ANNUAL DRINKING WATER QUALITY REPORT

Covering the reporting period of January - December 2017

WATER QUALITY EXCELLENCE | 2018

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

Read this report to learn more about water provided by Metropolitan, how it compares favorably to all drinking water standards, and what is being done to further protect nearly 19 million Southland consumers.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Metropolitan is a regional wholesaler that provides water for 26 member public agencies to deliver —either directly or through their sub-agencies— to nearly 19 million people living in Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura counties. The district 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 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.

To mark the completion of Metropolitan's conversion to ozone disinfection in 2017, this year's *Annual Drinking Water Quality Report* features images of ozone facilities at all five of Metropolitan's water treatment plants.

A Letter From The General Manager

On behalf of the Metropolitan Water District of Southern California, I am pleased to present this Annual Drinking Water Quality Report which provides a summary of water quality and monitoring data for 2017.

Metropolitan has been a national leader in providing safe drinking water that meets increasingly stringent standards. In 2017, that leadership was complemented by Metropolitan's ongoing efforts to improve the quality and reliability of water supplies imported via the Sacramento-San Joaquin Delta and the Colorado River, and Metropolitan's support of water quality initiatives within its six-county service area. The year was highlighted by the conversion of the F.E. Weymouth Water Treatment Plant to ozone disinfection, a more effective treatment process, capping a $1.2 billion initiative that had previously switched Metropolitan's Henry J. Mills (2003), Joseph Jensen (2005), Robert A. Skinner (2010) and Robert B. Diemer (2015) plants to ozone technology. This systemwide achievement improves and protects the quality of drinking water served to Southern California and has driven disinfection byproduct levels in Metropolitan's system to historically low levels.

To help ensure the delivery of a safe and reliable water supply to the nearly 19 million people in its service area, Metropolitan tests its water for almost 400 constituents and performs nearly 250,000 water quality tests annually on samples gathered throughout its vast distribution system. Analyses of these samples are undertaken at Metropolitan's water quality laboratory in La Verne.

A core feature of this report is a detailed table that begins on page 10, which illustrates monitoring results. Additionally, a Readers' Guide is included to help explain the data reported. To learn about other water quality and supply issues, visit Metropolitan's website at mwdh2o.com and go to the "About Your Water" section. You may also contact Dr. Mic Stewart, Metropolitan's Manager of Water Quality, at 213.217.5696 or mstewart@mwdh2o.com.

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 mwdh2o.com.

I trust you will find this report to be informative.

Sincerely,

Jeffrey Kightlinger
GENERAL MANAGER

« **F.E. Weymouth Water Treatment Plant** | Ozone generator

Drinking Water and Your Health

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 visiting the U.S. Environmental Protection Agency's website at **www.epa.gov/safewater.**

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.

Henry J. Mills Water Treatment Plant

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 source water include:

Microbial contaminants, such as viruses and bacteria, that 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

In order 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.

