusion; leaching from soil

### 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	Possible Sources of Contamination
Bromate (ppb)	1/14-12/14	N	3.4*	ND-12	MCLG = 0	MCL = 10	By-product of drinking water disinfection
Chlorine (ppm)	1/14-12/14	N	1.20*	0.18-2.6	MRDLG = 4	MRDL = 4	Water additive used to control microbes
HAA5 (ppb) Haloacetic Acids	2/14-11/14	N	34**	11-46	N/A	MCL = 60	By-product of drinking water chlorination
TTHMs (ppb) Total Trihalomethanes	2/14-11/14	N	73**	29-84	N/A	MCL = 80	By-product of drinking water chlorination

\*Compliance levels are based on running annual averages.

\*\*For HAA5 and TTHM the level detected is the highest locational running annual average for the samples collected: HAA5, (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.



## MICROBIOLOGICAL CONTAMINANTS

The following results are from tests conducted between Jan. 1 and Dec. 31, 2014 (the most recent available in accordance with DEP regulations).

Contaminant and unit of measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Highest Monthly Percentage/ Number	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (positive samples)	1/2014-12/2014	N	1.0%	0	Presence of coliform bacteria in more than 5% of monthly samples	Naturally present in the environment

During 2014, a minimum of 180 water samples per month was collected throughout OUC's water distribution system and analyzed for Total Coliform Bacteria.

## RESULTS OF COPPER AND LEAD SAMPLING AT CUSTOMER TAPS

The following results are from tests conducted in July 2014 (the most recent available in accordance with DEP regulations). The tests confirm that the levels of lead and copper in tap water sampled in homes were below the Action Level (AL).

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	AL Exceeded (Y/N)	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination
<b>Copper (tap water) (ppm)</b>	7/14	N	0.6	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
<b>Lead (tap water) (ppb)</b>	7/14	N	5	1	0	15	Corrosion of household plumbing systems; erosion of natural deposits

*In 90% of the homes sampled, the level of copper was 0.60 ppm or less, and the level of lead was 5 ppb or less.*

## UNREGULATED CONTAMINANT MONITORING RULE 3 (UCMR3)

Substance (Units)	Maximum Level	Average Level	Range
<b>Chromium (ppb)</b>	0.36	0.18	ND – 0.36
<b>Molybdenum (ppb)</b>	6.6	1.82	ND – 6.6
<b>Strontium (ppb)</b>	1210	538	19 – 1210
<b>Vanadium (ppb)</b>	0.20	0.12	ND – 0.20
<b>Chromium, Hexavalent (ppb)</b>	0.17	0.05	0.013 – 0.17
<b>Chlorate (ppb)</b>	9.8	2.76	ND – 9.8
<b>1,3-Butadiene (ppb)</b>	0.32	0.11	ND – 0.32
<b>Perfluorooctanoic Acid (ppb)</b>	0.00680	0.00024	ND – 0.00680
<b>1,4-Dioxane (ppb)</b>	0.026	0.00093	ND – 0.026

The 1996 Safe Drinking Water Act (SDWA) amendments require that once every five years the EPA issues a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs). The first Unregulated Contaminant Monitoring Rule (UCMR1) was published on September 17, 1999, the second (UCMR2) was published on January 4, 2007 and the third (UCMR3) was published on May 2, 2012. This monitoring provides a basis for future regulatory actions to protect public health. At present, no health standards (for example, MCLs) have been established for Unregulated Contaminants. However, we are required to publish the analytical results of our Unregulated Contaminant monitoring in our annual water quality report. If you would like more information on EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

## KEYS TO ABBREVIATIONS

### MCL: Maximum Contaminant Level.

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.

### 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.

### AL: Action Level.

The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

### ppm: Parts Per Million.

One part per million corresponds to 1 cent in \$10,000.

### ppb: Parts Per Billion.

One part per billion corresponds to 1 cent in \$10 million.

### pCi/L: Picocuries Per Liter.

A measure of the radioactivity in water.

### N/A: Not Applicable.

### ND: Not Detected.

Indicates that the substance was not found by laboratory analysis.

### MFL: Million Fibers Per Liter.

A measure of the presence of asbestos fibers that are longer than 10 micrometers.

### 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 benefits 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.





# 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. In some cases, radioactive material can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

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 U.S. Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

## More About Lead and Copper

The primary source of lead and copper in tap water is customer's plumbing. These elements can possibly leach into the water from a building's plumbing through corrosion if the water has been standing in the pipes for several hours. To prevent corrosion from occurring, OUC has effectively implemented system-wide corrosion-control treatment. At the treatment plants, sodium hydroxide is added to the water to increase the water's pH and thus prevent corrosion.

Buildings at risk for lead or copper in the water are those that have lead services or that have lead solder in copper pipes.

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. OUC 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 at 1-800-426-4791 or online at <http://www.epa.gov/dwstandardsregulations>.

## Constantly Testing Your Water

After an on-site assessment by the Florida Department of Health and successful completion of the latest round of proficiency testing, chemists at OUC's Water Quality Laboratory perform more than 20,000 chemical and bacteriological tests annually to ensure the quality and safety of OUC's drinking water. With the latest accreditation, customers can continue to enjoy OUC's award-winning water with confidence, knowing that the water is tested regularly and surpasses the highest quality standards. For more information about OUC's drinking water, call our Water Quality Laboratory at 407-434-2549 to talk to a water quality professional. Information also is available online at [www.ouc.com/water](http://www.ouc.com/water).

## Source Water Assessment

The latest source water assessment was completed in 2014 and the report is available online at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp).

## WHAT THE EPA SAYS ABOUT MCLS AND HEALTH EFFECTS

The Maximum Contaminant Levels (MCLs) established by the EPA are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk for infections. These people should seek advice from their health care providers about drinking water. EPA and Center for Disease Control and Prevention 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, 1-800-426-4791.

- **Microbial 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 come from gas stations, urban stormwater runoff and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or 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. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

All drinking water, including bottled water, may be reasonably expected to contain at least small