Foothill Municipal Water District(FMWD)
2024 WATER QUALITY REPORT TO FMWD MEMBER AGENCIES

WEYMOUTH refers to the Metropolitan Water District's Weymouth Water Treatment Plant in the city of La Verne.
FM-1 refers to the FMWD-Metropolitan Water District connection in the city of Pasadena.

		WEYMOUTH EFFLUENT	FM-1	REGULATORY STANDARDS			
		Range/Average		State (Federal) MCL	PHG	State DLR (RL)	Major Sources in Drinking Water
SOURCE WATER							
% of State Project Water % of Groundwater		0-100/68		NA	NA	NA	
PRIMARY STANDARDS - Mandatory Health-Related Standards							
CLARITY							
Combined Filter Effluent (CFE) Turbidity (a)	NTU % ≤ 0.3	**0.06 (highest)** **100%**	***NA***	**TT**	**NA**	**NA**	Soil runoff
MICROBIOLOGICAL (b)							
Total Coliform Bacteria (c)	% Positive	**0-0.3/0.07%** distribution system-wide	***0.003%***	**5.0**	**MCLG = 0**	**NA**	Naturally present in the environment
Escherichia coli (E. coli) (c,d)	Number	**0%** distribution system-wide	***0.003%***	**1**	**MCLG = 0**	**NA**	Human and animal fecal waste
Heterotrophic Plate Count (e)	CFU/ mL	**ND-1/ND**	***ND***	**TT**	**NA**	**(1)**	Naturally present in the environment
Cryptosporidium	Oocyst 200 L	**ND**	***ND***	**TT**	**MCLG = 0**	**(1)**	Human and animal fecal waste
Giardia	Cysts 200 L	**ND**	***ND***	**TT**	**MCLG = 0**	**(1)**	Human and animal fecal waste
INORGANIC CHEMICALS							
Nitrite (as Nitrogen)	ppm	**ND**	***ND***	**1**	**1**	**0.4**	Runoff & leaching from fertilizer use; septic tank and sewage; erosion of natural deposits
DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BY-PRODUCTS PRECURSORS (m)							
Total Trihalomethanes (TTHM)	ppb	**18-34/16-74** Distribution system-wide (i)	***27-30***	**80**	**NA**	**1**	By-product of drinking water disinfection
Sum of Five Haloacetic Acids (HAA5)	ppb	**ND-8.9/6.2** Distribution system-wide (i)	***5.4-6.8***	**60**	**NA**	**1**	By-product of drinking water disinfection
Total Chlorine Residual	ppm	**1.2-3.0/2.5** highest RAA Distribution system-wide	***2.0-2.7***	**[4.0]**	**[4.0]**	**NA**	Drinking water disinfectant added for treatment

DEFINITION OF TERMS AND FOOTNOTES

Footnotes

(a) FMWD recieves 100% of water from the Metropolitan Water District of Southern California's Weymouth Treatment Plant.

(b) Per the State's Surface Water Treatment Rule, treatment techniques that remove or inactivate *Giardia* cysts will also remove 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) The MCL for *E. coli* is based on any of the following conditions: Coliform-positive routine and repeat samples with either of them positive for *E. coli*; failure to analyze a repeat sample following an *E. coli*-positive routine sample; or a coliform-positive repeat sample is not tested for the presence of *E. coli*.

(e) All distribution system samples had detectable total chlorine residuals, so no HPC analysis was required. Metropolitan monitors HPC bacteria to ensure treatment process efficacy.

