



CENTRAL ARKANSAS WATER Water Quality Report 2009

PROUDLY PROVIDING 36 YEARS OF SAFE DRINKING WATER TO CENTRAL ARKANSAS

QUALITY ASSURANCE AND YOUR DRINKING WATER

Safe, reliable, and affordable drinking water is essential to economic development, community sustainability, environmental preservation, and life. It also is Central Arkansas Water's priority in serving our 398,000 consumers.

Central Arkansas Water recognizes the importance of clean water to quality of life and public health. As your water service provider, we are pleased to present this 2009 Water Quality Report and announce that for the regulatory compliance period of January 1 through December 31, 2009, the quality of your drinking water excelled above federal and state standards for health and safety.

For the 36th straight year in a row, your water supplier has had **ZERO violations** of the federal Safe Drinking Water Act and Arkansas' Rules and Regulations Pertaining to Public Water Systems.

WHAT'S IN YOUR 2009 WATER QUALITY REPORT?

- important information about the sources and quality of your drinking water
- results of tests that CAW and regulatory agencies conducted to make sure your drinking water is safe for consumption
- information on the steps that Central Arkansas Water is taking to protect your drinking water and your public health now and in the future

**CENTRAL
ARKANSAS
WATER**
Depend on us - today *and* tomorrow.
ESSENTIAL & EXCEPTIONAL



CENTRAL ARKANSAS WATER **Water Quality Report 2009**

Central Arkansas Water is the primary drinking water supplier for a growing metropolitan area of 16 cities and communities.

Our mission is to enhance the quality of life for Central Arkansas by delivering high-quality water and dependable service that exceed customer expectations; protecting and ensuring a long-term water supply for future generations; and serving as responsible stewards of public health, utility resources, and the environment.

You are receiving your 2009 Water Quality Report in accordance with the Consumer Confidence Rule of the federal Safe Drinking Water Act (SDWA). This law of standards for public drinking water suppliers in the United States requires the protection of your drinking water sources, Lake Maumelle and Lake Winona, and the monitoring and treatment of your drinking water to safeguard public health.

The Consumer Confidence Rule of the SDWA specifically mandates that you receive by July 1 of each year an annual report on your drinking water. The report must contain information on the quality of your drinking water, the sources of your drinking water, and our compliance with federal and state drinking water standards.

The initial enactment of the SDWA was in 1974 by the U.S. Congress. Since that time, Congress has amended the law to provide for increasingly stricter drinking water standards. The current regulations require that public water suppliers, such as CAW, test for 88 potential contaminants and limit the level of concentration at which substances may be in the finished drinking water.

CAW's program of source and treatment, watershed management,

engineering, and distribution is more comprehensive than state and federal regulations. In addition to the federal requirements, we test for an additional two dozen other potential contaminants, such as pharmaceuticals and other emerging contaminants.

Since the enactment of the federal law in 1974, we have had **ZERO violations** of the SDWA — that's **36 straight years**.

During the 12-month compliance period of 2009, our laboratory and operations personnel conducted more than 164,000 tests — an average of almost 450 tests a day, 365 days a year — on the various stages of the water production, treatment, and delivery process. Coupled with our 24-hour monitoring of treatment and delivery and additional testing by the Arkansas Department of Health, the quality assurance measures translate into quality and reliability at the tap for you.

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.

WATER UTILITY MASTER PLAN

CAW completed a 50-year Water Utility Master Plan in 2009. A key component of this long-range plan was the identification of water treatment process changes that will be necessary in order to meet increasingly stringent future federal water quality regulations, particularly the Stage 2 Disinfectants/Disinfection By-products Rule of the federal Safe Drinking Water Act.

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.

Central Arkansas Water's 2009 Annual Water Quality Report is applicable only to homes, businesses, and industries served by our public drinking water system.



LAKE MAUMELLE WATERSHED MANAGEMENT

In 2009, the Central Arkansas community achieved several milestones in watershed management. Pulaski County became the first county in the state of Arkansas to adopt land subdivision and planning rules and regulations specific to the protection of drinking water supplies.

The county's ordinances were key provisions of our Lake Maumelle Watershed Management Plan, which is a comprehensive strategy that addresses and seeks to safeguard against all potential pollution sources in the watershed of the lake. A primary focus of the plan is to ensure that as land development occurs through time in the lake's watershed, it will take place in a manner that maintains the high quality of water we have in Lake Maumelle and will protect our drinking water.

Through the new subdivision ordinance, the county will prohibit the surface discharge of wastewater in the lake's watershed that lies within Pulaski County. Furthermore, the county will regulate land development with best management practices.

In 2009, the Arkansas General Assembly also appropriated \$4 million toward acquisition of the 915-acre Winrock Grass Farm in the Lake Maumelle Watershed. At year's end, ownership of the land had transferred from private to public/non-profit ownership through a lease-purchase agreement between The Trust for Public Land and CAW.

The sod farm fronts the main tributary to Lake Maumelle. If development of the property were to occur, it potentially could have a significant impact on the

quality of water in the lake. With existing land holdings, this acquisition further provides for enhanced protection of the drinking water supply source.

During the year, CAW also expanded the extensive water quality monitoring program that we have in place for our two water supplies, Lake Maumelle and Lake Winona. The 2009 budget for water quality monitoring was \$424,150 and included cost-share efforts with the U.S. Geological Survey.

Notably, in 2009, we broadened monitoring for Lake Maumelle to better assess existing water quality and the impact of current land uses. Sampling for pharmaceuticals and other emerging contaminants has revealed no detectable levels of such contaminants in the lake.

