

Lake Casitas has no industrial water runoff and limited urban runoff as few residents still live in the immediate watershed. There is no oil or gas production in our watershed and one rock quarry mine is located in the indirect watershed upstream of the Robles Diversion Canal. Radiological monitoring results for CMWD sources are below the reporting detection limit. CMWD continues to monitor Lake Casitas source water for Cryptosporidium, which was not detected in 2022.

Chloramine Disinfection

All public drinking water must be disinfected to prevent water-borne diseases. Casitas disinfects the water by adding chlorine and a small amount of ammonia to the water to form chloramines. Chloramine disinfection is approved by the SWRCB Division of Drinking Water and the USEPA. Many United States and Canadian cities have used chloramines for decades to disinfect water. Chloramines reduce the level of unwanted disinfection by-products in our water. Disinfection by-products are formed when chlorine mixes with naturally occurring organic material in water. Currently, regulated disinfection by-products include trihalomethanes and haloacetic acids. Chloramines limit the continued formation of these by-products, and chloraminated water has less of a chlorine taste and odor than chlorinated water.

Chloramines do not pose a health hazard to the general population. Chloraminated water is safe for drinking, bathing, cooking and other normal uses. Two specific groups of people, however, do need to take special care with chloraminated water - kidney dialysis patients and tropical fish hobbyists. Chloramines are toxic to fish and animals that use gills to breathe and must be removed from water used for fish; contact your local pet store for assistance in chloramine removal.

Chloramines will not affect the chlorine balance in your backyard swimming pool. You still need to add chlorine to retard algae and bacterial growth. Chloramines have no effect on plants, vegetables or fruit trees. For more information on chloramines visit: <https://www.epa.gov/dwreginfo/chloramines-drinking-water>

Dialysis Patients Have Special Needs

Kidney patients are not harmed from drinking, cooking or bathing in chloraminated water. However, there is a problem that needs to be addressed for individuals who are undergoing dialysis treatment on artificial kidney machines. Chloramines must not be present in the water used in dialysis machines. Chloramines can be removed through a filtration system. We have worked with the SWRCB Division of Drinking Water to ensure that everyone involved with treatment of dialysis patients is alerted to the facts about chloraminated water.

Fluoride

Casitas does not add fluoride, but there is some naturally-occurring fluoride in the water. This level was tested at an average of 0.4 mg/L for all sources during 2022. For more information on fluoride, check the SWRCB Division of Drinking Water's Fluoridation website for more information on fluoridation, oral health, and current issues: http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml

Lead and Copper

The latest results from Casitas' lead and copper testing were below the action levels. 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. CMWD is responsible for providing high quality drinking water, but cannot control the variety of materials used in private 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 or at <http://www.epa.gov/safewater/lead>. Elevated levels of copper can occur when corrosive water causes leaching of copper plumbing. To prevent leaching, Casitas implemented a corrosion-control plan and adds a small amount of phosphate to the water to lower the corrosivity and reduce copper levels. Additionally, as part of the school lead testing program, four schools in the CMWD service area were tested for lead in 2017, and the schools were provided with the testing results.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders. Some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

February 2022 Monitoring Violation

CMWD is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the month of February, 2022; CMWD did not complete all monitoring requirements for total coliforms. A minimum of ten samples are required to be collected and analyzed for total coliforms each month, and during the month of February 2022, CMWD collected and analyzed nine routine samples.

CMWD collected 15 samples in the 30 day period from January 31, 2022 through March 01, 2022. There was no indication of potential adverse health risk as all routine weekly samples collected during this time were non-detect for total coliform bacteria. CMWD regularly collects 12-15 routine samples for each 30 day period and will ensure at least ten are collected each month. For more information regarding this notice, please contact Jordan Switzer at 805-649-2251 Ext. 120.

2023 Unregulated Contaminant Monitoring

Casitas MWD is currently conducting monitoring under the Fifth Unregulated Contaminant Monitoring Rule (UCMR 5). Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. A summary of monitoring results for unregulated contaminants detected in 2023 will be provided in next year's Annual Water Quality Report. If you are interested in these results before they are distributed, please contact Jordan Switzer at 805-649-2251 Ext. 120.