(m) 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.

revised 6/2/2025

2024 Water Quality Report to Member Agencies – The Metropolitan Water District of Southern California
Treatment Plant Effluents and Distribution System (PWS ID: 1910087)

Parameter		Units	State MCL	PHG	State DLR/ CCRDL (RL)	Range Average	Treatment Plant Effluent *					Distribution System	Major Sources in Drinking Water
							Diemer Plant	Jensen Plant	Mills Plant	Skinner Plant	Weymouth Plant		
Percent State Water Project		%	NA	NA	NA	Range	0 - 98	100	100	0 - 64	0 - 100		Not applicable
PRIMARY STANDARDS—Mandatory Health-Related Standards													
CLARITY													
Combined Filter Effluent (CFE) Turbidity	(a)	NTU	TT	NA	NA	Highest	0.06	0.04	0.08	0.07	0.06		Soil runoff
		%				% ≤ 0.3 NTU	100	100	100	100	100		
MICROBIOLOGICAL	(b)												
Total Coliform Bacteria	(c)	% Positive Monthly Sample	TT	MCLG = 0	NA	Range						0 - 0.3	Naturally present in the environment
						Average						0.1	
Heterotrophic Plate Count (HPC) Bacteria	(d)	CFU/mL	TT	NA	NA	Range	ND	ND	ND	ND	ND		Naturally present in the environment
						Median							
Cryptosporidium		oocysts/200 L	TT	MCLG = 0	NA	Range	ND	ND	ND	ND	ND		Human and animal fecal waste
						Average							
Giardia		cysts/200 L	TT	MCLG = 0	NA	Range	ND	ND	ND	ND	ND		Human and animal fecal waste
						Average							
ORGANIC CHEMICALS													
Synthetic Organic Compounds	(e)												
1,2,3-Trichloropropane (1,2,3-TCP)		ppt	5	0.7	5	Range	ND	ND	ND	ND	ND		Discharge from industrial and agrichemical factories; byproduct of producing other compounds and pesticides; leaching from hazardous waste sites
						Average							
2,4,5-TP (Silvex)		ppb	50	3	1	Range	ND	ND	ND	ND	ND		Residue of banned herbicide
						Average							
2,4-D		ppb	70	20	10	Range	ND	ND	ND	ND	ND		Runoff from herbicide used on row crops, rangeland, lawns, and aquatic weeds
						Average							
Acrylamide	(f)	ppm	TT	MCLG = 0	NA	Range	NA	NA	NA	NA	NA		Water treatment chemical impurities
						Average							
Alachlor		ppb	2	4	1	Range	ND	ND	ND	ND	ND		Runoff from herbicide used on row crops
						Average							
Atrazine		ppb	1	0.15	0.5	Range	ND	ND	ND	ND	ND		Runoff from herbicide used on row crops and along railroad and highway right-of-ways
						Average							
Bentazon		ppb	18	200	2	Range	ND	ND	ND	ND	ND		Runoff/leaching from herbicide used on beans, peppers, corn, peanuts, rice, and ornamental grasses
						Average							
Benzo(a)pyrene		ppt	200	7	100	Range	ND	ND	ND	ND	ND		Leaching from linings and coatings of water storage tanks and distribution mains
						Average							
Carbofuran		ppb	18	0.7	5	Range	ND	ND	ND	ND	ND		Leaching of soil fumigant used on rice, alfalfa, and grape vineyards
						Average							
Chlordane		ppt	100	30	100	Range	ND	ND	ND	ND	ND		Residue of banned insecticide
						Average							
Dalapon		ppb	200	790	10	Range	ND	ND	ND	ND	ND		Runoff from herbicide used on right-of-ways, and crops and landscape maintenance
						Average							
Di(2-ethylhexyl)adipate		ppb	400	200	5	Range	ND	ND	ND	ND	ND		Discharge from chemical factories
						Average							
Di(2-ethylhexyl)phthalate		ppb	4	12	3	Range	ND	ND	ND	ND	ND		Discharge from rubber and chemical factory; inert ingredient in pesticides
						Average							
Dibromochloropropane (DBCP)		ppt	200	3	10	Range	ND	ND	ND	ND	ND		Banned nematocide that may still be present in soils due to runoff/leaching
						Average							
Dinoseb		ppb	7	14	2	Range	ND	ND	ND	ND	ND		Runoff from herbicide used on soybeans, vegetables, and fruits
						Average							
Dioxin (2,3,7,8-TCDD)		ppq	30	0.05	5	Range	ND	ND	ND	ND	ND		Waste incineration emissions; chemical factory discharge
						Average							
Diquat		ppb	20	6	4	Range	ND	ND	ND	ND	ND		Runoff from herbicide used for terrestrial and aquatic weeds
						Average							
Endothall		ppb	100	94	45	Range	ND	ND	ND	ND	ND		Runoff from herbicide used for terrestrial and aquatic weeds; defoliant
						Average							
Endrin		ppb	2	0.3	0.1	Range	ND	ND	ND	ND	ND		Residue of banned insecticide and rodenticide
						Average							
Epichlorohydrin	(f)	ppm	TT	MCLG = 0	NA	Range	NA	NA	NA	NA	NA		Water treatment chemical impurities
						Average							

