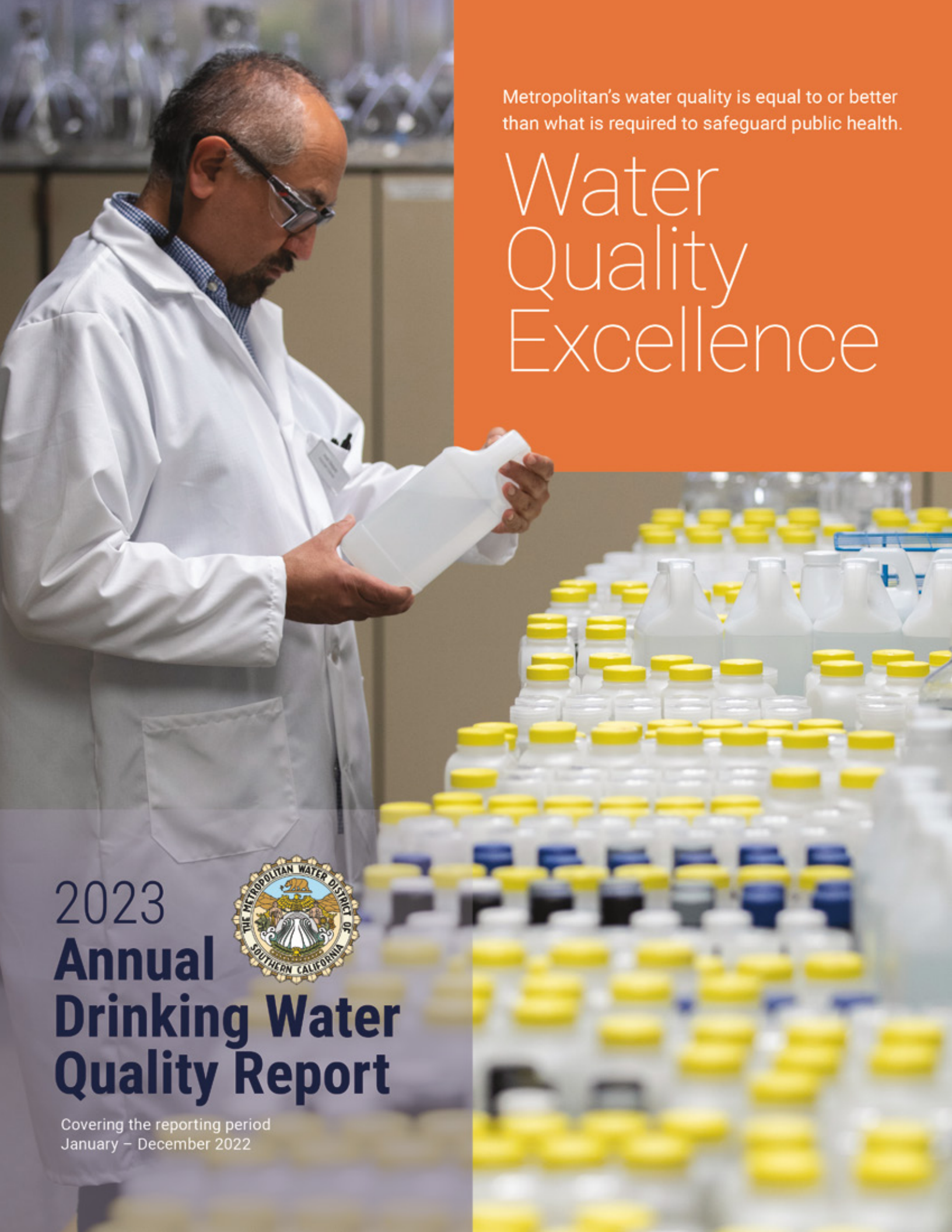


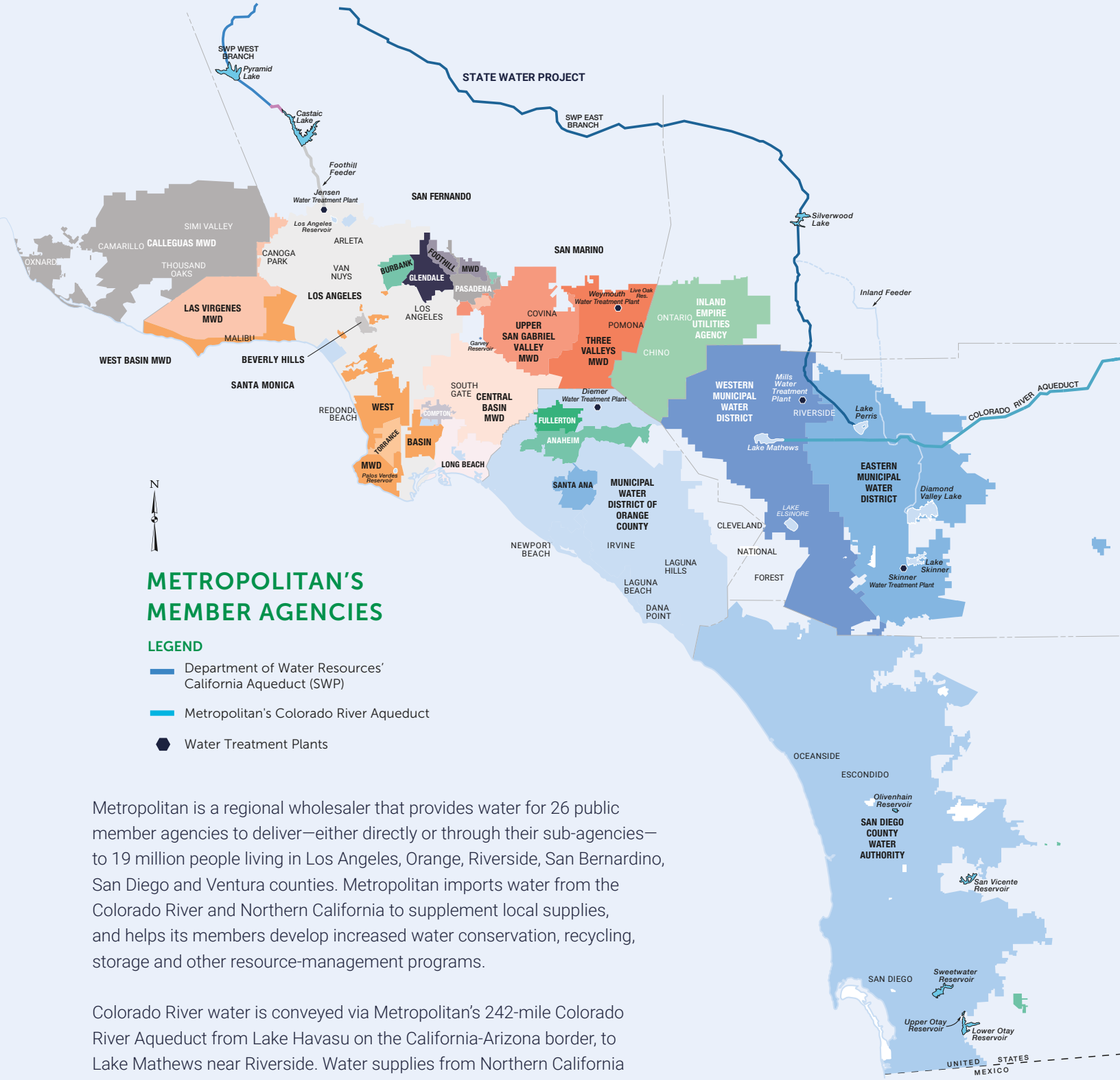
Metropolitan's water quality is equal to or better than what is required to safeguard public health.