Annual Drinking Water Quality Report

Casitas Municipal Water District System
ID # CA5610024, 2022 Data

High Water Quality Standards

Casitas MWD strives to meet all USEPA and State drinking water health standards. To ensure that you receive the highest quality drinking water, we test beyond what state and federal regulations mandate. This report shows the results of our monitoring for the period of January 1 through December 31, 2022 which is the most recent testing period required.

Este informe contiene informacion muy importante sobre su agua beber. Traduzcalo o hable con alguien que lo entienda bien. Para la informacion llame por favor 805-649-2251.

How to Get Involved

Board meetings are held on the second and fourth Wednesdays of each month at the Casitas MWD main office, 1055 Ventura Ave, Oak View, CA 93022. The public open session begins at 5:00 PM. Please refer to meeting agendas for current information on how to participate: www.casitaswater.org/about-us/board-of-directors. For additional details on the subjects outlined here, important updates and notices, and for more information about Casitas Municipal Water District, visit us at our web site: www.casitaswater.org, or call Jordan Switzer, Water Quality Supervisor, at 805-649-2251 Ext. 120.

Ensuring Tap Water Is Safe to Drink

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (SWRCB) Division of Drinking Water prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration Regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791). Additional information on bottled water is available on California Department of Public Health's website at <https://www.cdph.ca.gov/Programs/CEH/DFDCS/Pages/FDBPrograms/FoodSafetyProgram/Water.aspx>

Do You Know the Source of Your Water?

The Casitas Municipal Water District is supplied by a blend of groundwater and surface water that is treated before it is distributed to the public. The surface water comes from Lake Casitas, located near the junction of Highway 150 and Santa Ana Road. Lake Casitas receives runoff from its direct watershed, including Santa Ana Creek and Coyote Creek. Water is also diverted from the upper Ventura River via the Robles Diversion Canal.

The ground water is drawn from the Mira Monte Well, located in Mira Monte. Most of the watershed is federally

protected to limit contamination of the lake. For additional protection, the watershed is inspected on a regular basis.

The 2021 Watershed Sanitary Survey Update concluded the Lake Casitas Watershed, while protected, is most vulnerable to the following: Wildfire & erosion, sediment transport, unauthorized activities (e.g. illegal dumping & marijuana cultivation), and hazardous spills from boating or traffic accidents. There have not been any associated contaminants detected in exceedance of USEPA or State standards in the water supply, however, the lake is still vulnerable to activities located near this major source of our drinking water. Additional potential sources of contaminants include private sewage disposal systems, livestock and wildlife grazing, limited pesticide and herbicide use, recreational activities and natural gas pipelines.

The 2002 Drinking Water Source Assessment for the Mira Monte Well concluded the well is considered to be most vulnerable to the use of fertilizers and animal grazing, which raise nitrate levels in the water. In addition, the Mira Monte Well may be vulnerable to activities associated with an urban environment. However, these activities have not resulted in contamination of the well. The 2021 Watershed Sanitary Survey Update and 2002 Drinking Water Source Assessment for the Mira Monte Well are available upon request by contacting Jordan Switzer at 805-649-2251 Ext. 120.

Influences on Your Water Quality

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 human activity.

Contaminants that may be present in source water include:

- 1). Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- 2). Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff; industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- 3). Pesticides and herbicides that may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- 4). Organic chemical contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, which can also come from gas stations, urban storm water runoff, agricultural applications and septic systems.
- 5). Radioactive contaminants that can be naturally-occurring or be the result of oil and gas production and mining activities.

