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.

Lake Casitas has no urban or industrial water runoff and very few residents still live in the immediate watershed. There is no oil, gas or mining production above the lake, or in our watershed.

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 US Environmental Protection Agency. 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 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.

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.

Chloramines and Your Aquarium or Fishpond

Chloramines are toxic to fish and other animals that use gills to breath. While chlorine will evaporate rather quickly from standing water, it may take weeks for chloramines to disappear. Thus it is necessary to dechlorinate water used for aquariums and fishponds. We suggest using a filter system or a dechlorinating agent sold at most pet stores for fresh and saltwater aquariums and fishponds. Another option is to install a high-quality granular activated carbon (GAC) filter in your home. The chloramine residual in water used for fish should be kept below 0.1 parts per million. Contact your local pet store or fish shop for additional assistance.

Chloramines Are Safe for Plants and Swimming Pools

Chloramines will not affect the chlorine balance in your backyard swimming pool. You still need to add chlorine to eliminate algae and bacterial growth. Chloramines have no effect on plants, vegetables or fruit trees. For more information on chloramines call 805-649-2251 Ext. 120.

Fluoride

Casitas does not add fluoride, but there is some naturally-occurring fluoride in the water. This level was tested at 0.4 mg/L in the lake source and 0.5 mg/L in Mira Monte Well during 2019. 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.shtmlcertlic/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. Casitas 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, CMWD sampled four schools in our service area in 2017, and provided them with testing results.

Additional Bacteriological Sampling

In addition to weekly compliance sampling and analysis for microbial contamination, Casitas MWD samples for potential bacteriological contamination following water service interruptions and main repairs, as well as supplemental sample sites within the distribution system and background monitoring of source water.

Disinfection Byproducts

Casitas MWD did not exceed the maximum contaminant level (MCL) for disinfection byproducts in 2019. However, Casitas MWD has been monitoring an increasing trend of Haloacetic Acids, a class of disinfection byproducts, specifically after the 2017 Thomas Fire and subsequent rainfall and run-off. Some people who drink water containing Haloacetic Acids in excess of the MCL over many years may have an increased risk of cancer. Casitas MWD is currently researching potential treatment options to reduce the formation of disinfection byproducts.

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).

CASITAS Municipal Water District

Annual Drinking Water Quality Report

Casitas Municipal Water District System ID # CA5610024, 2019 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, 2019 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.

Board meetings are held on the second and fourth Wednesdays of each month at 3:00 p.m. at the district office: 1055 Ventura Avenue, Oak View, CA, 93022. Due to COVID-19 restrictions, meetings may be held via teleconference and are broadcast live via the internet. Please refer to meeting agendas for current information on how to participate: www.casitaswater.org/about-us/board-of-directors, click 'Board Meetings' for a list of broadcast meetings. 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 ground water 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 run-off 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, we inspect the watershed on a regular basis.

For more information, or to request a copy of the 2016 Watershed Sanitary Survey update, please contact Jordan Switzer at 805-649-2251 Ext. 120.

Lake Casitas is considered to be most vulnerable to the following activities not associated with any detected contaminants: boat services (repair and refinishing), petroleum pipelines and recreation. There have been no contaminants detected in the water supply. However, the lake is still vulnerable to activities located near this major source of our drinking water. The potential sources of contaminants include private sewage disposal systems; livestock and wildlife grazing; limited pesticide and herbicide use; activities in the surrounding recreation area; unauthorized dumping; limited growth of new homes or urban areas; traffic accidents; and spills. During 2019, results from sampling of the CMWD raw treatment plant influent were non-detect for giardia and cryptosporidium.

A copy of the 2002 Drinking Water Source Assessment for the Mira Monte Well is also available upon request by contacting Jordan Switzer at (805) 649-2251 Ext. 120. This 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.