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Treatment Plant Effluents and Distribution System (PWS ID: 1910087)

Parameter	Units	State MCL	PHG	State DLR/ CCRDL (RL)	Range Average	Treatment Plant Effluent *					Distribution System	Major Sources in Drinking Water
						Diemer Plant	Jensen Plant	Mills Plant	Skinner Plant	Weymouth Plant		
Ethylene Dibromide (EDB)	ppt	50	10	20	Range Average	ND	ND	ND	ND	ND		Petroleum refinery discharges; underground gas tank leaks; banned nematocide that may still be present in soils due to runoff and leaching
Glyphosate	ppb	700	900	25	Range Average	ND	ND	ND	ND	ND		Runoff from herbicide use
Heptachlor	ppt	10	8	10	Range Average	ND	ND	ND	ND	ND		Residue of banned insecticide
Heptachlor Epoxide	ppt	10	6	10	Range Average	ND	ND	ND	ND	ND		Breakdown product of heptachlor
Hexachlorobenzene	ppb	1	0.03	0.5	Range Average	ND	ND	ND	ND	ND		Discharge from metal refineries and agrichemicals factories; wastewater chlorination reaction byproduct
Hexachlorocyclopentadiene	ppb	50	2	1	Range Average	ND	ND	ND	ND	ND		Discharge from chemical factories
Lindane	ppt	200	32	200	Range Average	ND	ND	ND	ND	ND		Runoff/leaching from insecticide used on cattle, lumber, and gardens
Methoxychlor	ppb	30	0.09	10	Range Average	ND	ND	ND	ND	ND		Runoff/leaching from insecticide uses on fruits, vegetables, alfalfa, and livestock
Molinate (Ordram)	ppb	20	1	2	Range Average	ND	ND	ND	ND	ND		Runoff/leaching from herbicide used on rice
Oxamyl (Vydate)	ppb	50	26	20	Range Average	ND	ND	ND	ND	ND		Runoff/leaching from insecticide uses
Pentachlorophenol	ppb	1	0.3	0.2	Range Average	ND	ND	ND	ND	ND		Discharge from wood preserving factories, and other insecticidal and herbicidal uses
Picloram	ppb	500	166	1	Range Average	ND	ND	ND	ND	ND		Herbicide runoff
Polychlorinated Biphenyls (PCBs)	ppt	500	90	500	Range Average	ND	ND	ND	ND	ND		Runoff from landfills; discharge of waste chemicals
Simazine	ppb	4	4	1	Range Average	ND	ND	ND	ND	ND		Herbicide runoff
Thiobencarb	ppb	70	42	1	Range Average	ND	ND	ND	ND	ND		Runoff/leaching from herbicide used on rice
Toxaphene	ppb	3	0.03	1	Range Average	ND	ND	ND	ND	ND		Runoff/leaching from insecticide used on cotton and cattle
Volatile Organic Compounds												
1,1,1-Trichloroethane	ppb	200	1,000	0.5	Range Average	ND	ND	ND	ND	ND		Metal degreasing site discharge; manufacture of food wrappings
1,1,2,2-Tetrachloroethane	ppb	1	0.1	0.5	Range Average	ND	ND	ND	ND	ND		Discharge from industrial and agrichemical factories; solvent used in production of TCE, pesticides, varnish, and lacquers
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ppm	1.2	4	0.01	Range Average	ND	ND	ND	ND	ND		Discharge from metal degreasing sites and other factories; dry cleaning solvent; refrigerant
1,1,2-Trichloroethane	ppb	5	0.3	0.5	Range Average	ND	ND	ND	ND	ND		Discharge from industrial chemical factories
1,1-Dichloroethane	ppb	5	3	0.5	Range Average	ND	ND	ND	ND	ND		Extraction and degreasing solvent; fumigant
1,1-Dichloroethylene	ppb	6	10	0.5	Range Average	ND	ND	ND	ND	ND		Discharge from industrial chemical factories
1,2,4-Trichlorobenzene	ppb	5	5	0.5	Range Average	ND	ND	ND	ND	ND		Discharge from textile-finishing factories
1,2-Dichlorobenzene	ppb	600	600	0.5	Range Average	ND	ND	ND	ND	ND		Discharge from industrial chemical factories
1,2-Dichloroethane	ppt	500	400	500	Range Average	ND	ND	ND	ND	ND		Discharge from industrial chemical factories
1,2-Dichloropropane	ppb	5	0.5	0.5	Range Average	ND	ND	ND	ND	ND		Industrial chemical factory discharge; primary component of some fumigants
1,3-Dichloropropene	ppt	500	200	500	Range Average	ND	ND	ND	ND	ND		Runoff/leaching from nematocide used on croplands
1,4-Dichlorobenzene	ppb	5	6	0.5	Range Average	ND	ND	ND	ND	ND		Discharge from industrial chemical factories
Benzene	ppb	1	0.15	0.5	Range Average	ND	ND	ND	ND	ND		Plastics factory discharge; gas tanks and landfill leaching