Robert B. Diemer Water Treatment Plant

Protecting Water Quality at the Source

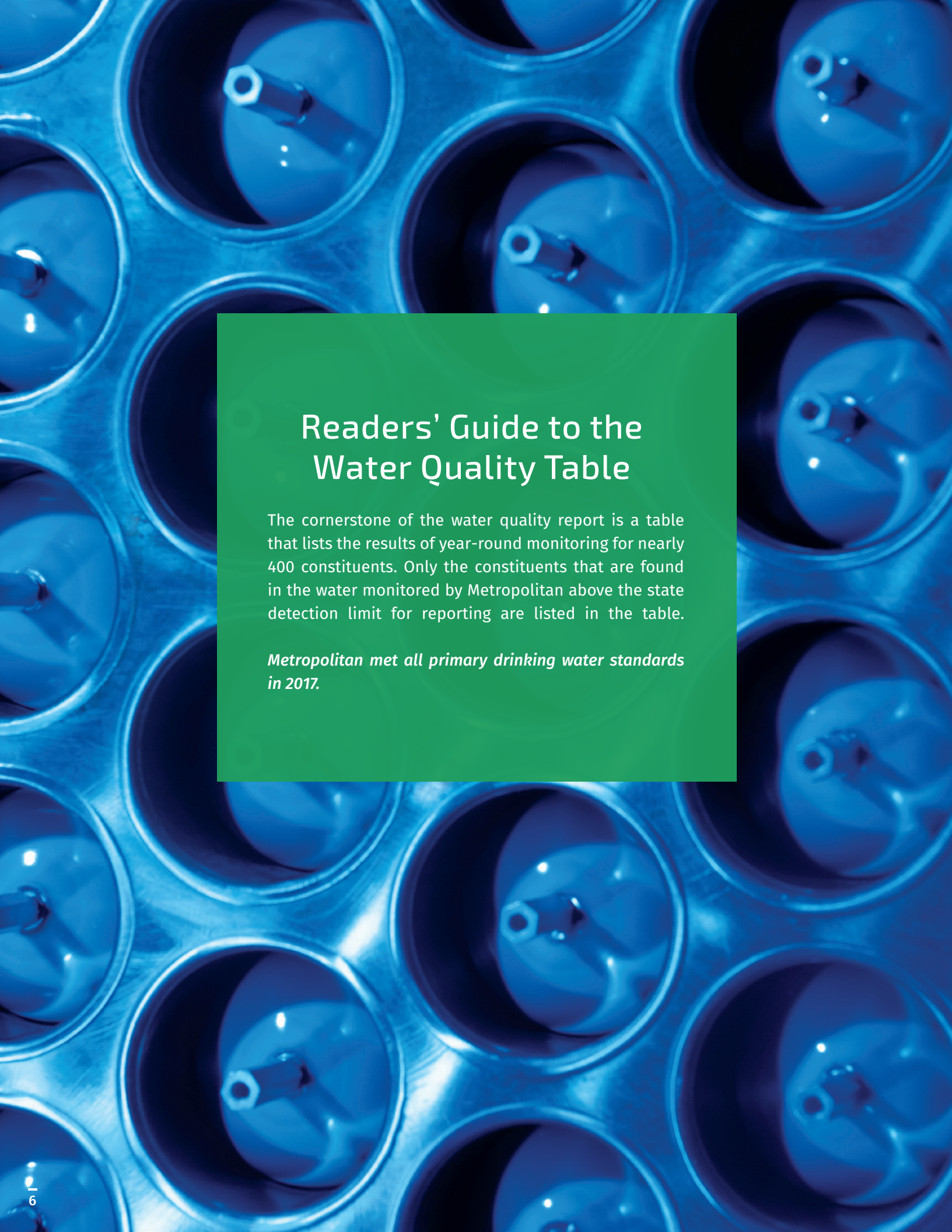
Source water protection is an important issue for all of California. Large water utilities are required by the DDW to conduct an initial source water assessment, which is then updated through watershed sanitary surveys every five years. Watershed sanitary surveys examine possible sources of drinking 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.

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 such as 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. USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available at the USEPA Ground Water and Drinking Water website at **www.epa.gov/safewater**.

Joseph Jensen Water Treatment Plant
Fog blanket created from ice buildup on liquid oxygen evaporator



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 nearly 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 2017.

By reading the table on Page 10 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.

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 tiny 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.

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 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.

« **Robert A. Skinner Water Treatment Plant**
Dielectrics inside an ozone generator (close-up view)

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 11, 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?

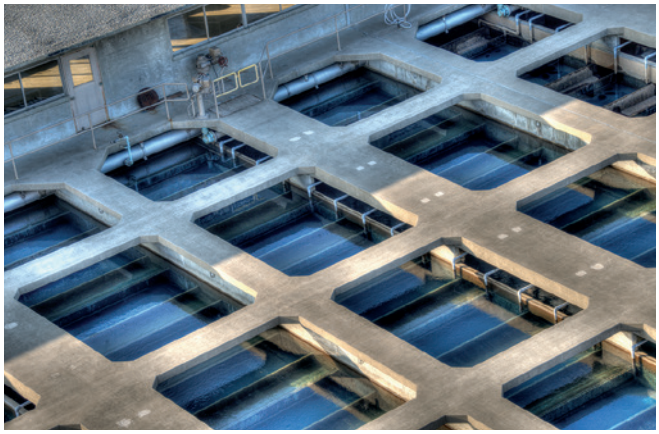
Metropolitan operates five water treatment plants, and the monitoring results for the water delivered by each of the plants are listed. Typically, the F.E. Weymouth Water Treatment Plant serves parts of Los Angeles County, the San Gabriel Valley and areas of Orange County. The Robert B. Diemer Water 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.