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

Continued on page 4 ➢

Casitas MWD Water Quality Summary, 2019 Data, ID CA5610024

TURBIDITY	MCL or [MRDL]	PHG, [MCLG] [MRDLG]	LAKE CASITAS TREATED WATER AVERAGE	LAKE CASITAS TREATED WATER RANGE	Year Tested Lake or Distribution System	Year Tested Mira Monte Well	Source of Contamination
	Treatment technique (TT)						
Filter Effluent Turbidity (NTU)[a]	1 NTU	NA	highest value = 0.16	0.01-0.16	2019	NA	Soil runoff
	95% < 0.2 NTU		100% of turbidity measurements were < 0.2 NTU		2019	NA	
			100% = lowest monthly % of samples meeting turbidity limits		2019		
			DISTRIBUTION SYSTEM				
MICROBIOLOGICAL			HIGHEST POSITIVE SAMPLES/MONTH	RANGE			
Total Coliform Bacteria[b]	> 1 positive sample/month	(0)	1	0-1	2019	NA	Naturally present in the environment
E. Coli Bacteria[b]	> 1 positive sample/month	(0)	1	0-1	2019	NA	Human and animal fecal waste

INORGANIC CHEMICALS			LAKE CASITAS TREATED WATER AVERAGE	LAKE CASITAS TREATED WATER RANGE	MIRA MONTE WELL TREATED AVERAGE	MIRA MONTE WELL TREATED RANGE	Year Tested Lake or Distribution System	Year Tested Mira Monte Well	Source of Contamination
Barium (ppm)	1	2	0.13	NA	0.13[f]	0.10-0.13	2019	2019	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride (ppm)	2.0	1	0.4	NA	0.4[f]	0.4-0.5	2019	2019	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate as N (ppm)	10	10	ND	NA	1.2[c]	0.6-1.7[c]	2019	2019	Runoff and leaching from fertilizer use; leaching from tanks and sewerage; erosion from natural products

DISINFECTION BY-PRODUCTS AND DISINFECTANT RESIDUALS	RUNNING ANNUAL AVERAGE (RAA)		DISTRIBUTION SYSTEM HIGHEST [RAA]/LOCATIONAL RAA	DISTRIBUTION SYSTEM RANGE	Year Tested Lake or Distribution System	Year Tested Mira Monte Well	Source of Contamination
Chloramines (ppm)	**[4.0]**	**[4.0]**	[2.3]	0.1-3.1	2019	NA	Drinking water disinfectant added for treatment
Trihalomethanes (ppb)	80	NA	60.8	44-77	2019	NA	By-product of drinking water disinfection
Haloacetic acids (ppb)	60	NA	56.8	10-71	2019	NA	By-product of drinking water disinfection

INDIVIDUAL TAP MONITORING FOR LEAD AND COPPER

	Regulatory Action Level (RAL)	PHG	# of samples collected	Homes above RAL	Level detected at 90th percentil	Year Tested[d]		
Lead (ppb)[e]	15	0.2	20	0	ND	2017	NA	Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural products
Copper (ppm)[e]	1.3	0.3	20	1	1.0	2017	NA	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead School			Number of schools requesting lead sampling = 4			2017	NA	Internal corrosion of end-user plumbing systems; discharges from industrial manufacturers; erosion of natural products

Secondary Aesthetic Standards

CONSTITUENTS	State MCL	PHG/NL	LAKE CASITAS TREATED WATER AVERAGE	LAKE CASITAS TREATED WATER RANGE	MIRA MONTE WELL AVERAGE	MIRA MONTE WELL RANGE	DISTRIBUTION SYSTEM AVERAGE	DISTRIBUTION SYSTEM RANGE	Year Tested Lake	Year Tested Well	Source of Contamination
Turbidity(NTU)	5	NA	0.2	NA	0.2	0.1-0.5[f]	0.3[f]	0.1-0.8[f]	2019	2019	Soil run-off
Total Dissolved Solids (ppm)	1000	NA	420	NA	390	NA	NA	NA	2019	2019	Run-off/leaching from natural deposits
Specific Conductance (uS/cm)	1600	NA	679	NA	683	675-731[f]	650[f]	540-730[f]	2019	2019	Substances that form ions in water; seawater influence
Chloride (ppm)	500	NA	24	NA	63	NA	NA	NA	2019	2019	Run-off/leaching from natural deposits; seawater influence
Sulfate (ppm)	500	NA	161	NA	39	NA	NA	NA	2019	2019	Run-off/leaching from natural deposits; industrial wastes