Water Quality Excellence

2023

Annual Drinking Water Quality Report

Covering the reporting period
January – December 2022



METROPOLITAN'S MEMBER AGENCIES

LEGEND

- Department of Water Resources' California Aqueduct (SWP)
- Metropolitan's Colorado River Aqueduct
- Water Treatment Plants

Metropolitan is a regional wholesaler that provides water for 26 public member agencies to deliver—either directly or through their sub-agencies—to 19 million people living in Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura counties. Metropolitan imports water from the Colorado River and Northern California to supplement local supplies, and helps its members develop increased water conservation, recycling, storage and other resource-management programs.

Colorado River water is conveyed via Metropolitan's 242-mile Colorado River Aqueduct from Lake Havasu on the California-Arizona border, to Lake Mathews near Riverside. Water supplies from Northern California are released from Lake Oroville and drawn from the confluence of the Sacramento and San Joaquin rivers. They are transported in the State Water Project's 444-mile California Aqueduct.

On the cover: Chemist Jesse Vasquez checking water samples.

A Letter from the General Manager

At Metropolitan, nothing is more important than protecting and ensuring the quality of drinking water we provide to our 26 member agencies and the 19 million Southern Californians who rely on us. The dramatic swing in weather this year demonstrates that conditions are becoming even more extreme, ranging from record drought to atmospheric rivers, requiring us to adapt and manage our water resources in the face of these challenges. Despite these unpredictable and everchanging conditions, we remain unwavering in our commitment to ensuring that Southern California has an adequate and reliable supply of high-quality water.

Metropolitan is steadfast in serving our region, and over the past year we have continued to build upon our legacy of safeguarding Southern California's drinking water supplies no matter what challenges we encounter. Daily, we perform all required testing and monitor more than 400 constituents as well as perform over 200,000 tests every year on samples collected throughout Metropolitan's vast water system. As a result of thorough work and dedication to ensuring the high quality of Southern California's water supply, our treated water continually meets or surpasses regulatory requirements.

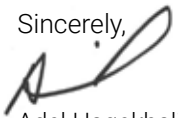
And because of our scientists' and engineers' diligent work, Metropolitan is at the forefront of creating new and innovative ways to increase resiliency in our water supply, including at our Pure Water Southern California Demonstration Plant. There, Metropolitan tests the purification technologies and processes, including the removal of pathogens and chemical contaminants such as per- and polyfluoroalkyl substances, to ensure that the produced purified water meets the highest water quality standards to replenish the region's local water supply basins. If approved for construction, the full-scale facility would have the potential to provide up to 150 million gallons of water daily or 155,000 acre-feet per year, enough water to serve 15 million people.

In addition to adhering to regulatory requirements, we also conduct applied research on emerging water quality issues and engage in state and national technical forums to ensure that Metropolitan is prepared to meet water quality challenges and regulatory requirements now and into the future.

On behalf of the many dedicated employees who protect, treat, and deliver water to our 5,200-square-mile service area, I am proud to present this Annual Drinking Water Quality Report, which summarizes water quality monitoring data for calendar year 2022.

The core feature of this report is a detailed table on testing results that begins on page 14. Additionally, a Readers' Guide helps explain the data. Many of the topics covered in the report are updated regularly on Metropolitan's website at mwdh2o.com. You also may contact Dr. Paul Rochelle, manager of Metropolitan's Water Quality Section, at (909) 392-5155 or prochelle@mwdh2o.com.

Sincerely,



Adel Hagekhalil, Chief Executive and General Manager
The Metropolitan Water District of Southern California

DRINKING WATER AND YOUR HEALTH

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.

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 (1-800-426-4791) or by visiting the U.S. Environmental Protection Agency's website at **www.epa.gov/ground-water-and-drinking-water.**

Microbiologist Jin Huang examining bacteriological monitoring agar plates.

CONTAMINANTS THAT MAY BE PRESENT

Water agencies are required to use the following language to discuss the source of contaminants that may reasonably be expected to be found in drinking water, including tap water and bottled water.

Contaminants that may be present in sources of drinking water include:

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency and the State Water Resources Control Board, Division of Drinking Water, prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. California law and U.S. Food and Drug Administration regulations also establish limits for contaminants in bottled water that provide the same protection for public health. Additional information on bottled water is available on California Department of Public Health's website at www.cdph.ca.gov/Programs/CEH/DFDCS/Pages/FDB-Programs/FoodSafetyProgram/Water.aspx.

Recording sample information using a barcode reader.

