2021

Water Quality Excellence

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

Annual Drinking Water Quality Report

Covering the reporting period of January - December 2020

» *On the cover*: Staff examining the preservative in a water quality sample bottle.

Metropolitan is a regional wholesaler that provides water for 26 member public 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 crossroads of the Sacramento and San Joaquin rivers. They are transported in the State Water Project's 444-mile California Aqueduct and serve urban and agricultural customers in the San Francisco Bay Area, as well as Central and Southern California.

» Water quality results are recorded prior to data review.

A Letter from the General Manager

The COVID-19 pandemic presented the Metropolitan Water District of Southern California, its member agencies, and the nation with historic challenges. When it comes to protecting the health of 19 million Southern Californians, the work of safeguarding the region's water quality has never been more vital. On behalf of the all of the dedicated employees who make up Metropolitan's essential workforce, and who devote themselves to this mission, I am pleased to present this Annual Drinking Water Quality Report, which summarizes water quality monitoring data for 2020.

The pandemic required quick action to protect our employees and assure the quality of the region's water supply. Metropolitan applied strict personal protection guidelines, enhanced sanitizing practices, limited access to field sites, operated in dedicated small micro-teams, and facilitated physical distancing to protect employees and ensure continuous water operations. In 2020, Metropolitan's water quality staff rapidly adapted to modified work conditions to continue uninterrupted monitoring and testing for over 400 constituents and tested about 200,000 water samples collected throughout our vast distribution system. The Water Quality Laboratory and five treatment plant laboratories analyzed these samples to ensure that Metropolitan delivered water that meets or surpasses all state and federal drinking water standards.

Metropolitan continued to support local, regional, state and national efforts to understand and address unregulated contaminants, including microplastics and PFAS (per- and polyfluoroalkyl substances). Our staff also participated in a variety of legislative and regulatory forums to inform and support the development of revised and new water quality regulations, including the state's Revised Total Coliform Rule. Metropolitan continued the collaboration with the Los Angeles County Sanitation Districts for operations and testing at the Regional Recycled Water Advanced Purification Center.

A core feature of this report is a detailed table that begins on page 12 and provides testing results. Additionally, a Reader's Guide helps explain the data reported. To learn about other water quality and supply issues, visit Metropolitan's website at mwdh2o.com. You also may contact Dr. Paul Rochelle, Metropolitan's manager of water quality, at (909) 392-5155 or prochelle@mwdh2o.com. In closing, I want to especially thank the many Metropolitan employees who went above and beyond in 2020, exemplifying an unwavering commitment to public service.

Sincerely,

Jeffrey Kightlinger
GENERAL MANAGER

» Instrument control module for water quality analysis.

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.

» Chemistry staff perform sample extractions prior to instrument analysis.

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:

MICROBIAL CONTAMINANTS, such as viruses and bacteria, which may come from wastewater 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

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 Department of Public Health and U.S. Food and Drug Administration regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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 USEPA 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).

» Dolores River, Paradox Valley, Colorado

Protecting Water Quality at the Source

Source water protection is an important issue for all of California. Large water utilities are required by the Division of Drinking Water to conduct an initial source water assessment, which is then updated through watershed sanitary surveys every five years. Watershed sanitary surveys examine possible sources of drinking water contamination and recommend actions to better protect these source waters. The most recent surveys for Metropolitan's source waters are the Colorado River Watershed Sanitary Survey – 2015 Update, and the State Water Project Watershed Sanitary Survey – 2016 Update.

Source waters used by Metropolitan— the Colorado River and State Water Project — each have different water quality challenges. Both are exposed to stormwater runoff, recreational activities, wastewater discharges, wildlife, fires and other watershed-related factors that could affect water quality. Treatment to remove specific contaminants can be more expensive than measures to protect water at the source, which is why Metropolitan and other water agencies invest resources to support improved watershed protection programs.

» Reducing saltiness of the Colorado River is one of Metropolitan's top source water protection priorities. Paradox Valley (shown above) has been the site of the single largest salinity control project in the Colorado River Basin, capturing 110,000 tons of salt each year before it reached Colorado River tributaries, and then injecting that brine up to 16,000 feet below the earth's surface.

