

planning for the future



2007 water quality report



Delivering **safe, reliable** *drinking water*



At OUC, we know that being *The Reliable One* means more than just providing safe, clean water for our customers. . . it also means planning for our region's future. A rapidly growing community and lower than usual rainfall levels have underscored our need to conserve water today while seeking out new, reliable sources of water for tomorrow.

In this report, you will find information about this precious resource — our drinking water. You can learn more about where your water comes from and the more than 20,000 annual scientific tests OUC conducts to ensure safe, great tasting water for our community. The report also provides water conservation tips — easy ways you can help protect our water resources.

Clean, great-tasting water from a reliable source is our top priority at OUC. With your help and our plan for our region's future, we can work together to ensure a healthy supply of water for years to come.

— **Kenneth P. Ksionek**
OUC General Manager & CEO


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 eight water treatment plants to produce high quality, great tasting tap water, proudly dubbed H₂OUC. Ozone is the strongest disinfectant available and reduces the amount of chlorine that must be added. The result is clean, fresh-tasting water with a sparkling appearance. Since 1995, OUC has converted five of its water plants to ozone treatment

and built three new ozone plants. As required by law, we still add chlorine to our water to maintain the high quality as it flows through pipes to customer 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, the primary source of these elements in our area.

A wide-angle photograph of a large, shallow lake with a grassy shore and a line of trees in the background. The water is calm, reflecting the sky and trees. The scene is bright and sunny.

A shortage of rainfall this year has left many lakes – like Lake Davis in downtown Orlando – far below usual levels.

for generations to come

Securing our water facilities

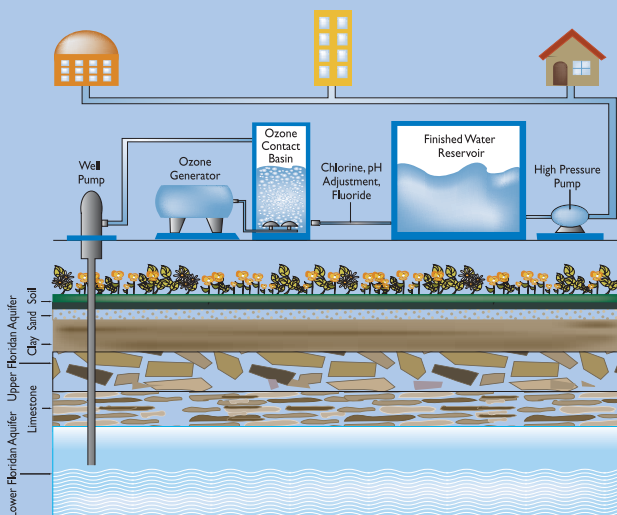
All OUC water plants are equipped with state-of-the-art security systems that include intrusion-detection systems, alarms, cameras and security fences around the perimeter of the properties. Armed security guards and law enforcement officers regularly patrol the facilities. You can be assured that OUC 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 200,000 customers in Orlando, St. Cloud and parts of unincorporated Orange and Osceola counties. OUC is the second largest water utility in the state. To learn more, attend any of the Commission's scheduled board meetings. They are at 2 p.m. on the second Tuesday of each month at OUC's Administration Building at 500 S. Orange Ave. in Orlando. Meetings are open to the public. Visit www.ouc.com for a complete schedule.



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 reservoir, where it waits for distribution to residential, commercial and industrial customers. Each year OUC delivers nearly 30 billion gallons of water to customers across a 200-square-mile territory.



Protecting our **water resources** through **conservation**

As Central Florida continues to grow, so does the demand for clean, safe water from the Floridan Aquifer. To prepare for our region's future needs, OUC has taken a leadership role in the search for innovative, reliable solutions while still providing clean, great-tasting water for our customers today.

One solution is the development of alternative water supplies — such as surface water from the St. Johns River and Taylor Creek Reservoir in east Orange County — to meet future drinking water demands. In addition, OUC is 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 actively developing these alternative water sources and plans to have them online by 2013.

We also want to highlight the value of water conservation through customer education. There are easy steps you and your family can take in your own home or business to lower your monthly utility bill while actively helping to preserve our water supply. By following these simple water conservation tips, you can save thousands of gallons of water each year:

Conservation Tips

- Water your lawn only before 10 a.m. or after 4 p.m. to minimize the amount of water lost to evaporation
- Water just once a week in the cooler months and twice a week in the warmer months to maintain healthy, green grass with a strong root system
- Irrigation for odd-numbered addresses is allowed Wednesdays and Saturdays
- Irrigation for even-numbered or no addresses is allowed Thursdays and Sundays
- Water your lawn for just 30-45 minutes per session
- Repair leaking faucets and toilets and install water-saver flush valves in toilets
- Install water-saver shower heads and take shorter showers
- Turn off the faucet when shaving or brushing your teeth
- Recycle water rather than pouring it down the drain (for instance, used water from a fish tank is good for watering plants)
- Check regularly for leaks in faucets, pipes and hoses, repairing any leaks promptly

For more ways to save water, visit www.conservefloridawater.org

we're doing our part . . .