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, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming

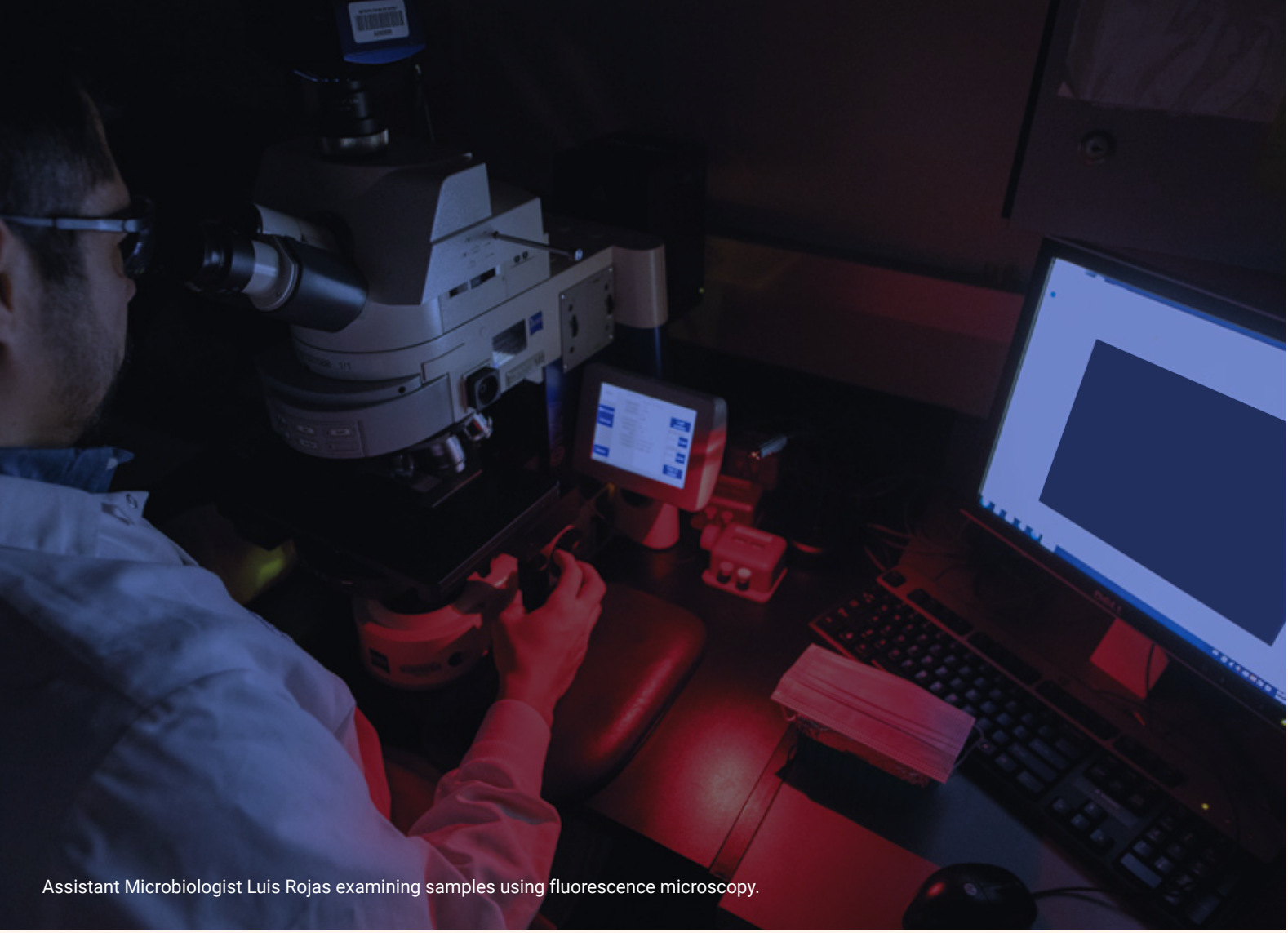
Pesticides and **herbicides** that may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses

Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural applications and septic systems

Radioactive contaminants that can be naturally occurring or be the result of oil and gas production and mining activities

//HEALTH ADVISORY FOR PEOPLE WITH WEAKENED IMMUNE SYSTEMS

Although Metropolitan treats water to meet drinking water standards, some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, including those with cancer undergoing chemotherapy, persons who have undergone organ transplants or have HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These individuals should seek advice about drinking water from their health care providers. The U.S. Environmental Protection Agency and Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants can be found at their respective websites, www.epa.gov/ground-water-and-drinking-water and www.cdc.gov/healthywater/drinking/public/water_diseases.html and are available from the Safe Drinking Water Hotline (1-800-426-4791).



Assistant Microbiologist Luis Rojas examining samples using fluorescence microscopy.

//EMERGING CONTAMINANTS AND NEW REGULATIONS

Metropolitan has a long history of applied research and engagement in preparing for emerging water quality challenges and new regulations. Since 1974, the year that the Safe Drinking Water Act was passed, we have monitored and tested Southern California's water. Today, Metropolitan's highly skilled staff, many of whom are leaders in their fields, go beyond the minimum requirements and conduct investigations to develop and optimize advanced detection methods and further our understanding of potential contaminants.

Metropolitan has since 2013 voluntarily monitored for a family of chemicals known as per- and polyfluoroalkyl substances (PFAS), including the two most common PFAS – perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), both of which are part of newly proposed federal regulatory standards. We have detected PFAS at low concentrations in some source waters, including detecting very low levels of PFOS at a source water lake. PFOA and PFOS have more consistently been detected in groundwater wells in the region. Two compounds – PFHxA and PFPeA – have been detected at trace levels in Metropolitan's treated water (see page 16). These two compounds do not have California notification or response levels and are not subject to ongoing federal regulatory development. The U.S. Environmental Protection Agency is developing regulations for selected PFAS, with final rules anticipated by the end of 2023. Metropolitan is working alongside our member agencies to understand how PFAS affect the region's water supplies and ensure Southern California continues to have high quality, reliable water.

Pure Water Southern California Demonstration Facility.

METROPOLITAN PLANS WITH THE FUTURE IN MIND

With the future in mind, Metropolitan has partnered with the Los Angeles County Sanitation Districts to test removal of chemical contaminants and pathogens, such as PFAS, at the Pure Water Southern California Demonstration facility. There we test and evaluate the treatment process to turn wastewater that currently flows to the ocean, into highly purified water. The water could replenish groundwater basins, be used by industries, and potentially be integrated into Metropolitan's existing water treatment and delivery system. The program has the potential to be one of the largest water reuse programs in the world and would benefit up to 15 million people.

Copper Basin near the start of the Colorado River Aqueduct.