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Carbon Tetrachloride	ppt	500	100	500	Range	ND	ND	ND	ND	ND		Discharge from chemical plants and other industrial waste
					Average							
cis-1,2-Dichloroethylene	ppb	6	13	0.5	Range	ND	ND	ND	ND	ND		Industrial chemical factory discharge; byproduct of TCE and PCE biodegradation
					Average							
Dichloromethane (Methylene Chloride)	ppb	5	4	0.5	Range	ND	ND	ND	ND	ND		Discharge from pharmaceutical and chemical factories; insecticide
					Average							
Ethylbenzene	ppb	300	300	0.5	Range	ND	ND	ND	ND	ND		Petroleum refinery discharge; industrial chemical factories
					Average							
Methyl-*tert*-butyl ether (MTBE)	ppb	13	13	3	Range	ND	ND	ND	ND	ND		Gasoline discharge from watercraft engines
					Average							
Monochlorobenzene	ppb	70	70	0.5	Range	ND	ND	ND	ND	ND		Discharge from industrial and agrichemical factories, and dry cleaners
					Average							
Styrene	ppb	100	0.5	0.5	Range	ND	ND	ND	ND	ND		Rubber and plastics factories discharge; landfill leaching
					Average							
Tetrachloroethylene (PCE)	ppb	5	0.06	0.5	Range	ND	ND	ND	ND	ND		Discharge from factories, dry cleaners, and auto shops
					Average							
Toluene	ppb	150	150	0.5	Range	ND	ND	ND	ND	ND		Discharge from petroleum and chemical refineries
					Average							
trans-1,2-Dichloroethylene	ppb	10	50	0.5	Range	ND	ND	ND	ND	ND		Industrial chemical factory discharge; byproduct of TCE and PCE biodegradation
					Average							
Trichloroethylene (TCE)	ppb	5	1.7	0.5	Range	ND	ND	ND	ND	ND		Discharge from metal degreasing sites and other factories
					Average							
Trichlorofluoromethane (Freon-11)	ppb	150	1,300	5	Range	ND	ND	ND	ND	ND		Industrial factory discharge; degreasing solvent; propellant and refrigerant
					Average							
Vinyl Chloride	ppt	500	50	500	Range	ND	ND	ND	ND	ND		Leaching from PVC piping; plastic factory discharge; byproduct of TCE and PCE biodegradation
					Average							
Xylenes, Total	ppm	1.750	1.8	0.0005	Range	ND	ND	ND	ND	ND		Discharge from petroleum and chemical refineries; fuel solvent
					Average							
INORGANIC CHEMICALS												
Aluminum (g)	ppb	1,000	600	50	Range	ND - 110	52 - 91	ND - 110	ND - 160	ND - 150		Residue from water treatment process; erosion of natural deposits
					Highest RAA	ND	62	ND	74	93		
Antimony	ppb	6	1	6	Range	ND	ND	ND	ND	ND		Petroleum refinery discharges; fire retardants; solder; electronics
					Average							
Arsenic	ppb	10	0.004	2	Range	ND	ND	ND	ND	ND		Natural deposits erosion, glass and electronics production wastes
					Average							
Asbestos (h)	MFL	7	7	0.2	Range	ND	ND	ND	ND	ND		Asbestos cement pipes internal corrosion; runoff and leaching from natural deposits
					Average							
Barium	ppb	1,000	2,000	100	Range	124	ND	ND	ND	124		Oil and metal refineries discharge; natural deposits erosion
					Average							
Beryllium	ppb	4	1	1	Range	ND	ND	ND	ND	ND		Discharge from metal refineries, aerospace, and defense industries
					Average							
Cadmium	ppb	5	0.04	1	Range	ND	ND	ND	ND	ND		Internal corrosion of galvanized pipes; discharge from electroplating, industrial factories, and metal refineries; runoff from waste batteries and paints; natural deposits erosion
					Average							
Chromium	ppb	50	MCLG = 100	10	Range	ND	ND	ND	ND	ND		Discharge from steel and pulp mills; natural deposits erosion
					Average							
Chromium VI	ppb	10	0.02	0.1	Range	ND	ND	ND	ND	ND		Runoff/leaching from natural deposits; discharge from industrial wastes
					Average							
Copper (i)	ppm	AL = 1.3	0.3	0.05	Range	ND	ND	ND	ND	ND		Internal corrosion of household pipes; runoff/leaching from natural deposits; wood preservatives leaching
					Average							
Cyanide	ppb	150	150	100	Range	ND	ND	ND	ND	ND		Discharge from steel/metal, plastic, and fertilizer factories
					Average							
Fluoride (j)	ppm	2.0	1	0.1	Range	0.6 - 0.8	0.6 - 0.8	0.6 - 0.9	0.6 - 0.8	0.3 - 0.8	0.3 - 0.8	Runoff and leaching from natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
					Average	0.7	0.7	0.7	0.7	0.7	0.7	
Lead (i)	ppb	AL = 15	0.2	5	Range	ND	ND	ND	ND	ND		Internal corrosion of household water plumbing systems; industrial manufacturers' discharge; runoff and leaching from natural deposits
					Average							
Mercury	ppb	2	1.2	1	Range	ND	ND	ND	ND	ND		Erosion of natural deposits; factory discharge; landfill runoff
					Average							

