

2005  
Water Quality  
**Report**



**OUC**   
*The Reliable One*<sup>®</sup>

2005  
Water Quality  
**Report**

delivering safe, reliable

# DRINKING WATER



*OUC—The Reliable One continually works to provide our customers with the safest and most reliable source of water. In our 2005 Water Quality Report, you will find information about the source of your drinking water, the steps we take to ensure your water's safety and the results of rigorous water-quality testing. OUC lab staff performs more than 20,000 chemical and bacteriological tests annually to ensure the quality and safety of OUC's drinking water. OUC's water clearly surpasses all federal and state drinking water requirements. With more and more people moving to Central Florida, the demand for water continues to grow.*

*This report also highlights important guidelines for conserving our community's water resources. At OUC, we are committed to delivering a safe, reliable supply of the best tasting water now and in the future.*

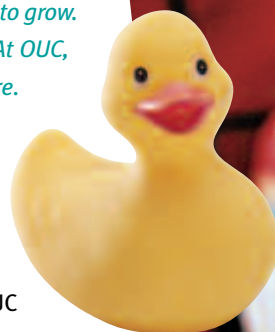
— Kenneth P. Ksionek, OUC General Manager & Chief Executive Officer

**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 H<sub>2</sub>OUC. Ozone treatment removes smelly hydrogen sulfide from water and reduces the amount of chlorine

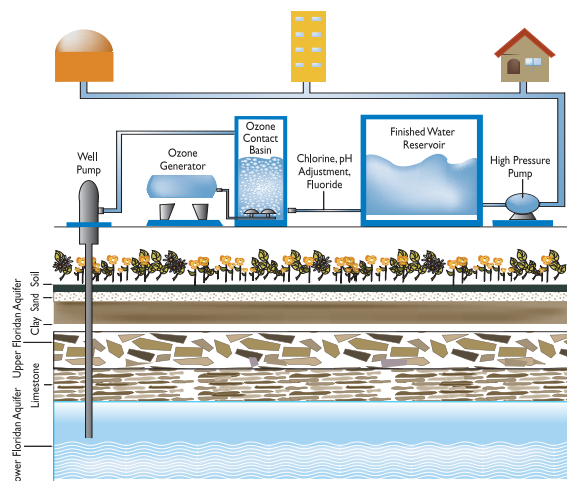
that must be added. The result is clean, fresh-tasting water with a sparkling appearance. Since 1995, OUC has converted five of its water plants to ozone treatment and built three new ozone plants.

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.



## 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.



**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 196,000 customers in Orlando, St. Cloud and parts of unincorporated Orange and Osceola counties. We encourage our valued customers to become more informed about their utility by attending any of the Commission's regularly 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 downtown Orlando.

Meetings are open to the public. Visit our Web site for complete listings of meeting times and dates.

**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. Please be assured that OUC remains vigilant in monitoring and protecting our water facilities. The safety of your water is our highest priority.



# WATER WISE

preparing for the future by being



*At OUC, our goal is to continue serving as a good steward of the environment while meeting the water needs of our vibrant, growing community. We're proud to have received approval from the St. Johns River Water Management District for a 20-year groundwater withdrawal permit. This unique long-term agreement details our plans for increased use of reclaimed water, enhanced conservation measures and development of alternative water supplies with regional partners.*

Central Florida is growing quickly as more people make the Sunshine State home. While these new residents come from all over the state, the country and around the globe to settle in Central Florida, they have one thing in common: a need for a clean and reliable water supply. OUC—The *Reliable One*, the region's largest water supplier, must accommodate today's ever-increasing demands for water while also conserving for the future.

OUC took a major step in that direction in 2004 when it was awarded a 20-year renewal of its consumptive-use water permit. Pioneering in its length and broad community consensus, the agreement carefully balances conservation with our region's future needs.

OUC is proud of its commitment to investing in alternative supply and will work with the water management districts, the City of Orlando and Orange County to develop solutions to safeguard Central Florida's water future. As part of the consumptive-use permit, OUC has pledged to maintain its groundwater withdrawal allocation at the same level for the next 20 years, despite an increasing customer base.

To do that, conservation is key. OUC has launched "Project Renew" to increase the use of reclaimed water, develop alternative water supply with utility partners and enhance conservation efforts. By encouraging conservation, OUC helps its customers lower their bills while preserving the water supply. Here are some steps you can take to use water more efficiently at your home:

#### Irrigation

- Water 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 a 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 for just 30-45 minutes per session.
- Don't water in the rain or if it's windy.
- Set your automatic sprinkler systems to reflect the guidelines above.

