

# 2007

## WATER QUALITY REPORT

# CENTRAL ARKANSAS WATER

Depend on us - today *and* tomorrow.

the  
*difference*  
is  
**Clear.**



### *Quality from the Source to the Tap*

A plentiful, reliable, and affordable source of clean, safe drinking water is essential to our health and quality of life. That is why Central Arkansas Water (CAW) is dedicated to protecting you, our valued customer, by adhering to the strictest of standards for drinking water.



For the compliance year of January 1 through December 31, 2007, the quality of your drinking water met and excelled above all federal and state standards for health and safety.



At CAW, we take great care in making sure that your drinking water is safe from the source to the tap. Our laboratory and operations personnel conduct more than 155,000 tests — an average of 425 tests a day, 365 days a year — on the various stages of the treatment and delivery process. We also have 24-hour monitoring of the treatment and delivery process.

### *Your 2007 Water Quality Report Provides*

- Results of tests that CAW and regulatory agencies conducted to make sure your water is safe for consumption.
- Information that federal and state health agencies believe you should know about your drinking water.



Our mission is to provide you with exceptional service and the best water quality possible at a fair price. When you review the monitoring and testing results in this report, we believe our mission, like our water, is clear.

# 2007 WATER QUALITY REPORT

You are receiving your 2007 Water Quality Report in compliance with the Consumer Confidence Rule of the federal Safe Drinking Water Act (SDWA). The SDWA is the law of standards for all public drinking water systems in the United States and specifically requires monitoring and treatment of drinking water to ensure the protection of public health. The law also mandates that by July 1 of each year, we provide you with information on the quality of your drinking water, the sources of your drinking water, and our compliance with federal and state drinking water standards.

Since the enactment of the federal Safe Drinking Water Act by the U.S. Congress in 1974, your water service provider has had ZERO violations of the SDWA — that's 34 straight years.

## *Source to the Tap*

Central Arkansas Water receives its supply from two surface water sources, Lake Maumelle and Lake Winona. Lake Maumelle is located in Pulaski County. Lake Winona is located in Saline County. Both lakes can supply water to Jackson Reservoir, a regulating reservoir located within the Little Rock city limits. Water is delivered by pipeline to the Jack H. Wilson Water Treatment Plant and Ozark Point Water Treatment Plant. Both treatment plants are located within the city limits of Little Rock.

## *Water Treatment Process*

Central Arkansas Water utilizes a conventional water treatment process at each of our two water treatment facilities. The process includes flash mixing, coagulation/flocculation, sedimentation, filtration, and disinfection.



## *Source Water Assessment Statement*

The Arkansas Department of Health completed a Source Water Vulnerability Assessment for the water utility in June 2000. The assessment, a requirement of the federal Safe Drinking Water Act, summarizes the potential for contamination of our sources of drinking water and can be used as a basis for developing a source water protection plan. Based on the various criteria of the assessment, our surface water sources have been determined to have medium to high susceptibility to contamination due to surrounding land uses.

Customers may obtain a copy of the report, which explains the assessment process and includes the results, from Central Arkansas Water's administrative office at 221 East Capitol Avenue in Little Rock or by calling 501.377.1229.

## *Retail Service Area*

Little Rock  
North Little Rock  
Alexander  
Brushy Island Public Water Authority  
Cammack Village  
College Station  
Sherwood  
Gravel Ridge  
Wrightsville  
145th Street Water and Sewer Improvement District  
Unincorporated Pulaski County

## *Wholesale Service Area*

Bryant  
Jacksonville  
North Pulaski Water Works Association  
Shannon Hills  
Salem Water Users Public Water Authority  
Sardis Water Association Public Water Authority  
Woodland Hills

*Central Arkansas Water's 2007 Annual Water Quality Report is applicable only to homes, businesses, and industries served by our public drinking water system.*

[www.carkw.com](http://www.carkw.com)

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### *Lake Maumelle Watershed Management Plan*

In February 2007, the CAW Board of Commissioners adopted the Lake Maumelle Watershed Management Plan. The plan is a science- and public-policy based initiative to protect Lake Maumelle, our primary drinking water source and the source most susceptible to contamination by surrounding land uses. The plan specifically directs strategies related to lake management, comprehensive water-quality monitoring, private land development, forestry activities, other land disturbances, “good household” practices by property owners, and land acquisition by CAW to ensure the long-term viability of the drinking water supply and to minimize land-use restrictions on owners of private property in the surrounding watershed.