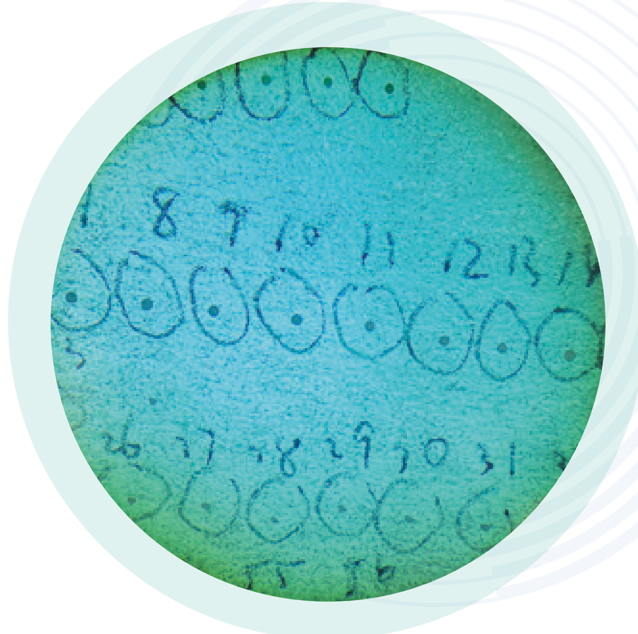
» Metropolitan and the Colorado River Basin States have been closely working with the U.S. Bureau of Reclamation to establish a sustainable, long-term solution to control salt in the Paradox Valley. Shown here is the Delores River Canyon and the Paradox Injection Well, which was shut down in 2019 due to micro-seismic activity in the area.

Emerging Contaminants

Metropolitan has used innovative analytical technologies for monitoring emerging contaminants for nearly four decades. This proactive approach helps establish a baseline understanding of applicable technologies, occurrence of unregulated contaminants, and awareness of potential water quality issues. Today, Metropolitan develops new and improved analytical detection methods for emerging contaminants to investigate and understand issues relating to source water protection, occurrence and control of disinfection byproducts, treatment plant performance, and recycled water, among others. During the COVID-19 pandemic, Metropolitan continued investigations on several important and innovative water quality projects.

A top priority included optimizing analytical tools to measure pathogen removal at the 500,000-gallons-per-day Regional Recycled Water Advanced Purification Center in Carson. A collaboration with the Sanitation Districts of Los Angeles County, this demonstration plant is testing a potable reuse treatment process that includes membrane bioreactors, reverse osmosis, and UV-advanced oxidation to meet regulatory requirements for groundwater replenishment. Demonstration project findings will be used to determine optimum design and operating criteria and ultimately obtain regulatory permitting for a potential full-scale reuse treatment plant.

In June 2020, the State Water Resources Control Board Division of Drinking Water adopted a formal definition of microplastics, as required by the regulations established by a 2018 state law. In October, Metropolitan joined more than 35 laboratories from seven countries in a project to evaluate microplastics monitoring methods and provide support and technical expertise to help develop recommendations to the SWRCB on further regulatory development.



» An example of 1 millimeter size microplastic particles used for the development of analytical detection methods for microplastics.

Metropolitan monitored source and treated waters for 18 per- and polyfluoroalkyl substances (PFAS) in 2020. Results were similar to findings in 2019: PFHxA was the only PFAS detected at some locations, slightly above the minimum reporting limit of 2 ng/L (parts per trillion) but below the Consumer Confidence Report Detection Level of 4 ng/L established in 2020 by the SWRCB (see table of monitoring results on page 14). PFHxA is not currently regulated in California or at the federal level and is not considered toxic or carcinogenic. No other PFAS have been detected in any samples since Metropolitan began monitoring in 2013.

Metropolitan continues to voluntarily monitor for PFAS to establish an understanding of which PFAS may affect our system. We also will continue to support our member agencies as the region responds to this emerging water quality issue as part of our proactive stance toward protecting water quality and public health.