F.E. Weymouth Water Treatment Plant »
Ozone generator

Robert B. Diemer Water Treatment Plant
Ozone contactor building rooftop



Robert B. Diemer Water Treatment Plant
Filter basins


Ozone Gas
4
0
3
0
0
0
OX

2017 Water Quality Table

	B	C	D	F	G	H					I
	Parameter	Units	STATE MCL	PHG	Range Average	Diemer Plant	Jensen Plant	Mills Plant	Skinner Plant	Weymouth Plant	Major Sources in Drinking Water
A	**Percent State Water Project**[a]	%	NA	NA	Range **Average**	0 - 100 71	60 - 100 97	100	0 - 100 62	0 - 100 74	NA
E	**PRIMARY STANDARDS -** Mandatory Health-Related Standards										
	CLARITY										
	Combined Filter Effluent Turbidity (CFE)[b]	NTU %	TT	NA	Highest **% ≤ 0.3**	0.08 100	0.06 100	0.08 100	0.10 100	0.04 100	Soil runoff
	MICROBIOLOGICAL										
	Total Coliform Bacteria[c]	%	5.0	MCLG = 0	Range **Average**	***Distribution Systemwide: 0 - 0.2***					Naturally present in the environment
						Distribution Systemwide: 0.1					
	Heterotrophic Plate Count Bacteria (HPC)[d]	CFU/mL	TT	NA	Range **Median**	ND - 1 ND	ND - 1 ND	ND	ND - 1 ND	ND - 1 ND	Naturally present in the environment
	INORGANIC CHEMICALS										
	Aluminum	ppb	1,000	600	Range **Highest RAA**	ND - 130 159	ND - 120 89	ND - 85 93	ND	ND - 210 170	Residue from water treatment process; natural deposits erosion
	Arsenic	ppb	10	0.004	Range **Average**	ND	ND - 2.4 ND	ND	ND	ND	Natural deposits erosion; glass and electronics production wastes
	Fluoride[e]	ppm	2.0	1	Range	0.6 - 0.9	0.6 - 0.8	0.6 - 0.9	0.5 - 0.9	0.5 - 0.9	Water additive for dental health
						Distribution Systemwide: 0.5 - 0.9					
					Average	0.7	0.7	0.7	0.7	0.7	
						Distribution Systemwide: 0.7					
	Nitrate (as Nitrogen)	ppm	10	10	Range **Average**	ND	0.6	0.5	ND	ND	Runoff and leaching from fertilizer use; sewage; natural deposits erosion
	RADIONUCLIDES										
	Gross Alpha Particle Activity	pCi/L	15	MCLG = 0	Range **Average**	ND	ND - 3 ND	ND	ND - 4 ND	ND	Erosion of natural deposits
	Gross Beta Particle Activity	pCi/L	50	MCLG = 0	Range **Average**	ND	ND	ND	ND - 5 ND	ND	Decay of natural and man-made deposits
	Uranium	pCi/L	20	0.43	Range **Average**	ND	ND - 1 ND	ND	ND - 3 ND	ND	Erosion of natural deposits
	DISINFECTION BYPRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BYPRODUCT PRECURSORS										
	Total Trihalomethanes (TTHM) - Plant Core Locations and Distribution System[f]	ppb	80	NA	Range	15- 24	19 - 41	12 - 40	17 - 27	21 - 43	Byproduct of drinking water chlorination
						Distribution Systemwide: 12 - 18					
					Highest LRAA	24	28	30	22	44	
						Distribution Systemwide: 55					
	Haloacetic Acids (five) - Plant Core Locations and Distribution System	ppb	60	NA	Range	2.2 - 8.5	5.6 - 7.9	2.8 - 12	3.9 - 9.1	6.4 - 26	Byproduct of drinking water chlorination
						Distribution Systemwide: 2.2 - 3.5					
					Highest LRAA	5.9	6.8	8.8	7.0	17	
						Distribution Systemwide: 23					
	Bromate[g]	ppb	10	0.1	Range	ND - 5.8	3.3 - 8.9	ND - 7.8	ND - 12	2.6 - 5.0	Byproduct of drinking water ozonation
					Highest LRAA	2.3	7.4	3.2	4.1	NA	
	Total Chlorine Residual	ppm	MRDL = 4.0	MRDLG = 4.0	Range	***Distribution Systemwide: 1.1 - 3.1***					Drinking water disinfectant added for treatment
					Highest RAA	***Distribution Systemwide: 2.4***					
	Total Organic Carbon (TOC)[h]	ppm	TT	NA	Range **Average**	1.8 - 3.0 2.4	2.3 - 3.1 2.5	1.6 - 3.2 2.6	1.9 - 3.1 2.5	2.0 - 2.9 2.5	Various natural and man-made sources; TOC is a precursor for the formation of disinfection byproducts