The purpose of our emphasis on water quality protection at the source is simple yet highly significant. The quality of raw-water in our lake sources determine the level of treatment necessary to comply with federal and state standards for health and safety, the end-cost that consumers pay for water service, and the quality of drinking water that ultimately flows from the customer's tap.

For consumers, CAW's Watershed Management Program reflects our commitment to ensuring a quality, abundant, and affordable water supply now and in the future.

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).



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 linked to animal and human wastes. 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 181 samples collected over the past 15 years, there have been only 2 detections of *Cryptosporidium* in the untreated surface sources. Quarterly monitoring for *Cryptosporidium* in the untreated source water and the treated water supply to customers began in 1994.

From July 1997 through December 1998, we performed additional monthly monitoring of the source water as part of USEPA's Information Collection Rule (ICR). As part of the ICR Supplemental Survey, twice-monthly monitoring of the Lake Maumelle

source water began in March 1999. Beginning in January 2004 and continuing through March 2006, CAW 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>.

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. The building location is 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 in this document indicate the substances that Central Arkansas Water detected in treated water. The charts contain testing results for 2009. 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. This is an unenforceable public health goal.

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 turbidity (clarity) of water.

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.

Mission Statement: To enhance the quality of life for Central Arkansas by delivering high-quality water and dependable service that exceed customer expectations; protecting and ensuring a long-term water supply for future generations; and serving as responsible stewards of public health, utility resources, and the environment.



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	0.24 (W) 0.35 (OP)	0.04 – 0.24 (W) 0.04 – 0.35 (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	Lowest monthly % equal to or less than 0.3 NTU	100% (W) 98.3% – 100% (OP)	No (W and OP)	
			100% (W) 98.3% (OP)			
SUBSTANCE (unit of measure)	MCLG	MCL	Average Level Detected	Range Detected	SDWA Violation	Likely Source of Substance
Fluoride (ppm)	4	4	0.89 (W) 0.88 (OP)	0.07 – 1.18 (W) 0.08 – 1.58 (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 on-schedule 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	64.4(D)†	23.7 – 107.0 at individual sampling sites	No	By-products of drinking water disinfection.
Haloacetic acids (ppb)	0	RAA 60 ppb	31.0 (D)†	10.0 – 44.5 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	0.9%	0% – 0.9%	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	0.55	0.06 – 1.23	No	Water additive used for disinfection.

Disinfection By-Product Precursors

The percentage of Total Organic Carbon (TOC) removal was routinely monitored in 2009, and our water system met all TOC removal requirements set by the U.S. Environmental Protection Agency (USEPA). Total Organic Carbon has no health effects. However, Total Organic Carbon provides a medium for the formation of disinfection by-products. The 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 (USEPA) 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	31.4 (W) 21.7 (OP)	One Sample Only (W) One Sample Only (OP)	Component of Total Trihalomethanes.
Bromodichloromethane** (ppb)	0	Not Regulated	5.53 (W) 2.69 (OP)	One Sample Only (W) One Sample Only (OP)	Component of Total Trihalomethanes.
Dibromochloromethane** (ppb)	60	Not Regulated	0.57 (W)	One Sample Only (W)	Component of Total Trihalomethanes.

** The U.S. Environmental Protection Agency does not regulate the above 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 2009

(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	All 0
Threshold Odor	TON	3	0	All 0
Inorganic Chemicals	Unit of Measure	SMCL	Average Value	Range of Values
Aluminum	ppm	0.05 – 0.2	0.09	< 0.04 – 0.15
Chloride	ppm	250	4	3 – 5
Iron	ppm	0.3	0.007	0.003 – 0.018
Manganese	ppm	0.05	0.01	0.01 – 0.07
Silver	ppm	0.1	< 0.001	< 0.001 – 0.0014
Sulfate	ppm	250	18	11 – 29
Total Dissolved Solids	ppm	500	35	25 – 56
Zinc	ppm	5	< 0.5	All < 0.5
Hydronium (pH)	SU	6.5 – 8.5	7.8	7.2 – 8.3

UNREGULATED PHYSICAL & CHEMICAL PARAMETERS

Parameter	Unit of Measure	Average Value	Range of Values
Alkalinity (Phenolphthalein)	ppm	0	All 0
Alkalinity (Total)	ppm	9.5	7 – 16
Calcium	ppm	7.5	6.2 – 13.4
Conductivity	µmho/cm	62	51 – 82
Hardness	grains/gallon	1.5	0.8 – 2.3
Magnesium	ppm	1.01	0.78 – 1.30
Phosphate (Total)	ppm	0.59	0.24 – 0.70
Potassium	ppm	0.59	0.40 – 0.86
Silica	ppm	0.89	0.82 – 1.05
Sodium	ppm	1.65	1.3 – 2.1
Sediment	ppm	< 0.5	All < 0.5
Temperature	°F	67.1°	46.4° – 93.2°

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.

µmho/cm — Micromhos per centimeter.



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

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2009 ANNUAL WATER QUALITY REPORT

COMPLIANCE PERIOD *January 1, 2009, through December 31, 2009*



Central Arkansas Water presents this 2009 Water Quality Report as our statement of accountability to you. We have the responsibility of ensuring that your drinking water quality is in compliance with federal and state standards for health and safety. In 2009, as in years prior, we were successful in meeting this charge. This report contains important information about the quality and sources of your drinking water. We hope that you will take a few minutes to review the report and contact us at 501.210.4914 or 501.377.1229, if you have questions or comments. We appreciate you as our customer.

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

IMPORTANTE: Se establece que para el año 2009, 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. En Julio este infome seria disponible en Espanol en nuestro Centro del Servicio al Cliente, 221 East Capitol Avenue en Little Rock.



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Graham W. Rich, P.E.

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

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