Lake Winona is under a unique protection agreement between CAW and the U.S. Forest Service. The lake’s entire watershed is within the Ouachita National Forest.

### *About Drinking Water*

Sources of drinking water (both tap water and bottled water) include lakes, rivers, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally-occurring minerals and, in

some cases, radioactive materials and can pick up substances resulting from the presence of animals or human activity.

Substances that may be present in source water include:

- Microbial substances, such as viruses and bacteria, which may come from septic systems, agricultural livestock operations, and wildlife.
- Inorganic substances, such as salts and metals, which can be naturally occurring or result from oil and gas production, domestic wastewater discharges, mining, farming, and urban stormwater runoff.
- Pesticides and herbicides, which may come from a variety of sources, such as agriculture, silviculture (forestry activity), residential uses, and urban stormwater runoff.
- Organic chemicals, which include synthetic and volatile organic chemicals that are by-products of petroleum production and which also can come from gas stations, septic systems, and stormwater runoff.
- Radioactive substances, 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 U.S. Environmental Protection Agency prescribes regulations that limit the amount of certain substances in water provided by public drinking water systems. U.S. Food and Drug Administration (USFDA) regulations establish limits for substances in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, reasonably may be expected to contain at least small amounts of some contaminants. The presence of the contaminants does not necessarily mean that the water poses a health risk.

More information about contaminants in drinking water and potential health effects may be obtained by calling the U.S. Environmental Protection Agency’s (USEPA) Safe Drinking Water Hotline (1.800.426.4791).



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### *Information for Vulnerable Populations*

Some people may be more vulnerable than the general population to contaminants in drinking water. Immuno-compromised persons, such as persons who have cancer and are undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people, and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. U.S. Environmental Protection Agency and Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection from *Cryptosporidium parvum* and other microbial contaminants are available through the Safe Drinking Water Hotline (1.800.426.4791).

### *About Cryptosporidium*

*Cryptosporidium parvum* is a microbial contaminant that is linked to animal and human waste. The contaminant is fairly common in the untreated water of surface sources (lakes and rivers). *Cryptosporidium* never has been detected in the treated water supplied to your tap.

Of the 88 samples collected over the past 14 years, there have been only



two detections of *Cryptosporidium* in the untreated surface sources. Quarterly monitoring for *Cryptosporidium* began in 1994.

From July 1997 through December 1998, we performed monthly monitoring of the source water, as part of USEPA's Information Collection Rule (ICR). Beginning in March 1999 and continuing throughout the year, we conducted twice-monthly monitoring of Lake Maumelle, as part of the ICR Supplemental Survey of USEPA.

Beginning in January 2004 and continuing through March 2006, we conducted monthly sampling for *Cryptosporidium* in the source water in preparation for upcoming regulations.

### *About Lead in Drinking Water*

If present in drinking water, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. The source of lead in drinking water primarily is from the materials and components associated with service lines and home plumbing.

Central Arkansas Water is responsible for ensuring that the drinking water the utility delivers to your tap meets all federal and state standards for health and safety; however, the water utility cannot control the variety of materials that customers use in plumbing components. When water has been sitting for several hours in plumbing, a customer can minimize the potential for lead exposure by flushing the tap for 30 seconds to 2 minutes before using water for drinking, beverage preparation, or cooking.