PROTECTING WATER QUALITY AT THE SOURCE

Source water protection is an important issue for all of California. Public water systems are required to submit a comprehensive sanitary survey of their watersheds to the State Water Resources Control Board's Division of Drinking Water every five years. These sanitary surveys examine possible sources of contamination and recommend actions to protect source waters. The most recent surveys for Metropolitan's source waters are the 2020 update of the Colorado River Watershed Sanitary Survey and the 2021 update of the State Water Project Watershed Sanitary Survey.

Metropolitan's source waters — the Colorado River and Northern California via the State Water Project — each have different water quality challenges. Both are exposed to stormwater runoff, recreational activities, wastewater discharges, wildlife, fire impacts, and other factors that can affect water quality. Treatment to remove contaminants can be more expensive and more challenging than measures to protect source waters, which is why Metropolitan and other water agencies invest resources to support improved watershed protection programs.

Source waters are vulnerable to weather extremes caused by climate change. Heavy rainfall after prolonged dry years can introduce contaminants from burn areas, wildlife, and human activities within the watershed. Metropolitan's water treatment operations are modified and adapted to ensure continued compliance with drinking water regulations and water quality goals under changing source water conditions.

Laboratory Assistant Fadi Marouf verifying sample collection information.

FLAVOR PROFILE/ BEST TASTING WATER

Our staff in water treatment and water quality work tirelessly to ensure the water we deliver is not only safe and meets regulatory requirements, but also tastes good. Over 40 years ago, Metropolitan pioneered a method to evaluate the odor and flavor of our water, to help ensure it smells and tastes good. Since then, the practice has been adopted at drinking water agencies across the world and is regarded as one of the most reliable measures of drinking water aesthetics. The rigorous water treatment process at Metropolitan's five plants uses ozone as the primary disinfectant, which destroys a wide variety of microorganisms and effectively removes unpleasant tastes and odors.

Metropolitan's Flavor Profile Analysis panel meets several times a week to evaluate the taste of water samples from throughout the system. As a result of this focus on great tasting and smelling water, Metropolitan has regularly won awards in international and regional water tasting competitions for over two decades, including second place in a 2022 international contest.

READERS' GUIDE TO THE WATER QUALITY TABLE

The cornerstone of the water quality report is a table that lists the results of year-round monitoring for over 400 constituents. Only the constituents that are found in the water monitored by Metropolitan above the state detection limit for reporting are listed in the table.

Metropolitan met all primary drinking water standards in 2022.

By reading the table on pages 14 through 17 from left to right, you will learn the level of a constituent found in Metropolitan's water and how that compares with the allowable state and federal limits. You also will see the measured range and average of the constituent and where it likely originated. The questions and answers on this and the following page, lettered A through I, will explain the important elements of the table. The letters correspond to row and column headings on the water quality table.

Assistant Chemist Sam Patton checking the integrity of a sample bottle.

Laboratory Technologist Tomasz Globisz collecting a water sample.

A What are the sources of water Metropolitan delivers?

Metropolitan imports water from Northern California through the Sacramento-San Joaquin Delta via the State Water Project, and from the Colorado River through its Colorado River Aqueduct. The table shows the percentage of the total water delivered by Metropolitan that is from the State Water Project. The remainder is from the Colorado River.

B What is in my drinking water?

Your water may contain different types of chemicals (organic and inorganic), microscopic organisms (e.g., bacteria, algae, protozoa, and viruses) and radioactive materials (radionuclides), many of which are naturally occurring. Health agencies require monitoring for these constituents because at certain levels they could result in short- and long-term health risks. The column marked "Parameter" lists the constituents found in the water from Metropolitan's treatment plants.

C How are constituents reported?

"Units" describe how a constituent is reported. Usually constituent levels are measured in extremely low quantities such as parts per million, parts per billion and, in some cases, parts per trillion. Even small concentrations of certain constituents can be a potential health concern. That is why regulatory standards are set at extremely low levels for certain constituents.

D What are the maximum allowed levels for constituents in drinking water?

Regulatory agencies have maximum contaminant levels for constituents so that drinking water is safe. A few constituents have the letters "TT" (treatment technique) in the MCL column because they do not have a numerical MCL. Instead, they have certain treatment requirements that have to be met to reduce their levels in drinking water.

One of the constituents, total chlorine residual, has a maximum residual disinfectant level instead of an MCL. The MRDL is the level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap. While disinfectants are necessary to kill harmful microbes, drinking water regulations protect against too much disinfectant being added. Another constituent, turbidity, has a requirement that 95% of the measurements must be below a certain number. Turbidity is a measure of the cloudiness of the water. Metropolitan monitors turbidity because it is a good indicator of the effectiveness of our filtration system.

E Why are some of the constituents listed in the section labeled "Primary Standards" and others in the "Secondary Standards" section?

Primary standards are developed for the purpose of protecting the public from possible health risks associated with exposure to health-compromising constituents. In general, no health hazard is reasonably expected to occur when levels of a constituent are below a primary MCL.

Constituents that are grouped under the secondary standards section can affect the aesthetics (e.g., appearance, taste and smell) of water. These substances are not reasonably expected to have any potential health-related impacts unless they also have a primary standard. Some constituents (e.g., aluminum) have two different MCLs, one to protect against health-related impacts, and another to protect against non-health-related impacts.

F What are Public Health Goals and Maximum Contaminant Level Goals?

Public Health Goals and Maximum Contaminant Level Goals are targets set by regulatory agencies for the water industry. They define a constituent level in the water that does not pose any known or expected risk to health. Often, it is not possible to remove or reduce constituents to the level of PHGs and MCLGs because it is technologically impossible or the cost for treatment is so expensive that it would make tap water unaffordable. That is why PHGs and MCLGs are considered goals to work toward, and not realistic standards that can be enforced. Similar goals exist for Maximum Residual Disinfectant Level Goals (see MRDLG, page 15, Abbreviations and Definitions).

G How do I know how much of a constituent is in my water and if it is at a level that is safe?

With a few exceptions, regulatory requirements are considered satisfied if the average amount of a constituent found in tap water over the course of a year is no greater than the MCL. Some constituents do have special rules, described in the footnotes to the water quality table.