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Casitas Municipal Water District, PWS CA5610024 - Water Quality Summary, 2022 Data

WATER CLARITY	MCL or [MRDL]	PHG, (MCLG)	LAKE CASITAS TREATED WATER				SAMPLE SOURCE & YEAR TESTED		SOURCE OF CONSTITUENT
			FILTER EFFLUENT	RANGE		Filter Effluent			
Direct Filtration	Treatment technique (TT)		Filter Effluent	RANGE		Filter Effluent			
Filter Effluent Turbidity ^a (NTU)	TT < 1	NA	0.07	0.01-0.07		2022		Soil runoff	
	95% < 0.2	NA	100% of turbidity measurements were < 0.2 NTU				2022		
			100% = lowest monthly % of samples meeting turbidity limits				2022		
MICROBIOLOGICAL	MCL or (TT)	(MCLG)	DISTRIBUTION SYSTEM		DISTRIBUTION SYSTEM				
Total Coliform Bacteria ^b	(More than 1 positive per month) ^b	(0)	HIGHEST POSITIVE SAMPLES		NUMBER OF MONTHS IN VIOLATION		Distribution System		
E. Coli ^c	Revised Total Coliform Rule: E. coli MCL ^c	(0)	1 / Month		0		2022		
			0 / Year		0		2022		
INORGANIC CHEMICALS	MCL	PHG	LAKE CASITAS TREATED WATER		MIRA MONTE WELL TREATED ^d		Lake Casitas	Mira Monte Well	
			AVERAGE	RANGE	AVERAGE	RANGE	Treated	Treated	
Barium (ppm)	1	2	0.11	NA	0.11	NA	2022	2022	
Fluoride (ppm)	2	1	0.4	NA	0.4	NA	2022	2022	
Nitrate as N (ppm)	10	10	ND	NA	0.7 ^d	0.5 - 0.8 ^d	2022	2022	
DISINFECTANT RESIDUALS AND DISINFECTION BY-PRODUCTS	RUNNING ANNUAL AVERAGE (RAA) MCL OR [MRDL]	PHG or [MRDLG]	DISTRIBUTION SYSTEM				DISTRIBUTION SYSTEM		
			HIGHEST [RAA]/LOCAL RAA		INDIVIDUAL SAMPLE RANGE		Distribution System		
Chloramines as Cl ₂ (ppm)	[4.0]	[4.0]	[2.7] ^g		0.2 - 3.9		2022		
Trihalomethanes (ppb)	80	NA	52 ^g		38-68		2022		
Haloacetic acids (ppb)	60	NA	38 ^g		9-45		2022		
LEAD AND COPPER	Regulatory Action Level (RAL)	PHG	# of samples collected	Homes above RAL	Level detected at 90th percentile		Individual Taps ^e		
Lead (ppb) ^f	15	0.2	30	0	ND		2020		
Copper (ppm) ^f	1.3	0.3	30	0	1.0		2020		
Lead School (ppb)	15	0.2	Number of schools requesting lead sampling = 4; Sample locations = 19; Locations above RAL = 0				2017		

Secondary Aesthetic Standards

CONSTITUENTS	State MCL	PHG	LAKE CASITAS TREATED		MIRA MONTE WELL TREATED ^d		Year Tested		SOURCE OF CONSTITUENT
			AVERAGE	RANGE	AVERAGE	RANGE	Lake Treated	Mira Monte Well	
Apparent Color (color units)	15	NA	ND	NA	5	NA	2022	2022	Naturally-occurring organic materials
Total Dissolved Solids (ppm)	1000	NA	470	NA	450	NA	2022	2022	Run-off/leaching from natural deposits
Specific Conductance (uS/cm)	1600	NA	706	NA	725	NA	2022	2022	Substances that form ions in water; seawater influence
Chloride (ppm)	500	NA	23	NA	26	NA	2022	2022	Run-off/leaching from natural deposits; seawater influence
Sulfate (ppm)	500	NA	199	NA	189	NA	2022	2022	Run-off/leaching from natural deposits; industrial wastes