CAW advises that if a customer has a concern about lead in the drinking water at the tap, the customer may contact a private laboratory for testing or a customer may contact the Arkansas Department of Health at 501.661.2623. Additional information on the potential for lead in drinking water, testing methods, and steps a customer may take to minimize exposure is available from the Safe Drinking Water Hotline at 1.800.426.4791 or at <http://www.epa.gov/safewater/lead>.

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## Public Participation

If you are interested in learning more about your public waterworks, there are various opportunities to do so. The seven-member Board of Commissioners meets at 2 p.m. each second Thursday of the month at the James T. Harvey Administration Building, located at 221 East Capitol Avenue in Little Rock. The Board announces changes in meeting location and times, as well as special meetings, prior to the meeting dates. All sessions are open to the public and news media.

## Regulated Substances

The charts on the next page indicate the substances that Central Arkansas Water detected in treated water. The charts contain testing results for 2007. All test results are below allowable levels. We have not listed the several hundreds of substances for which we monitored but did not have a detectable level.

CAW operates two water treatment plants:

The Jack H. Wilson Water Treatment Plant primarily serves the areas of Little Rock and Pulaski County west of University Avenue and the areas of North Little Rock north of Interstate 40.

The Ozark Point Water Treatment Plant primarily serves the areas of Little Rock and Pulaski County east of University Avenue and the areas of North Little Rock south of Interstate 40.

Some blending of water from the two treatment plants takes place within the pipelines of the distribution system. In the charts, "W" indicates water quality monitoring results for the Wilson Plant and "OP" indicates water quality monitoring results for the Ozark Point Plant. "D" indicates water quality monitoring results for our Distribution System.



## Water Quality Terms

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

**Maximum Contaminant Level (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 (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 (MRDL)** — The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the control of microbial contaminants, such as bacteria.

**Maximum Residual Disinfectant Level Goal (MRDLG)** — The level of a drinking water disinfectant below which there is no known or expected risk to public health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Micromhos per centimeter (umho/cm)** — Measurement of conductivity.

**Nephelometric Turbidity Units (NTUs)** — A measure of the clarity of water. Turbidity in excess of 5 NTUs is barely noticeable to the average person.

**None Detected (ND)** — Laboratory analyses indicate that the constituent is below detectable levels.

**Not Applicable (N/A)** — Does not apply.

**Parts per billion (ppb)** — One part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.

**Parts per million (ppm)** — One part per million corresponds to one minute in two years or a single penny in \$10,000.

**Running Annual Average (RAA)** — The arithmetic average, computed quarterly, of the latest four quarterly arithmetic averages of all samples collected by the water system.

**Secondary Maximum Contaminant Level (SMCL)** — Recommended guideline for enhancing aesthetic quality of water (odor and appearance). The Secondary Standards are not required for compliance with the federal Safe Drinking Water Act.

**Treatment Technique (TT)** — A required process intended to reduce the level of a contaminant in drinking water.

## Regulated Substances

### Inorganic Substances

SUBSTANCE (unit of measure)	MCLG	MCL	Highest Level Detected	Range Detected	SDWA Violation	Likely Source of Substance
Turbidity (NTU)	n/a	1 NTU	0.20 (W) 0.57 (OP)	0.03 – 0.20 (W) 0.04 – 0.57 (OP)	No (W and OP)	Turbidity is a measurement of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration process. It may be caused by soil runoff.
		and 95% of monthly samples or more equal to or less than 0.3 NTU	<b>Lowest monthly % equal to or less than 0.3 NTU</b>	100% (W) 100% – 99% (OP)	No (W and OP)	
			100% (W) 99% (OP)			
SUBSTANCE (unit of measure)	MCLG	MCL	Average Level Detected	Range Detected	SDWA Violation	Likely Source of Substance
Fluoride (ppm)	4	4	0.71 (W) 0.89 (OP)	0.04 – 1.11 (W) 0.05 – 1.53 (OP)	No (W and OP)	Erosion of natural deposits; water additive that promotes strong teeth.
SUBSTANCE (unit of measure)	AL	90th Percentile Concentration	95th Percentile Concentration	Number of Samples Exceeding Action Level	SDWA Violation	Likely Source of Substance
Lead* (ppb)	15	< 3	< 3	0	No	Corrosion of household plumbing; erosion of natural deposits.
Copper* (ppb)	1300	< 200	< 200	0	No	Corrosion of household plumbing; erosion of natural deposits.