	B	C	D	F	G	H					I
	Parameter	Units	STATE 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[i]	ppb	200	600	Range **Highest RAA**	ND - 130 159	ND - 120 89	ND - 85 93	ND	ND - 210 170	Residue from water treatment process; natural deposits erosion
	Chloride	ppm	500	NA	Range **Average**	34 - 66 50	74 - 94 84	30 - 41 36	56 - 72 64	29 - 66 48	Runoff/leaching from natural deposits; seawater influence
	Color	Color Units	15	NA	Range **Average**	1	1 - 2 2	1	1	2	Naturally-occurring organic materials
	Manganese	ppb	50	NL = 500	Range **Average**	ND	ND	ND	27	ND	Leaching from natural deposits
	Odor Threshold[j]	TON	3	NA	Range **Average**	2	2	3	3	3	Naturally-occurring organic materials
	Specific Conductance	µS/cm	1,600	NA	Range **Average**	351 - 630 490	557 - 626 592	278 - 307 292	455 - 571 513	299 - 621 460	Substances that form ions in water; seawater influence
	Sulfate	ppm	500	NA	Range **Average**	65 - 127 96	61 - 78 70	26 - 39 32	66 - 81 74	46 - 123 84	Runoff/leaching from natural deposits; industrial wastes
	Total Dissolved Solids (TDS)	ppm	1,000	NA	Range **Average**	213 - 374 294	316 - 373 344	163 - 170 166	259 - 321 290	179 - 364 272	Runoff/leaching from natural deposits; seawater influence

Abbreviations and Definitions

Average Result based on arithmetic mean

CFU Colony-Forming Units

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

NL Notification Level - The level at which notification of the public water system to state Division of Drinking Water is required.

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 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 microSiemen per centimeter; or micromho per centimeter (µmho/cm)

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) The Jensen treatment plant treated small amounts of Los Angeles Aqueduct water during the months of March and June 2017.

(b) As a Primary Standard, the turbidity levels of the filtered water were less than or equal to 0.3 NTU in 95% of the online measurements taken each month and did not exceed 1 NTU for more than one hour. Turbidity, a measure of the cloudiness of the water, is an indicator of treatment performance. The turbidity levels for grab samples at these locations were below the state detection limit for purposes of reporting and were in compliance with the Secondary Standards.

(c) State Total Coliform Rule (TCR) - No more than 5.0% total coliform-positive samples in a month. Compliance is based on the monthly combined distribution system sampling from all of the treatment plants. Six total coliform-positive samples were found out of the 8,971 samples analyzed in 2017. The MCL was not exceeded.

Federal Revised Total Coliform Rule (rTCR) - More than 5.0% total coliform-positive samples in a month triggers Level 1 assessments: No Level 1 assessments, or violations occurred.

(d) All distribution system samples had detectable total chlorine residuals and no HPC was required. However, plant effluents' HPC were analyzed to ensure chlorine disinfection. HPC reporting level is 1 CFU/mL. Values are based on monthly median per state guidelines and recommendations.

(e) Metropolitan was in compliance with all provisions of the State's Fluoridation System Requirements.

(f) No MCL exceedance occurred in the distribution system. Compliance with the state and federal TTHM MCL is based on LRAA.

(g) No MCL exceedance occurred in the Skinner treatment plant effluent. Compliance with the state and federal bromate MCL is based on RAA. Weymouth treatment plant's RAA will be calculated once monitoring data from four quarters becomes available.

(h) Metropolitan was in compliance with all provisions of state and federal requirements for disinfection byproduct precursors.

(i) No MCL exceedance occurred in the Weymouth treatment plant effluent. Compliance with the state aluminum MCL is based on RAA.

(j) No odor threshold MCL exceedance occurred in Mills, Skinner, and Weymouth treatment plant effluents because no values were higher than the MCL of 3. The MCL was not violated.