#### Saving water inside your home

- Repair leaking faucets and toilets.
- Install water-saver flush valves in toilets.
- Install water-saver shower heads.
- Take short showers.
- Turn off the water while brushing your teeth or shaving.
- Wash only full loads in dishwasher and clothes washer.
- Recycle water rather than pouring it down the drain. (For instance, used water from a fish tank is good for watering plants.)
- Don't flush the toilet just to get rid of trash.
- Use the garbage disposal sparingly.
- When you wash dishes by hand, fill up the sink with water and turn off the faucet.

#### General outdoor conservation tips

- When washing your car with a hose, always use a spray nozzle to stop water flow between rinsings.
- Clean driveways and sidewalks with a broom instead of a hose.
- Check for leaks in outdoor faucets, pipes and hoses, repairing any leaks promptly.
- Cover your pool or spa to reduce evaporation.
- Check for pool/spa leaks, making repairs promptly.



water quality

# TEST RESULTS

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 Jan. 1 and Dec. 31, 2004 (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)	9/04	No	0.010-0.060	0.060	2	2	Erosion of natural deposits
Fluoride (ppm)	7/04	No	0.70-0.83	0.83	4	4	Erosion of natural deposits; water additive that promotes strong teeth
Nitrate (ppm)	6/04	No	0.029-0.116	0.116	10	10	Runoff from fertilizer; erosion of natural deposits
Sodium (ppm)	7/04	No	9.5-16.3	16.3	160	N/A	Salt water intrusion; leaching from soil
Selenium (ppb)	9/04	No	4-12	12	50	50	Erosion of natural deposits
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 2004	No	ND-10	10* (annual average 1)	10	0	By-product of drinking water disinfection
HAA5 (ppb) Haloacetic Acids	Quarterly 2004	No	7-35	35* (annual average 21)	60	N/A	By-product of drinking water chlorination
TTHMs (ppb) Trihalomethanes	Quarterly 2004	No	23-80	80* (annual average 54)	80	N/A	By-product of drinking water chlorination

\* Compliance levels are based on running annual averages.

**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, OUC's state-of-the-art Water Quality Laboratory was awarded a two-year accreditation in January. OUC lab staff performs 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 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](http://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 website listed below: <http://www.dep.state.fl.us/swapp/SelectCounty.asp>.



**Microbiological Contaminants.** The following results are from tests conducted between Jan. 1 and Dec. 31, 2004 (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 percent of monthly samples	OUC's highest monthly percentage of positive samples was 1.55%, in September and October 2004	No	Naturally present in the environment

During 2004, a minimum of 242 water samples per month were collected throughout OUC's water distribution system and analyzed for Total Coliform Bacteria.

**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.

# results of copper and lead SAMPLING at customer taps



The following results are from tests conducted between June 1 and Aug. 30, 2002 (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 Measure	Copper (tap water) (ppm)	Lead (tap water) (ppb)
MCL/Violation	No	No
Level Detected	0.59 (90th percentile*)	2 (90th percentile*)
MCL	AL = 1.3	AL = 15
MCLG	1.3	0 (Zero ppb)
Likely Source of Contamination	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	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.

The following results are from tests conducted in July 2003 in the Southeast area (Lake Nona). 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	Copper (tap water) (ppm)	Lead (tap water) (ppb)
MCL/Violation	NO (two sampling sites exceeded AL)	NO (one sampling site exceeded AL)
Level Detected	1.14 (90th percentile*)	5.0 (90th percentile*)
MCL	AL = 1.3	AL = 15
MCLG	1.3	0 (Zero ppb)
Likely Source of Contamination	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Corrosion of household plumbing systems; erosion of natural deposits

\* In 90 percent of the homes sampled, the level of copper was 1.14 ppm or less and the level of lead was 5.0 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 systemwide 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.

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.



# epa statement about WATER SOURCES, 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 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.



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.