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						Diemer Plant	Jensen Plant	Mills Plant	Skinner Plant	Weymouth Plant		
Nickel	ppb	100	12	10	Range	ND	ND	ND	ND	ND		Erosion of natural deposits; discharge from metal factories
					Average							
Nitrate (as Nitrogen)	ppm	10	10	0.4	Range	ND	0.5	0.6	ND	ND		Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion
					Average							
Nitrite (as Nitrogen)	ppm	1	1	0.4	Range	ND	ND	ND	ND	ND		Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion
					Average							
Perchlorate	ppb	6	1	1	Range	ND	ND	ND	ND	ND		Naturally-occurring in arid regions; industrial waste discharge
					Average							
Selenium	ppb	50	30	5	Range	ND	ND	ND	ND	ND		Refineries, mines, and chemical waste discharge; runoff from livestock lots
					Average							
Thallium	ppb	2	0.1	1	Range	ND	ND	ND	ND	ND		Leaching from ore processing; discharge from electronics, glass, and pharmaceutical factories
					Average							
RADIOLOGICALS (k)												
Gross Alpha Particle Activity	pCi/L	15	MCLG = 0	3	Range	ND - 5	ND	ND	ND - 4	ND		Runoff/leaching from natural deposits
					Average	ND			ND			
Gross Beta Particle Activity	pCi/L	50	MCLG = 0	4	Range	ND - 5	ND	ND	ND - 5	ND - 5		Decay of natural and man-made deposits
					Average	4			4	ND		
Radium-226	pCi/L	NA	0.05	1	Range	ND	ND	ND	ND	ND		Erosion of natural deposits
					Average							
Radium-228	pCi/L	NA	0.019	1	Range	ND	ND	ND - 1	ND	ND		
					Average			ND				
Combined Radium-226 + 228	pCi/L	5	MCLG = 0	NA	Range	ND	ND	ND - 1	ND	ND		
					Average			ND				
Strontium-90	pCi/L	8	0.35	2	Range	ND	ND	ND	ND	ND		Decay of natural and man-made deposits
					Average							
Tritium	pCi/L	20,000	400	1,000	Range	ND	ND	ND	ND	ND		Decay of natural and man-made deposits
					Average							
Uranium	pCi/L	20	0.43	1	Range	ND - 3	2 - 3	ND	ND - 3	ND - 3		Erosion of natural deposits
					Average	1	2		2	ND		
DISINFECTION BYPRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BYPRODUCT PRECURSORS (l)												
Total Trihalomethanes (TTHM) (Plant Core Locations and Distribution System)	ppb	80	NA	1.0	Range	24 - 30	13 - 27	14 - 29	15 - 48	28 - 37	12 - 48	Byproducts of drinking water chlorination