\* Lead and copper results are from the latest required round of sampling in 2007. The next required round of sampling is scheduled for 2010.

### Volatile Organic Substances

SUBSTANCE (unit of measure)	MCLG	MCL	Highest Level Detected	Range Detected	SDWA Violation	Likely Source of Substance
Total Trihalomethanes (ppb)	n/a	RAA 80 ppb	61(D)†	7.2 – 114 at individual sampling sites	No	By-products of drinking water disinfection.
Haloacetic acids (ppb)	0	RAA 60 ppb	35 (D)†	1.9 – 66.8 at individual sampling sites	No	By-products of drinking water disinfection.

† In the above chart on Volatile Organic Substances, the “Highest Level Detected” represents the Running Annual Average of all sampling sites. The Running Annual Average is the calculation basis for the federal Maximum Contaminant Level for the substances. The “Range Detected” represents the range of detection at individual sampling sites.

### Microbiological Substances

SUBSTANCE (unit of measure)	MCLG	MCL	Highest Level Detected	Range Detected	SDWA Violation	Likely Source of Substance
Coliform Bacteria (% positive)	0	5% of monthly samples total coliform positive	< 1%	0% – < 1%	No	Naturally present in the environment.

### Disinfectants

SUBSTANCE (unit of measure)	MRDLG	MRDL	Average Level Detected	Range Detected	SDWA Violation	Likely Source of Substance
Chlorine (ppm)	4	4	0.65	0.08 – 1.75	No	Water additive used for disinfection.

### Disinfection By-Product Precursors

The percentage of Total Organic Carbon (TOC) removal was routinely monitored in 2007, and our water system met all TOC removal requirements set by USEPA. Total Organic Carbon (TOC) has no health effects. However, Total Organic Carbon provides a medium for the formation of disinfection by-products. By-products include trihalomethanes (THMs) and haloacetic acids (HAAs).

## Unregulated Substances for Which Monitoring is Required

Unregulated contaminants are substances for which the U.S. Environmental Protection Agency has not established Drinking Water Standards. The purpose of unregulated contaminant monitoring is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Maximum Contaminant Level Goals (MCLGs) have not been established for all unregulated contaminants.

SUBSTANCE (unit of measure)	MCLG	MCL	Average Level Detected	Range Detected	Likely Source of Substance
Chloroform** (ppb)	n/a	Not Regulated	30.1 (W) 7.41 (OP)	One Sample Only (W) One Sample Only (OP)	Component of Total Trihalomethanes.
Bromodichloromethane** (ppb)	0	Not Regulated	7.50 (W) 1.07 (OP)	One Sample Only (W) One Sample Only (OP)	Component of Total Trihalomethanes.
Dibromochloromethane** (ppb)	60	Not Regulated	1.70 (W)	One Sample Only (W)	Component of Total Trihalomethanes.

\*\* The U.S. Environmental Protection Agency does not regulate these contaminants individually but does so as a part of the Total Trihalomethane Group, which has a Maximum Contaminant Level (MCL) of 80 parts per billion (ppb).