These constituents do not have a numerical MCL, but instead a required treatment technique that when satisfied is listed in the column for the treatment plant effluent and distribution system (Column "H" of the table). The highest and lowest levels measured over a year are shown in the range. Requirements for safety, appearance, taste and smell are based on the average levels recorded and not the range.

Water agencies have specific procedures to follow if a constituent is found at levels higher than the MCL and considered a potential threat to public health. Information is shared immediately with the regulatory agencies. The regulatory agencies will determine when and how this information is shared with the public.

H What are the areas served by each of Metropolitan's treatment plants and its distribution system?

Metropolitan operates five water treatment plants, and the monitoring results for the supplies delivered by each of the plants are listed. Typically, the F.E. Weymouth Water Treatment Plant serves parts of Los Angeles County, the San Gabriel Valley and areas of Orange County. The Robert B. Diemer Water Treatment Plant also provides treated water to areas of Orange County and coastal Los Angeles. The Joseph Jensen Water Treatment Plant supplements local water supplies in the San Fernando Valley, Ventura County and central Los Angeles. The Robert A. Skinner Water Treatment Plant serves western Riverside County, Moreno Valley and San Diego County. Finally, the Henry J. Mills Water Treatment Plant also serves western Riverside County and Moreno Valley.

I How do constituents get into the water supply?

The most likely source for each constituent is listed in the last column of the table. Some constituents are natural and come from the environment, others come from cities and farms, and some result from the water disinfection process itself. Some chemicals have found their way into California's water supplies, making water treatment more difficult. Certain industrial processes — like dry cleaning, fireworks and rocket fuel manufacturing — have left constituents in the environment, as has the use of certain fertilizers and pesticides. Many of these chemicals have since been banned from use.

Microbiologist Patty Huang processing samples for pathogen analysis.

Preparing to measure the pH of a sample.

2023 WATER QUALITY TABLE

	B	C	D	F	G	H					I
						Treatment Plant Effluents and Distribution System					
	Parameter	Units	State (Federal) MCL	PHG	Range Average	Diemer Plant	Jensen Plant	Mills Plant	Skinner Plant	Weymouth Plant	Major Sources in Drinking Water
A	Percent State Water Project	%	NA	NA	Range	0 - 7	100	100	0 - 43	0 - 100	Not Applicable
E	**PRIMARY DRINKING WATER STANDARDS-** Mandatory Health-Related Standards										
	CLARITY										
	Combined Filter Effluent (CFE) Turbidity[a]	NTU %	TT	NA	Highest % ≤ 0.3	0.03 100	0.05 100	0.06 100	0.05 100	0.04 100	Soil runoff
	MICROBIOLOGICAL[b]										
	Total Coliform Bacteria[c]	% Positive Monthly Samples	5.0	MCLG = 0	Range **Average**	***Distribution Systemwide: 0 - 0.3***					Naturally present in the environment
						Distribution Systemwide: 0.04					
	Heterotrophic Plate Count (HPC) Bacteria[d]	CFU/mL	TT	NA	Median Range **Median**	ND- 1 ND	ND	ND	ND	ND	Naturally present in the environment
	INORGANIC CHEMICALS										
	Aluminum[e]	ppb	1,000	600	Range **Highest RAA**	85 - 210 140	ND - 81 62	ND - 150 60	ND - 230 113	58 - 240 156	Residue from water treatment process; runoff and leaching from natural deposits
	Arsenic	ppb	10	0.004	Range **Average**	ND	2.4	ND	ND	ND	Natural deposits erosion, glass and electronics production wastes
	Barium	ppb	1,000	2,000	Range **Average**	111	ND	ND	ND	110	Oil and metal refineries discharge; natural deposits erosion
	Fluoride[f]	ppm	2.0	1	Range	0.7 - 0.8	0.4 - 0.8	0.6 - 0.8	0.6 - 0.8	0.6 - 0.8	Runoff and leaching from natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
						Distribution Systemwide: 0.4 - 0.9					
					Average	0.7	0.7	0.8	0.7	0.7	
						Distribution Systemwide: 0.7					
	Nitrate (as Nitrogen)	ppm	10	10	Range **Average**	ND	0.9	ND	ND	ND	Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion
	RADIONUCLIDES[g]										
	Gross Alpha Particle Activity	pCi/L	15	MCLG = 0	Range **Average**	ND - 3 ND	ND	ND - 4 ND	ND - 3 ND	ND	Runoff/leaching from natural deposits
	Gross Beta Particle Activity	pCi/L	50	MCLG = 0	Range **Average**	ND - 9 6	ND - 5 ND	ND - 6 4	5 - 8 7	4 - 7 6	Decay of natural and man-made deposits
	Radium-228	pCi/L	NA	0.019	Range **Average**	ND	ND	ND	ND - 1 ND	ND - 1 ND	Erosion of natural deposits
	Uranium	pCi/L	20	0.43	Range **Average**	1 - 3 2	ND - 3 ND	ND - 2 ND	ND - 2 2	1 - 3 2	Erosion of natural deposits
	DISINFECTION BYPRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BYPRODUCT PRECURSORS[h]										
	Total Trihalomethanes (TTHM) (Plant Core Locations and Distribution System)	ppb	80	NA	Range	25 - 39	16 - 30	11 - 21	14 - 29	21 - 32	Byproduct of drinking water chlorination
						Distribution Systemwide: 11 - 42					
					Highest LRAA	34	27	22	20	29	
						Distribution Systemwide: 34					
	Sum of Five Haloacetic Acids (HAA5) (Plant Core Locations and Distribution System)	ppb	60	NA	Range	ND - 13	ND - 9.6	ND	6.0 - 13	ND - 7.6	Byproduct of drinking water chlorination
						Distribution Systemwide: ND - 15					
					Highest LRAA	9.6	ND	ND	9.0	ND	
						Distribution Systemwide: 9.6					
	Bromate	ppb	10	0.1	Range **Highest RAA**	ND	ND - 15 7.2	ND - 14 5.5	ND - 55 1.2	ND - 7.6 ND	Byproduct of drinking water ozonation
	Total Chlorine Residual[i]	ppm	MRDL = 4.0	MRDLG = 4.0	Range	***Distribution Systemwide: 0.4 - 2.9***					Drinking water disinfectant added for treatment
					Highest RAA	***Distribution Systemwide: 2.5***					
	Total Organic Carbon (TOC)	ppm	TT	NA	Range **Highest RAA**	2.3 - 2.6 2.5	1.0 - 1.4 1.5	1.7 - 2.2 1.9	2.3 - 2.6 2.5	1.7 - 2.6 2.4	Various natural and man-made sources; TOC is a precursor for the formation of disinfection byproducts