Other Detected Constituents That May be of Interest to Consumers

Parameter	Units	NL (PHG)	Range Average	TREATMENT PLANT EFFLUENTS AND DISTRIBUTION SYSTEM Diemer Plant	Jensen Plant	Mills Plant	Skinner Plant	Weymouth Plant	Major Sources in Drinking Water
Alkalinity (as $CaCO_3$)	ppm	NA	Range **Average**	48 - 74 61	85 - 86 86	41 - 55 48	62 - 78 70	43 - 71 57	Runoff/leaching of natural deposits; carbonate, bicarbonate, hydroxide, and occasionally borate, silicate, and phosphate
Boron	ppb	1,000	Range **Average**	100	190	100	110	110	Runoff/leaching from natural deposits; industrial wastes
Calcium	ppm	NA	Range **Average**	20 - 36 28	27	13 - 14 14	27 - 32 30	14 - 35 24	Runoff/leaching from natural deposits
Chlorate	ppb	800	Range **Average**	27	28	23	23	34	Byproduct of drinking water chlorination; industrial processes
Corrosivity[a] as Aggressiveness Index (AI)	AI	NA	Range **Average**	12.0	12.0 - 12.1 12.0	11.9 - 12.0 12.0	11.8 - 12.0 11.9	11.9 - 12.1 12.0	Elemental balance in water; affected by temperature, other factors
Corrosivity[b] as Saturation Index (SI)	SI	NA	Range **Average**	0.21 - 0.29 0.25	0.15 - 0.26 0.20	0.13 - 0.19 0.16	0.04 - 0.25 0.14	0.18 - 0.35 0.26	Elemental balance in water; affected by temperature, other factors
Hardness (as $CaCO_3$)	ppm	NA	Range **Average**	82 - 156 119	118 - 120 119	58 - 63 60	109 - 129 119	58 - 152 105	Runoff/leaching from natural deposits; sum of polyvalent cations, generally magnesium and calcium present in the water
Magnesium	ppm	NA	Range **Average**	8.1 - 16 12	12 - 14 13	6.1 - 7.5 6.8	11 - 13 12	6.2 - 16 11	Runoff/leaching from natural deposits
N-Nitrosodimethylamine (NDMA)	ppt	10 PHG=3	Range **Average**	ND ***Distribution Systemwide: 3.3***	ND - 3.2	ND - 2.4	ND - 3.1	ND	Byproduct of drinking water chloramination; industrial processes
pH	pH Units	NA	Range **Average**	8.2 - 8.6 8.4	8.2 - 8.3 8.3	8.7 - 8.8 8.7	8.2	8.4 - 8.7 8.5	NA
Potassium	ppm	NA	Range **Average**	2.4 - 3.2 2.8	3.1 - 3.2 3.2	1.8 - 2.1 2.0	2.8 - 3.2 3.0	2.2 - 3.2 2.7	Salt present in the water; naturally-occurring
Sodium	ppm	NA	Range **Average**	39 - 63 51	58 - 80 69	32	48 - 56 52	35 - 64 50	Salt present in the water; naturally-occurring
Vanadium	ppb	50	Range **Average**	ND	4.0	ND	ND	ND	Naturally-occurring; industrial waste discharge

Abbreviations and Definitions

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

$CaCO_3$ Calcium Carbonate

NL Notification Level - The level at which notification of the public water system to state Division of Drinking Water is required.

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

Footnotes

(a) AI (greater than or equal to) 12.0 = Non-aggressive water
AI (10.0 - 11.9) = Moderately aggressive water
AI (less than or equal to) 10.0 = Highly aggressive water
Reference: ANSI/AWWA Standard C400-93 (R98)

(b) Positive SI index = non-corrosive; tendency to precipitate and/or deposit scale on pipes

Negative SI index = corrosive; tendency to dissolve calcium carbonate

Robert A. Skinner Water Treatment Plant
Ozone monitoring

F.E. Weymouth Water Treatment Plant
Ozone destruct unit

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.shtml

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/safewater

CONSUMER INFORMATION
www.epa.gov/ccr

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

ANNUAL DRINKING WATER QUALITY REPORT

Covering the reporting period
of January - December 2017

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

This report is very important to read or have translated. The sentences below 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."

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.

Front and back cover:

F.E. Weymouth Water Treatment Plant
Dielectric tubes inside an ozone generator

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