					Highest LRAA	44	21	44	34	32	45	
Sum of Five Haloacetic Acids (HAA5) (Plant Core Locations and Distribution System)	ppb	60	NA	1.0	Range	ND - 9.5	1.3 - 5	ND - 5.7	1.2 - 23	ND - 4.2	ND - 23	
					Highest LRAA	19	5.6	13	12	6.2	19	
Chloramines (as total chlorine residual)	ppm	MRDL = 4.0	MRDLG = 4	NA	Range						1.6 - 3.0	Drinking water disinfectant added for treatment
					Highest RAA						2.5	
Bromate	ppb	10	0.1	1.0	Range	ND - 1.6	ND - 5.4	ND - 19	ND - 6.0	ND - 9.2		Byproduct of drinking water ozonation
					Highest RAA	ND	3.1	7.9	1.5	2.0		
Total Organic Carbon (TOC)	ppm	TT	NA	0.30	Range	2.0 - 2.5	2.0 - 2.5	1.5 - 2.5	2.3 - 3.0	2.1 - 2.6		Various natural and man-made sources; TOC is a precursor for the formation of disinfection byproducts
					Highest RAA	2.4	2.4	2.2	2.6	2.4		
SECONDARY STANDARDS—Aesthetic Standards												
Aluminum (g)	ppb	200	600	50	Range	ND - 110	52 - 91	ND - 110	ND - 160	ND - 150		Residue from water treatment process; runoff and leaching from natural deposits
					Highest RAA	ND	62	ND	74	93		
Chloride	ppm	500	NA	(2)	Range	93 - 116	39 - 41	41 - 67	92 - 100	96 - 116		Runoff/leaching from natural deposits; seawater influence
					Average	104	40	54	96	106		
Color	Color Units	15	NA	(1)	Range	1 - 2	1	1 - 2	1 - 2	1		Naturally-occurring organic materials
					Average	2		2	2			
Copper (i)	ppm	1.0	0.3	0.05	Range	ND	ND	ND	ND	ND		Internal corrosion of household pipes; runoff/leaching from natural deposits; wood preservatives leaching
					Average							
Foaming Agents - Methylene Blue Active Substances (MBAS)	ppb	500	NA	(50)	Range	ND	ND	ND	ND	ND		Municipal and industrial waste discharges
					Average							
Iron	ppb	300	NA	100	Range	ND	ND	ND	ND	ND		Leaching from natural deposits; industrial wastes
					Average							
Manganese	ppb	50	NL = 500	(5)	Range	ND	ND	ND	ND	ND		Leaching from natural deposits
					Average							
Methyl-*tert*-butyl ether (MTBE)	ppb	5	13	3	Range	ND	ND	ND	ND	ND		Gasoline discharge from watercraft engines
					Average							
Odor Threshold	TON	3	NA	1	Range	1	1	1	1	ND		Naturally-occurring organic materials
					Average							