Additional Constituents

ADDITIONAL CONSTITUENTS	SECONDARY MCL	PHG (NL)	LAKE CASITAS TREATED		MIRA MONTE WELL TREATED ^d		Year Tested		SOURCE OF CONSTITUENT
			AVERAGE	RANGE	AVERAGE	RANGE	Lake Treated	Mira Monte Well	
Alkalinity - Total as CaCO ₃ (ppm)	NA	NA	140	NA	150	NA	2022	2022	A measure of the capacity to neutralize acid
Boron (ppb)	NA	(1000)	200	NA	200	NA	2022	2022	A naturally-occurring element
Calcium (ppm)	NA	NA	69	NA	68	NA	2022	2022	A naturally-occurring element
Corrosivity (Langlier Index) ^f	Noncorrosive (US EPA)	NA	0.10	NA	0.05	NA	2022	2022	Indicator of corrosivity. Water with a positive Langlier Index can be considered as non-corrosive
Hardness - Total as CaCO ₃ (ppm)	NA	NA	291 (17.0 gpg)	NA	285 (16.6 gpg)	NA	2022	2022	"Hardness" is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring.
Magnesium (ppm)	NA	NA	29	NA	28	NA	2022	2022	A naturally-occurring element
pH (pH standard units)	6.5-8.5 (US EPA)	NA	7.6	NA	7.5	NA	2022	2022	A measure of acidity or alkalinity
Potassium (ppm)	NA	NA	4	NA	4	NA	2022	2022	A naturally-occurring element
Sodium (ppm)	NA	NA	35	NA	34	NA	2022	2022	"Sodium" refers to the salt present in the water and is generally naturally occurring.
Vanadium (ppm)	NA	(50)	3	NA	3	NA	2022	2022	A naturally-occurring element

TERMS USED IN THIS REPORT:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

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 are set by the U.S. Environmental Protection Agency (US EPA).

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 control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (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.

Running Annual Average (RAA): Some MCLs are determined based on the running annual average which is calculated by averaging all sample results within the previous four quarters. Locational running annual average includes results averaged over the previous four quarters for a specific sample site.

Notification Level (NL): Health based advisory levels established by the State Board for chemicals in drinking water that lack MCLs.

Primary Drinking Water Standards (PDWS): MCLs, MRDLs and treatment techniques (TT) for contaminants that affect health, along with their monitoring and reporting requirements.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Regulatory Action Level (RAL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

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

Key To Table (ACRONYMS)

MMW = Mira Monte Well
 NA = Not Applicable or Available
 ND = None Detected at or above the limits of detection for reporting purposes
 NL = Notification Level
 NS = No Sample
 NTU = Nephelometric Turbidity Units (a measure of turbidity)
 ppm = Parts per million, or milligrams per liter (mg/L)
 ppb = Parts per billion, or micrograms per liter (ug/L)
 RAA = Running Annual Average
 uS/cm = Micro Siemens per Centimeter (a measure of specific conductance)
 gpg = Grains per gallon, an alternative unit used to measure hardness
 US EPA = United States Environmental Protection Agency

Water Quality Table Footnotes:

- Turbidity is a measure of the cloudiness of water and is a good measure of water quality and filtration performance; 100% of the samples tested for turbidity were below the required TT level of 0.2 NTU and 100% is the lowest monthly percentage of samples meeting the turbidity limits.
- For systems collecting fewer than 40 samples per month: Two or more total-coliform positive monthly samples is a treatment technique trigger. During 2022 Casitas collected 159 routine and repeat distribution system samples for total coliform bacteria testing under the Revised Total Coliform Rule. Total coliform bacteria was detected in one routine sample, all repeat samples were absent for total coliform.
- Based on the Revised Total Coliform Rule, an E-Coli MCL violation occurs when 1) a routine and associated repeat sample(s) are total coliform-positive and either is E. coli-positive, 2) the system fails to take repeat samples following an E. coli-positive routine sample, or 3) the system fails to analyze a total coliform-positive repeat sample for E. coli. Casitas did not have any E. coli MCL violations during 2022.
- Mira Monte Well water receives blending treatment with lake Casitas Treated water and when operated, blended water is sampled weekly for nitrates with the resulting nitrate level averaging 0.7 ppm as nitrogen in 2022. All other sample results are from samples collected of the blended water.
- The State monitoring requirements for some contaminants is less than once per year because the concentrations of these contaminants do not change frequently. These data are from the most recent sampling, and although representative, are more than one year old.
- Casitas has implemented a corrosion control plan by adding a small amount of phosphate to the water to lower corrosivity and reduce copper levels.
- Highest running annual average and locational running annual averages are used to calculate the MCL / MRDL and include sample results from a previous reporting period, whereas range only includes individual sample results from 2022.