## Additional Water Quality Information For Calendar Year 2007

(Not Required in Consumer Confidence Report/Annual Water Quality Report)

### Secondary Standards

Physical Parameters	Unit of Measure	SMCL	Average Value	Range of Values
Apparent Color	Color Units	15	0	0
Threshold Odor	TON	3	0	0 – 3
Inorganic Chemicals	Unit of Measure	SMCL	Average Value	Range of Values
Aluminum	ppm	0.05 – 0.2	0.1	0.06 – 0.21
Chloride	ppm	250	4	3 – 5
Iron	ppm	0.3	0.01	0.00 – 0.03
Manganese	ppm	0.05	0.01	0.0 – 0.04
Silver	ppm	0.1	< 0.005	All < 0.005
Sulfate	ppm	250	14	4 – 24
Total Dissolved Solids	ppm	500	39	31 – 57
Zinc	ppm	5	< 0.5	All < 0.5
Hydronium (pH)	SU	6.5 – 8.5	7.9	7.1 – 8.6

### Unregulated Physical & Chemical Parameters

Parameter	Unit of Measure	Average Value	Range of Values
Alkalinity (Phenolphthalein)	ppm	0	All 0
Alkalinity (Total)	ppm	10	7 – 16
Calcium	ppm	6.3	4.8 – 8.3
Conductivity	umho/cm	72	52 – 104
Hardness	grains/gallon	1.5	1.0 – 2.3
Magnesium	ppm	1.2	0.9 – 1.4
Phosphate (Total)	ppm	0.39	0.29 – 0.53
Potassium	ppm	0.8	0.7 – 2.0
Silica	ppm	1.0	0.7 – 1.2
Sodium	ppm	1.9	1.4 – 2.3
Sediment	ppm	< 0.5	< 0.5
Temperature	° F	68°	45° – 90°

### Definitions:

**Grain** — Measurement of mass. One gram is equal to 15.4 Grains. One Grain per gallon equals 17 parts per million.

**Secondary Maximum Contaminant Level (SMCL)** — Aesthetic standard recommended; not required.

**Standard pH Unit (SU)** — Measurement of acidity or alkalinity of water.

**Threshold Odor Number (TON)** — Measurement designed to effectively measure odor, regardless of origin.

**umho/cm** — Micromhos per centimeter.

# 2007 ANNUAL WATER QUALITY REPORT

Central Arkansas Water  
221 East Capitol Avenue  
P.O. Box 1789  
Little Rock, AR 72203

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Your 2007 Water Quality Report is Central Arkansas Water's statement of accountability to you. As your drinking water supplier, we must provide you with information about the quality and sources of your drinking water. We hope that you will take a few minutes to review this year's report. We encourage you to contact us at 501.210.4914 or 501.377.1229,

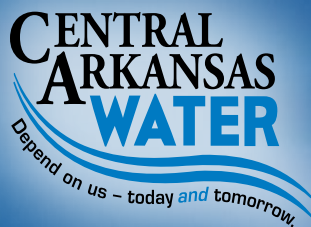
if you have comments or questions. You also may E-mail us at [customerservice@carkw.com](mailto:customerservice@carkw.com).

Graham W. Rich, P.E.  
Chief Executive Officer

### Importante:

Se establece que para el año 2007, la calidad de agua, provista en relacion a los trabajos efectuados por Central Arkansas Water (Agua de Arkansas Central), es apta para el consumo y se encuentra dentro de los parametros establecidos por las regulaciones tanto del gobierno federal como del gobierno estatal. El presente documento contiene informacion importante sobre el agua para consumo y sobre el suministro publico del agua. Si usted no habla ingles, sirvase contactar a una persona que pueda traducirle esta informacion.

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# 2007 WATER QUALITY REPORT

PROUDLY PROVIDING 34 YEARS OF SAFE DRINKING WATER TO CENTRAL ARKANSAS

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## Chief Executive Officer

Graham W. Rich, P.E.

## For additional information about this report, please, write or call us:

Central Arkansas Water  
221 East Capitol Avenue  
P.O. Box 1789  
Little Rock, AR 72203

U.S. Environmental Protection Agency  
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1.800.426.4791

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*Central Arkansas Water's 2007 Annual Water Quality Report is applicable only to homes, businesses, and industries served by our public drinking water system.*

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