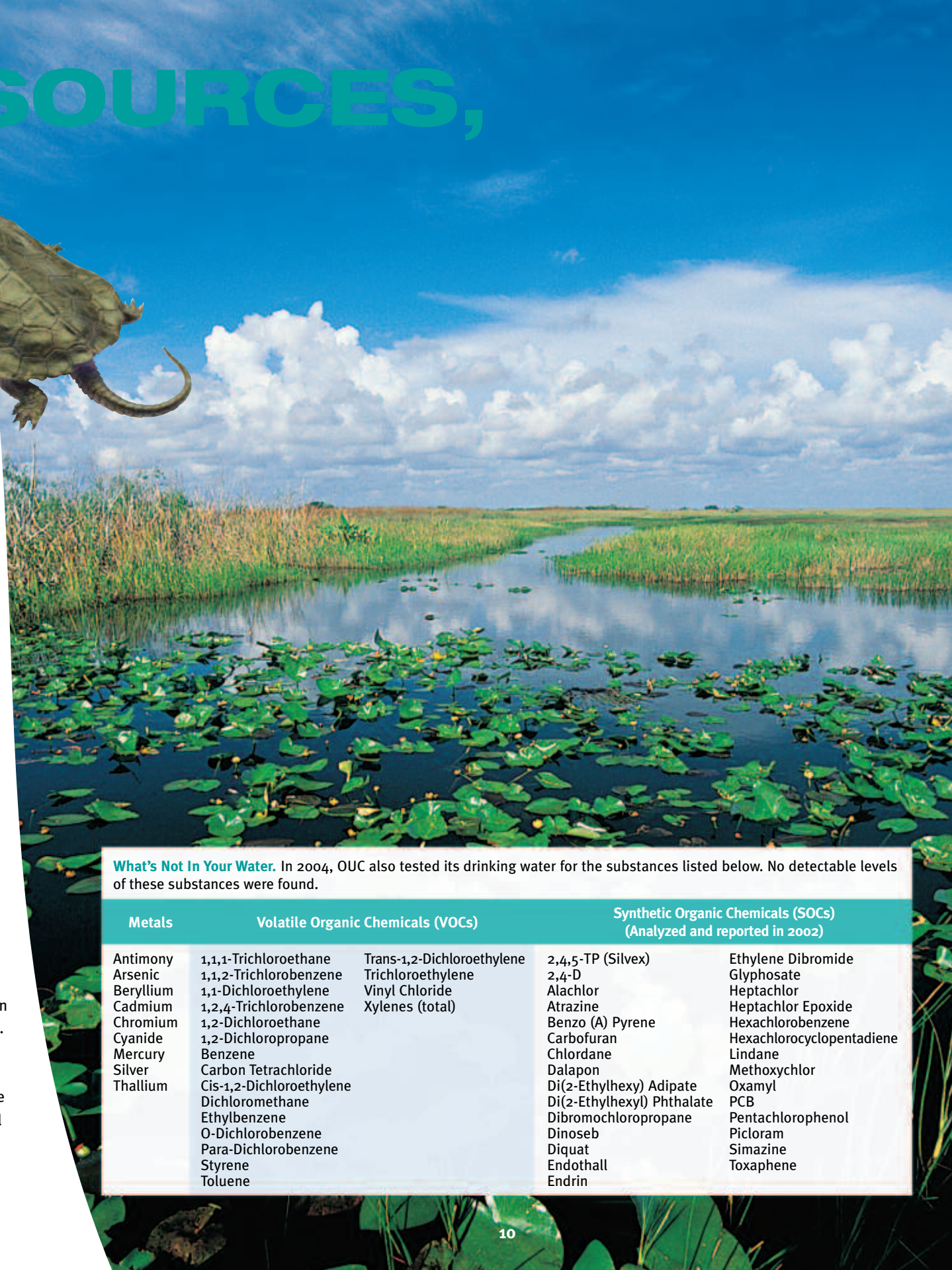
All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained 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**.



**What's Not In Your Water.** In 2004, OUC also tested its drinking water for the substances listed below. No detectable levels of these substances were found.

Metals	Volatile Organic Chemicals (VOCs)		Synthetic Organic Chemicals (SOCs) (Analyzed and reported in 2002)	
Antimony	1,1,1-Trichloroethane	Trans-1,2-Dichloroethylene	2,4,5-TP (Silvex)	Ethylene Dibromide
Arsenic	1,1,2-Trichlorobenzene	Trichloroethylene	2,4-D	Glyphosate
Beryllium	1,1-Dichloroethylene	Vinyl Chloride	Alachlor	Heptachlor
Cadmium	1,2,4-Trichlorobenzene	Xylenes (total)	Atrazine	Heptachlor Epoxide
Chromium	1,2-Dichloroethane		Benzo (A) Pyrene	Hexachlorobenzene
Cyanide	1,2-Dichloropropane		Carbofuran	Hexachlorocyclopentadiene
Mercury	Benzene		Chlordane	Lindane
Silver	Carbon Tetrachloride		Dalapon	Methoxychlor
Thallium	Cis-1,2-Dichloroethylene		Di(2-Ethylhexyl) Adipate	Oxamyl
	Dichloromethane		Di(2-Ethylhexyl) Phthalate	PCB
	Ethylbenzene		Dibromochloropropane	Pentachlorophenol
	O-Dichlorobenzene		Dinoseb	Picloram
	Para-Dichlorobenzene		Diquat	Simazine
	Styrene		Endothall	Toxaphene
	Toluene		Endrin	