Businesses also play a critical role in preserving our region's water supply. Our new downtown administration building — scheduled for completion by 2008 — will incorporate a rainwater collection system for irrigation, as well as other water- and energy-saving features. These measures will make our state-of-the-art office the first commercial building in Orlando to be LEED (Leadership in Energy and Environmental Design) certified. . . and the greenest building in the City Beautiful.



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 well below allowable levels.

Except where otherwise noted, the following results are from tests conducted between January 1 and December 31, 2006 (the most recent available in accordance with DEP regulations.)

Primary Regulated Substances	Date of Sampling	MCL/AL Violation	Range Detected	Highest Detected	MCL	MCLG	Possible Sources
Barium (ppm)	6/06-7/06	No	0.017-0.063	0.063	2	2	Erosion of natural deposits
Fluoride (ppm)	6/06-7/06	No	0.61-0.86	0.86	4	4	Erosion of natural deposits; water additive that promotes strong teeth
Lead (ppb)	6/06-7/06	No	ND-3	3	AL(15)	0	Erosion of natural deposits
Nitrate (ppm)	6/06-7/06	No	0.025-0.113	0.113	10	10	Runoff from fertilizer; erosion of natural deposits
Sodium (ppm)	6/06-7/06	No	8.64-14.4	14.4	160	N/A	Salt water intrusion; leaching from soil

Radiological Contaminants	Date of Sampling	MCL/AL Violation	Range Detected	Highest Detected	MCL	MCLG	Possible Sources
Radiological Gross Alpha (pCi/L) (2002)	10/02	No	ND-1.1	1.1	15	0	Erosion of natural deposits

TTHMs and Stage I Disinfectant/Disinfection By-Product (D/DBP) Parameters

Disinfection By-products	Date of Sampling	MCL/AL Violation	Range Detected	Highest Detected	MCL	MCLG	Possible Sources
Bromate (ppb)	Monthly 2006	No	ND-13	13* (annual average 5)	10	0	By-product of drinking water disinfection
HAAS (ppb) Haloacetic Acids	Quarterly 2006	No	10-46	46* (annual average 24)	60	N/A	By-product of drinking water chlorination
TTHMs (ppb) Trihalomethanes	Quarterly 2006	No	23-73	73* (annual average 46)	80	N/A	By-product of drinking water chlorination
Chlorine (ppm)	1/06-12/06	No	0.2-1.9	1.9* (annual average 1.2)	(MRDLG=4)	(MRDL=4)	Water additive used to control microbes

* Compliance levels are based on running annual averages

Microbiological Contaminants

The following results are from tests conducted between January 1 and December 31, 2006 (the most recent available in accordance with DEP regulations).

Contaminant	MCLG	MCL	Level Detected	Violation	Likely Sources
Total Coliform Bacteria	0	Presence of Coliform Bacteria in more than 5% of month samples	OUC's highest monthly percentage of positive samples was 0.8%, in December 2006	No	Naturally present in the environment

During 2006, a minimum of 198 water samples per month were collected throughout OUC's water distribution system and analyzed for Total Coliform Bacteria.

For a complete list of abbreviation and definitions used on this and following pages, please see page 5.

results of copper and lead sampling at customer taps



The following results are from tests conducted between June 1 and September 30, 2005 (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) except where noted.

Contaminant and Unit of Measure	MCL Violation	Level Detected	MCL	MCLG	Likely Source of Contamination
Copper (tap water) (ppm)	No	0.77 (90th percentile)*	AL=1.3 (One site exceeded AL)	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	No	2 (90th percentile)*	AL=1.3 (One site exceeded AL)	0 (Zero ppb)	Corrosion of household plumbing systems; erosion of natural deposits

* In 90 percent of the homes sampled, the level of copper was 0.59 ppm or less and the level of lead was 2 ppb or less.

More about lead and copper

The primary source of lead and copper in tap water is customers' 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 of water pipes.

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 you are unsure whether your plumbing contains lead or copper, run tap water for 30 seconds before using it. This will ensure that you draw fresh water from the tap, not water that has been standing in your plumbing for several hours or overnight.

Copper is an essential nutrient but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress.

Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

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 state-of-the-art Water Quality Laboratory perform more than 20,000 chemical and bacteriological tests annually to ensure the quality and safety of OUC's drinking water. 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 **407.244.8779** to talk to a water quality professional. Information also is available online at www.ouc.com.

Source Water Assessment and Protection Program (SWAPP)

A source water assessment has been completed and the report is available to the public at the following website: <http://www.dep.state.fl.us/swapp>

KEY 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.

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

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.

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:

- **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 also can 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.

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 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 U.S. Environmental Protection Agency's Safe Drinking Water Hotline at **1.800.426.4791**.

What the EPA says about MCLs and health effects



The Maximum Contaminant Levels (MCLs) set 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 2 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, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people and infants can be particularly at risk for 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 microbial contaminants are available from the EPA Safe Drinking Water Hotline, **1.800.426.4791**.





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