B	C	D	F	G	H					I
					Treatment Plant Effluents and Distribution System					
Parameter	Units	State (Federal) MCL	PHG	Range Average	Diemer Plant	Jensen Plant	Mills Plant	Skinner Plant	Weymouth Plant	Major Sources in Drinking Water
E SECONDARY STANDARDS - Aesthetic Standards										
Aluminum[e]	ppb	200	600	Range **Highest RAA**	85 - 210 140	ND - 81 62	ND - 150 60	ND - 230 113	58 - 240 156	Residue from water treatment process; runoff and leaching from natural deposits
Chloride	ppm	500	NA	Range **Average**	98 - 104 101	67 - 73 70	76 - 77 76	98 - 106 102	98 - 105 102	Runoff/leaching from natural deposits; seawater influence
Color	Color Units	15	NA	Range **Average**	1 1	1 1	1 1	1 - 2 2	1 1	Naturally occurring organic materials
Odor Threshold	TON	3	NA	Range **Average**	3 3	3 3	2 2	1 1	3 3	Naturally occurring organic materials
Specific Conductance	µS/cm	1,600	NA	Range **Average**	965 - 1,010 988	557 - 572 564	522 - 546 534	944 - 1,030 987	964 - 1,020 992	Substances that form ions in water; seawater influence
Sulfate	ppm	500	NA	Range **Average**	213 - 229 221	71 - 80 76	56 - 57 56	206 - 229 218	212 - 232 222	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)[j]	ppm	1,000	NA	Range **Average**	608 - 648 628	332 - 335 334	289 - 304 296	591 - 651 621	632 - 643 638	Runoff/leaching from natural deposits

Abbreviations and Definitions

Average Arithmetic mean

CFE Combined Filter Effluent

CFU Colony-Forming Units

HAA5 Sum of five haloacetic acids

LRAA **Locational Running Annual Average**; highest LRAA is the highest of all Locational Running Annual Averages calculated as average of all the samples collected within a 12-month period.

MCL **Maximum Contaminant Level** - 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.

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

MRDL **Maximum Residual Disinfectant Level** - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG **Maximum Residual Disinfectant Level Goal** - 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.

NA Not Applicable

ND Not Detected at or above DLR or RL

NTU Nephelometric Turbidity Units

pCi/L picoCuries per liter

PHG **Public Health Goal** - 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.

ppb parts per billion or micrograms per liter (µg/L)

ppm parts per million or milligrams per liter (mg/L)

RAA **Running Annual Average**; highest RAA is the highest of all Running Annual Averages calculated as average of all the samples collected within a 12-month period.

Range Results based on minimum and maximum values; range and average values are the same if a single value is reported for samples collected once or twice annually.

TON Threshold Odor Number

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

µS/cm microSiemens per centimeter

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

Secondary Standards Requirements that ensure the appearance, taste and smell of drinking water are acceptable.

Footnotes

(a) Metropolitan monitors turbidity at the CFE locations using continuous and grab samples. Turbidity, a measure of cloudiness of the water, is an indicator of treatment performance. Turbidity was in compliance with the TT primary drinking water standard and the secondary drinking water standard of less than 5 NTU.

(b) Per the state's Surface Water Treatment Rule, treatment techniques that remove or inactivate *Giardia* cysts will also remove Heterotrophic Plate Count (HPC) bacteria, *Legionella*, and viruses. *Legionella* and virus monitoring is not required.

(c) Compliance is based on monthly samples from treatment plant effluents and the distribution system.

(d) Metropolitan analyzes HPC bacteria in plant effluent to monitor treatment process efficacy.

(e) Compliance with the State Mprimary and secondary MCLs for aluminum is based on RAA. No primary or secondary standard MCL exceedance occurred.

(f) Metropolitan was in compliance with all provisions of the State's fluoridation system requirements. Fluoride feed systems were temporarily out of service during treatment plant shutdowns and/or maintenance work in 2022, resulting in occasional fluoride levels below 0.7 mg/L. Information about fluoridation, oral health, and current issues is available from www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml

(g) Starting in 2021, samples are collected quarterly for gross beta particle activity. Gross alpha particle activity and uranium data are from samples collected in 2020 for the required triennial monitoring (2020-2022).

(h) Compliance with the State and Federal MCLs is based on RAA or LRAA, as appropriate. Plant core locations for TTHM and HAA5 are service connections specific to each of the treatment plant effluents. One core location from the Jensen treatment plant effluent's service connections was excluded in the RAA and LRAA calculations due to operational changes in the Jensen distribution system.

(i) One sample had no detectable chlorine residual but met regulatory requirements through an HPC result of less than 500 colony-forming units/mL.

(j) Metropolitan's TDS compliance data are based on flow-weighted monthly composite samples collected twice per year (April and October). The 12-month statistical summary of flow-weighted data is reported in the "Other Detected Constituents That May be of Interest to Consumers."