» Microscope used as part of a state-mandated study involving some three dozen water quality labs worldwide, designed to develop standardized methods for detecting microplastics in drinking water.

Readers' Guide to the Water Quality Table

» Microbiologist performing cell culture analysis to detect viruses for the Regional Recycled Water demonstration project.

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 2020.

By reading the table on pages 12 through 14 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 will also 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.

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 health concern. That is why regulatory standards are set at extremely low levels for certain constituents.

» Water quality sample being prepared for analysis.

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

Regulatory agencies have maximum contaminant levels (MCLs) for constituents so that drinking water is safe and looks, tastes and smells good. 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 an MRDL (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 percent of the measurements taken 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

» Sample extracts on an instrument autosampler ready for analysis

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 (PHGs) and Maximum Contaminant Level Goals (MCLGs)?

PHGs and MCLGs are targets or goals 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 13, 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.

2020 Water Quality Table

	B	C	D	F	G	H					I
						Treatment Plant Effluents and Distribution System					
	Parameter	Units	State and 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 **Average**	0 - 94 9	100	100	0–84 32	0–90 10	NA
E	**PRIMARY STANDARDS - Mandatory Health-Related Standards**										
	CLARITY										
	Combined Filter Effluent (CFE) Turbidity[a]	NTU %	TT	NA	Highest **% ≤ 0.3**	0.04 100	0.04 100	0.09 100	0.09 100	0.04 100	Soil runoff
	MICROBIOLOGICAL[b]										
	Total Coliform Bacteria[c]	% Positive Monthly Samples	5.0	MCLG = 0	Range **Average**	***Distribution Systemwide: 0.0 – 0.1*** ***Distribution Systemwide: 0.0***					Naturally present in the environment
	Heterotrophic Plate Count (HPC) Bacteria[d]	CFU/mL	TT	NA	Range **Median**	ND - 1 ND	ND - 3 ND	ND - 1 ND	ND - 1 ND	ND	Naturally present in the environment
	INORGANIC CHEMICALS										
	Aluminum[e]	ppb	1,000	600	Range **Highest RAA**	ND - 260 137	ND - 220 116	ND - 93 ND	ND - 200 108	80 - 210 149	Residue from water treatment process; runoff and leaching from natural deposits
	Barium	ppb	1,000	2,000	Range **Average**	107	ND	ND	ND	105	Oil and metal refineries discharge; natural deposits erosion
	Fluoride[f]	ppm	2.0	1	Range	0.5 - 0.9	0.4 - 0.8	0.1 - 0.9	0.6 - 0.9	0.6 - 0.8	Runoff and leaching from natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
						Distribution Systemwide: 0.2 – 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	ND	0.6	ND	ND	Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion
	RADIONUCLIDES										
	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 – 7 ND	ND	ND – 4 ND	ND – 5 ND	ND – 6 4	Decay of natural and man-made deposits
	Radium-228	pCi/L	NA	0.019	Range **Average**	ND	ND	ND	ND – 1 ND	ND – 2 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[g]										
	Total Trihalomethanes (TTHM) (Plant Core Locations and Distribution System)	ppb	80	NA	Range	19 - 27	12 - 17	14 - 22	13 - 24	20 - 26	Byproduct of drinking water chlorination
						Distribution Systemwide: 10 – 31					
					Highest LRAA	25	14	18	23	24	
						Distribution Systemwide: 32					
	Sum of Five Haloacetic Acids (HAA5) (Plant Core Locations and Distribution System)	ppb	60	NA	Range	1.8 - 8.0	1.9 - 4.9	2.2 - 14	3.5 - 12	3.3 - 7.3	Byproduct of drinking water chlorination
						Distribution Systemwide: 1.1 – 14					
					Highest LRAA	5.9	4.6	9.1	8.5	6.2	
						Distribution Systemwide: 9.1					
	Bromate[h]	ppb	10	0.1	Range **Highest RAA**	ND - 1.3 1.9	1.4 - 6.0 4.4	ND - 12 4.3	ND - 5.6 2.5	ND - 4.2 2.0	Byproduct of drinking water ozonation
	Total Chlorine Residual	ppm	MRDL = 4.0	MRDLG = 4.0	Range	***Distribution Systemwide: 1.4 – 3.0***					Drinking water disinfectant added for treatment
					Highest RAA	***Distribution Systemwide: 2.4***					
	Total Organic Carbon (TOC)	ppm	TT	NA	Range **Highest RAA**	2.2 - 2.7 2.4	1.8 - 2.3 2.2	1.7 - 3.1 2.1	1.9 - 2.6 2.3	2.1 - 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**	ND - 260 137	ND - 220 116	ND - 93 ND	ND - 200 108	80 - 210 149	Residue from water treatment process; runoff and leaching from natural deposits
Chloride	ppm	500	NA	Range **Average**	93 - 94 94	51 - 54 52	60 - 62 61	81 - 92 86	93	Runoff/leaching from natural deposits; seawater influence
Color	Color Units	15	NA	Range **Average**	1	1 - 3 2	1 - 3 2	1 - 2 2	1	Naturally occurring organic materials
Odor Threshold	TON	3	NA	Range **Average**	2	2	2	2	2	Naturally occurring organic materials
Specific Conductance	µS/cm	1,600	NA	Range **Average**	964 - 975 970	451 - 468 460	439 - 455 447	796 - 956 876	963 - 968 966	Substances that form ions in water; seawater influence
Sulfate	ppm	500	NA	Range **Average**	215 - 217 216	53 - 56 54	41 - 43 42	152 - 208 180	211 - 215 213	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)[i]	ppm	1,000	NA	Range **Average**	582 - 603 592	255 - 264 260	240 - 255 248	472 - 588 530	587 - 593 590	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