ADDITIONAL CONSTITUENTS

ADDITIONAL CONSTITUENTS (UNREGULATED)		PHG/NL	LAKE CASITAS TREATED WATER AVERAGE	LAKE CASITAS TREATED WATER RANGE	MIRA MONTE WELL AVERAGE	MIRA MONTE WELL RANGE	DISTRIBUTION SYSTEM AVERAGE	DISTRIBUTION SYSTEM RANGE	Year Tested Lake	Year Tested Well	
Alkalinity (Total as CaCO3 ppm)	NA	NA	140	NA	160	NA	159[f]	157-164[f]	2019	2019	A measure of the capacity to neutralize acid
pH (units)	6.5-8.5 US EPA	NA	7.6	NA	7.3	7.1-7.3[f]	7.5[f]	7.3-8.0[f]	2019	2019	A measure of acidity or alkalinity
Bicarbonate Alkalinity HCO3 (ppm)	NA	NA	170	NA	190	NA	NA	NA	2019	2019	A measure of the capacity to neutralize acid
Corrosivity (Langlier Index)[e]	NA	NA	0.01	NA	-0.20	NA	NA	NA	2019	2019	Indicator of corrosion. A positive Langlier Index indicates the water is non-corrosive
Boron (ppb)	NA	(1000)	200	NA	ND	NA	NA	NA	2019	2019	A naturally-occurring element
Calcium (ppm)	NA	NA	53	NA	53	NA	NA	NA	2019	2019	A naturally-occurring element
Magnesium (ppm)	NA	NA	26	NA	16	NA	NA	NA	2019	2019	A naturally-occurring element
Potassium (ppm)	NA	NA	4	NA	ND	NA	NA	NA	2019	2019	A naturally-occurring element
Total Hardness (ppm)	NA	NA	239 (14.0 grains/gal)	NA	198 (11.6 grains/gal)	NA	NA	NA	2019	2019	"Hardness" is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occuring.
Sodium (ppm)	NA	NA	30	NA	50	NA	NA	NA	2019	2019	"Sodium" refers to the salt present in the water and is generally naturally occurring.

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 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 (USEPA).

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 MCL's 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: Health based advisory levels established by the State Board for chemicals in drinking water that lack MCLs.

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

NA = Not Applicable
ND = None Detected
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)
ppt = Parts per trillion, or nanograms per liter (ng/L)
pCi/L = Picocuries per liter (a measure of radiation)
RAA = Running Annual Average
uS/cm = Micro Siemens per Centimeter (a measure of specific conductance)

Water Quality Table Footnotes:

a) 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.

b) During 2019 Casitas collected 155 samples for total coliform bacteria testing according to the Total Coliform Rule. Total Coliform bacteria and E-Coli were detected in one sample. Repeat sampling resulted in all absent results and the E. Coli MCL was not violated. Further investigation lead to a sample tap/site contaminated with bird feces as the likely cause of positive results.

c) Mira Monte Well water receives blending treatment with lake Casitas water and when operated, blended water is sampled weekly for nitrates with the resulting nitrate level averaging 1.2 ppm as nitrogen in 2019.

d) The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

e) Casitas has implemented a corrosion control plan by adding a small amount of phosphate to the water to lower corrosivity and reduce copper levels.

f) Distribution system measurements taken with field kits (not certified laboratory results).