OTHER DETECTED CONSTITUENTS THAT MAY BE OF INTEREST TO CONSUMERS

Parameter	Units	NL	Range Average	Treatment Plant Effluents and Distribution System					Major Sources in Drinking Water
				Diemer Plant	Jensen Plant	Mills Plant	Skinner Plant	Weymouth Plant	
Alkalinity (as $CaCO_3$)	ppm	NA	Range **Average**	125 - 127 126	84	83 - 89 86	119 - 128 124	126 - 128 127	Runoff/leaching of natural deposits; carbonate, bicarbonate, hydroxide, and occasionally borate, silicate, and phosphate
Boron	ppb	1,000	Range **Average**	130	220	160	130	140	Runoff/leaching from natural deposits; industrial wastes
Calcium	ppm	NA	Range **Average**	66 - 70 68	32 - 34 33	25 - 28 26	63 - 71 67	68 - 71 70	Runoff/leaching from natural deposits
Calcium Carbonate Precipitation Potential (CCPP) (as $CaCO_3$) [a]	ppm	NA	Range **Average**	8.7 - 11 9.8	1.2 - 2.9 2.2	1.4 - 3.1 2.2	6.1 - 13 10	5.7 - 11 9.4	A measure of the balance between pH and calcium carbonate saturation in the water
Chlorate	ppb	800	Range **Average**	90	243	200	75	88	Byproduct of drinking water chlorination; industrial processes
Corrosivity as Aggressiveness Index [b]	AI	NA	Range **Average**	12.4 - 12.5 12.4	12.1	12.0 - 12.1 12.0	12.4 - 12.5 12.4	12.5	A measure of the balance between pH and calcium carbonate saturation in the water
Corrosivity as Saturation Index [c]	SI	NA	Range **Average**	0.57 - 0.61 0.59	0.35 - 0.40 0.38	0.25 - 0.34 0.30	0.61 - 0.62 0.62	0.52 - 0.61 0.56	A measure of the balance between pH and calcium carbonate saturation in the water
Hardness (as $CaCO_3$)	ppm	NA	Range **Average**	275 - 281 278	107 - 110 108	115 - 120 118	263 - 282 272	277 - 281 279	Runoff/leaching from natural deposits; sum of polyvalent cations, generally magnesium and calcium present in the water
Magnesium	ppm	NA	Range **Average**	24 - 26 25	6.2 - 7.5 6.8	12 - 13 12	24 - 26 25	25 - 26 26	Runoff/leaching from natural deposits
N-Nitrosodimethylamine (NDMA)	ppt	10 PHG = 3	Range	ND	ND	4.4	4.4	ND	Byproduct of drinking water chloramination; industrial processes
				Distribution Systemwide: ND – 3.3					
			Average	ND	ND	4.4	4.4	ND	
				Distribution Systemwide: ND					
Perfluorohexanoic Acid (PFHxA)	ppt	NA	Range **Average**	ND	ND	2.4	ND	ND	Runoff/leaching from landfills; used in fire-retarding foams and various industrial processes and wastewater treatment plants and biosolids
Perfluoropentanoic acid (PFPeA)	ppt	NA	Range **Average**	ND	ND	ND	ND	2.0	Runoff/leaching from landfills; used in fire-retarding foams and various industrial processes and wastewater treatment plants and biosolids
pH	pH Units	NA	Range **Average**	8.1	8.2 - 8.3 8.3	8.2 - 8.4 8.3	8.1 - 8.2 8.2	8.1	Not Applicable
Potassium	ppm	NA	Range **Average**	4.4 - 4.8 4.6	2.0	3.6 - 3.8 3.7	4.4 - 4.8 4.6	4.5 - 4.8 4.6	Salt present in the water; naturally occurring
Sodium	ppm	NA	Range **Average**	95 - 102 98	71 - 72 72	60	100	100	Salt present in the water; naturally occurring
Sum of Five Haloacetic Acids (HAA5) [d]	ppb	MCL = 60	Range **Average**	ND - 10 6.6	ND - 11 ND	ND	7.0 - 14 10	ND - 6.6 ND	Byproduct of drinking water chlorination
Total Dissolved Solids (TDS) [e]	ppm	MCL = 1,000	Range **Average**	587 - 625 607	319 - 332 326	285 - 305 295	529 - 631 601	522 - 633 602	Runoff/leaching from natural deposits
Total Trihalomethanes (TTHM) [d]	ppb	MCL = 80	Range **Average**	21 - 34 26	6.0 - 80 21	9.9 - 42 17	11 - 31 20	18 - 44 24	Byproduct of drinking water chlorination
Vanadium	ppb	NL = 50	Range **Average**	ND	6.2	ND	ND	ND	Naturally occurring; industrial waste discharge

Mechanical pipets for measuring small volumes of liquids.

Abbreviations and Definitions

(please refer to page 15 for any abbreviations and definitions not listed below for table that ends on page 16)

AI	Aggressiveness Index
$CaCO_3$	Calcium Carbonate
CCPP	Calcium Carbonate Precipitation Potential
NL	**Notification Level** - Non-regulatory State advisory levels for contaminants that are established as precautionary measures
ppt	parts per trillion or nanograms per liter (ng/L)
SI	Saturation Index

Footnotes

(a) Positive CCPP indicates a non-corrosive; tendency to precipitate and/or deposit scale on pipes. Negative CCPP indicates a corrosive; tendency to dissolve calcium carbonate. *Reference: Standard Methods (SM2330)*

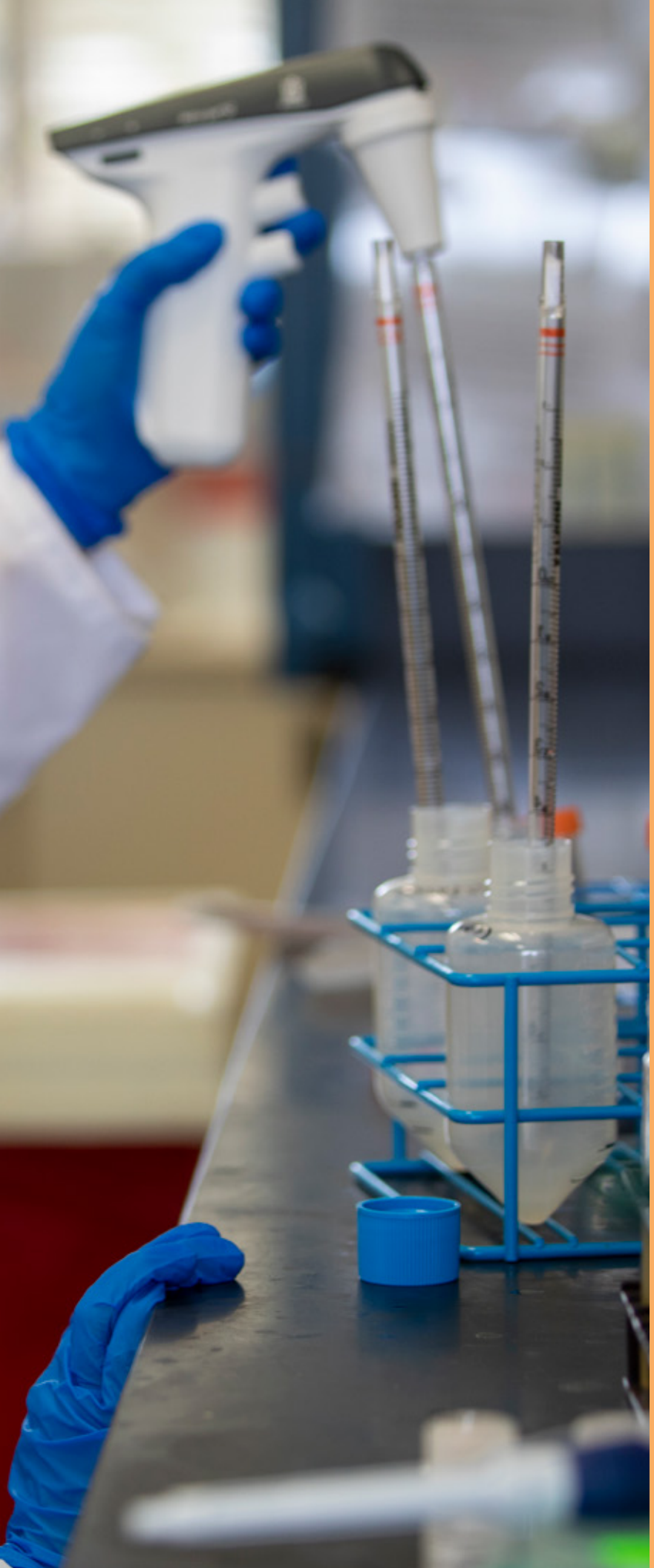
(b) AI ≥ 12.0 indicates non-aggressive water; AI 10.0 - 11.9 indicates moderately aggressive water; AI ≤ 10.0 indicates highly aggressive water. *Reference: ANSI/AWWA Standard C400-93 (R98)*