HPC Heterotrophic Plate Count

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 Standards (Primary Drinking Water Standards) - MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment 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 HPCs, *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) All distribution system samples had detectable total chlorine residuals, so no HPC bacteria analysis was required. Metropolitan monitors HPCs to ensure treatment process efficacy.

(e) Compliance with the state MCL for aluminum is based on RAA. No exceedances occurred in the Diemer, Jensen, Mills, Skinner and Weymouth treatment plant effluents.

(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 2020, resulting in occasional fluoride levels below 0.7 mg/L .

(g) 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.

(h) Compliance with the state and federal bromate MCL is based on RAA. No exceedances occurred in the Diemer, Jensen, Mills, Skinner and Weymouth treatment plant effluents.

(i) 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**	117 - 120 118	79 - 86 82	75 - 76 76	105 - 121 113	118 - 119 118	Runoff/leaching of natural deposits; carbonate, bicarbonate, hydroxide and occasionally borate, silicate and phosphate
Boron	ppb	1,000	Range **Average**	130	170	140	130	130	Runoff/leaching from natural deposits; industrial wastes
Calcium	ppm	NA	Range **Average**	65 - 67 66	25 - 27 26	21 - 22 22	52 - 72 62	65	Runoff/leaching from natural deposits
Calcium Carbonate Precipitation Potential (CCPP) (as $CaCO_3$) [a]	ppm	NA	Range **Average**	2.6 - 11 8.1	1.1 - 3.4 2.2	0.85 - 2.2 1.6	0.78 - 11 6.4	3.3 - 9.9 7.4	Elemental balance in water; affected by temperature, other factors
Chlorate	ppb	800	Range **Average**	69	27	27	34	76	Byproduct of drinking water chlorination; industrial processes
Corrosivity as Aggressiveness Index [b]	AI	NA	Range **Average**	12.3 - 12.4 12.4	12.1 - 12.2 12.1	11.9 - 12.1 12.0	12.3 - 12.5 12.4	12.4	Elemental balance in water; affected by temperature, other factors
Corrosivity as Saturation Index [c]	SI	NA	Range **Average**	0.49 - 0.69 0.59	0.32 - 0.48 0.40	0.27 - 0.28 0.28	0.39 - 0.73 0.56	0.48 - 0.65 0.56	Elemental balance in water; affected by temperature, other factors
Hardness (as $CaCO_3$)	ppm	NA	Range **Average**	261 - 269 265	107 - 110 108	84 - 94 89	211 - 273 242	256 - 268 262	Runoff/leaching from natural deposits; sum of polyvalent cations, generally magnesium and calcium present in the water
Magnesium	ppm	NA	Range **Average**	25 - 26 26	11 - 12 12	9.7 - 10 9.8	20 - 26 23	25 - 26 26	Runoff/leaching from natural deposits
N-Nitrosodimethylamine (NDMA)	ppt	10	Range	3.1	2.0	2.5	4.2	ND	Byproduct of drinking water chloramination; industrial processes
		PHG = 3	**Range**	***Distribution Systemwide: ND – 5.2***					
Perfluorohexanoic Acid (PFHxA) [d]	ppt	NA	Range **Average**	ND	2.5	2.6	ND	ND	Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes
pH	pH Units	NA	Range **Average**	8.1	8.4	8.3 - 8.5 8.4	8.1	8.1	NA
Potassium	ppm	NA	Range **Average**	4.5 - 4.7 4.6	2.5 - 2.6 2.6	2.5	4.0 - 4.8 4.4	4.5 - 4.6 4.6	Salt present in the water; naturally occurring
Sodium	ppm	NA	Range **Average**	93 - 98 96	46 - 48 47	51 - 55 53	76 - 98 87	93 - 97 95	Salt present in the water; naturally occurring
Sum of Five Haloacetic Acids (HAA5) [e]	ppb	MCL = 60	Range **Average**	1.1 - 4.0 2.5	1.4 - 3.0 2.5	2.1 - 7.6 5.7	2.9 - 8.6 6.2	3.4 - 5.7 4.5	Byproduct of drinking water chlorination
Total Dissolved Solids (TDS) [f]	ppm	MCL = 1,000	Range **Average**	402 - 595 563	248 - 273 258	244 - 295 263	334 - 612 475	450 - 599 565	Runoff/leaching from natural deposits
Total Trihalomethanes (TTHM) [e]	ppb	MCL = 80	Range **Average**	13 - 32 22	8.2 - 22 11	12 - 29 18	11 - 40 19	15 - 36 22	Byproduct of drinking water chlorination

Abbreviations and Definitions

(please refer to the main table for other abbreviations and definitions)

AI Aggressiveness Index

$CaCO_3$ Calcium Carbonate

CCPP Calcium Carbonate Precipitation Potential

NL Notification Level - The level that requires the public water system to notify the State Water Resources Control Board.

ppt parts per trillion or nanograms per liter (ng/L)

SI Saturation Index

Footnotes

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

(b) AI ≥ 12.0 = Non-aggressive water; AI 10.0 - 11.9 = Moderately aggressive water; AI ≤ 10.0 = Highly aggressive water. Reference: *ANSI/AWWA Standard C400-93 (R98)*

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

(d) Data based on EPA Method 537.1 for 18 different perfluoroalkyl and polyfluoroalkyl substances (PFAS) that includes Perfluorohexanoic Acid (PFHxA). PFAS results below the laboratory minimum reporting level (MRL) of 2.0 ppt are reported as "ND."

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

(f) 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.

Chemistry staff prepare sample for nitrosamine 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
www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chemicalcontaminants.html

U.S. ENVIRONMENTAL PROTECTION AGENCY OFFICE OF GROUND WATER AND DRINKING WATER
1200 Pennsylvania Avenue, NW
Mail Code 4606M
Washington, DC 20460-0003
www.epa.gov/ground-water-and-drinking-water

CONSUMER INFORMATION
www.epa.gov/CCR

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

2021

Annual Drinking Water Quality Report

Covering the reporting period of January - December 2020

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."

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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 Street, Los Angeles, adjacent to historic Union Station. More information is available at www.mwdh2o.com.

June 2021 . 2,500

MIX
Paper from responsible sources
FSC® C114687

Printed by MWD Imaging Services

Arabic

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

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.