(c) Positive SI indicates a non-corrosive; tendency to precipitate and/or deposit scale on pipes. Negative SI indicates a corrosive; tendency to dissolve calcium carbonate. *Reference: Standard Methods (SM2330)*

(d) HAA5 and TTHM noncompliance samples collected at treatment plant effluents.

(e) Statistical summary represents 12 months of flow-weighted data, and values may be different than the TDS reported to meet compliance with secondary drinking water regulations. Metropolitan's calculated TDS goal is ≤ 500 mg/L.

Associate Microbiologist Sandy Schiller concentrating samples for pathogen analysis



ADDITIONAL INFORMATION

Additional information about drinking water safety and standards can be found at:

STATE WATER RESOURCES CONTROL BOARD DIVISION OF DRINKING WATER
1001 I Street
Sacramento, CA 95814
(916) 449-5577

waterboards.ca.gov/drinking_water/programs/

U.S. ENVIRONMENTAL PROTECTION AGENCY OFFICE OF GROUND WATER AND DRINKING WATER
1200 Pennsylvania Avenue, NW
Mail Code 4606M
Washington, DC 20460-0003

epa.gov/ground-water-and-drinking-water

CONSUMER INFORMATION
epa.gov/CCR

INFORMATION ON HOW DRINKING WATER STANDARDS ARE ESTABLISHED
epa.gov/dwstandardsregulations

2023 Annual Drinking Water Quality Report

Covering the reporting period
January – December 2022

This report is very important to read or have translated. The sentences to the right reflect the diversity of Metropolitan's service area and read, "This report contains important information about your drinking water. Translate it, or speak with someone who understands it."

Metropolitan's Board of Directors typically meets on the second Tuesday of each month at the district's downtown Los Angeles headquarters building at 700 N. Alameda St., Los Angeles, adjacent to historic Union Station.
More information is available at **mwdh2o.com**

Printed by MWD Imaging Services

June 2023 1,000

Arabic

يحتوي هذا التقرير على معلومات
هامة عن نوعية مياه الشرب. يرجى ترجمته أو مناقشته مع شخص يفهمه جيداً.

Chinese

这份报告中含有关于饮用水的重要信息。请您找人翻译，或者请能看得懂这份报告的朋友给您 解释一下。

French

Cé rapport contient des information importantes concernant votre eau potable. Veuillez traduire, ou parlez avec quelqu' un qui peut le comprendre.

German

Dieser Bericht enthält wichtige Informationen über die Wasserqualität in Ihrer Umgebung. Der Bericht sollte entweder offiziell übersetzt werden, oder sprechen Sie mit Freunden oder Bekannten, die gute Englishchkenntnisse besitzen.

Greek

Αυτή η αναφορά περιέχει σημαντικές πληροφορίες σχετικά με το πόσιμο νερό. Μεταφράστε την ή ζητήστε να σάς την εξηγήσει κάποιος που την κατανοεί.

Hindi

इस रिपोर्ट में पीने के पानी के बारे में महत्वपूर्ण जानकारी दी गई है। इसका अनुवाद करें, या किसी ऐसे व्यक्ति से बात करें, जो इसे समझता हो।

Japanese

この資料には、あなたの飲料水についての大切な情報が書かれています。内容をよく理解するために、日本語に翻訳して読むか説明を受けてください。

Khmer

របាយការណ៍នេះមានព័ត៌មានសំខាន់អំពីទឹកសម្រាប់ពិសា។ សូមបកប្រែ ឬពិគ្រោះជាមួយអ្នកដែលមើលយល់របាយការណ៍នេះ។

Korean

이 보고서에는 귀하가 거주하는 지역의 수질에 관한 중요한 정보가 들어 있습니다.이 보고서를 번역하시거나, 내용을 이해하는 분과 상의하십시오.

Polish

Sprawozdanie zawiera ważne informacje na temat jakości wody w Twojej miejscowści. Poproś kogoś o przellurnaczenie go lub porozmawiaj z osobą która je dobrze rozumie.

Russian

Отчет содержит важную информацию о питьевой воде. Переведите его или попросите кого-нибудь, кто хорошо понимает текст, объяснить вам его содержание.

Spanish

Este informe contiene información importante acerca de su agua potable. Tradúzcalo o hable con alguien que lo entienda.

Tagalog

Ang ulat na ito ay naglalaman ng mahahalagang impormasyon tungkol sa pag-inom ng tubig. Mangyaring ipasalin ito, o kumausap sa isang taong nakakaintindi nito.

Vietnamese

Bản báo cáo này có chứa các thông tin quan trọng về nước uống. Hãy dịch, hoặc nói chuyện với ai đó hiểu bản báo cáo này.