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Silver	ppb	100	NA	10	Range	ND	ND	ND	ND	ND		Industrial discharges
					Average							
Specific Conductance	µS/cm	1,600	NA	NA	Range	888 - 1,070	498 - 522	317 - 466	903 - 917	912 - 1,080		Substances that form ions in water; seawater influence
					Average	979	510	392	910	996		
Sulfate	ppm	500	NA	0.5	Range	196 - 253	89 - 92	21 - 47	195 - 203	200 - 250		Runoff/leaching from natural deposits; industrial wastes
					Average	224	90	34	199	225		
Thiobencarb	ppb	1	42	1	Range	ND	ND	ND	ND	ND		Runoff/leaching from rice herbicide
					Average							
Total Dissolved Solids, Filterable (TDS) (m)	ppm	1,000	NA	(2)	Range	556 - 686	291 - 322	178 - 263	560 - 572	573 - 690		Runoff/leaching from natural deposits
					Average	621	306	220	566	632		
Turbidity	NTU	5	NA	0.1	Range	ND	ND	ND	ND	ND		Soil runoff
					Average							
Zinc	ppm	5.0	NA	0.05	Range	ND	ND	ND	ND	ND		Runoff/leaching from natural deposits; industrial wastes
					Average							
OTHER PARAMETERS												
General Minerals												
Alkalinity, Total (as $CaCO_3$)	ppm	NA	NA	(1)	Range	105 - 123	94 - 101	68 - 71	103 - 107	109 - 127		Runoff/leaching of natural deposits; carbonate, bicarbonate, hydroxide, and occasionally borate, silicate, and phosphate
					Average	114	98	70	105	118		
Calcium	ppm	NA	NA	(0.1)	Range	58 - 78	38 - 39	15 - 22	61 - 62	59 - 76		Runoff/leaching from natural deposits
					Average	68	38	18	62	68		
Hardness, Total (as $CaCO_3$)	ppm	NA	NA	(1)	Range	235 - 305	143 - 153	68 - 99	242 - 243	241 - 303		Runoff/leaching from natural deposits; sum of polyvalent cations, generally magnesium and calcium present in the water
					Average	270	148	84	242	272		
Magnesium	ppm	NA	NA	(0.01)	Range	22 - 29	13 - 14	8.4 - 11	22 - 23	23 - 29		Runoff/leaching from natural deposits
					Average	26	14	9.7	22	26		
Potassium	ppm	NA	NA	(0.2)	Range	4.4 - 5.4	2.6	1.9 - 3.1	4.6 - 4.9	4.6 - 5.4		Salt present in the water; naturally-occurring
					Average	4.9		2.5	4.8	5.0		
Sodium	ppm	NA	NA	(1)	Range	90 - 116	46	35 - 54	91 - 95	93 - 117		
					Average	103		44	93	105		
Unregulated Contaminants												
Boron	ppb	NL = 1,000	NA	100	Range	140	170	130	130	140		Runoff/leaching from natural deposits; industrial wastes
					Average							
Chlorate	ppb	NL = 800	NA	(10)	Range	77	71	78	80	80		Byproduct of drinking water chlorination; industrial processes
					Average							
Lithium	ppb	NA	NA	(10)	Range	32 - 47	ND	ND	24 - 32	32 - 47		Naturally-occurring; used in electrochemical cells, batteries, and organic syntheses and pharmaceuticals
					Average	40			28	40		
Vanadium	ppb	NL = 50	NA	3	Range	ND	ND	ND	ND	ND		Naturally-occurring; industrial waste discharge
					Average							
Dichlorodifluoromethane (Freon-12)	ppb	NL = 1,000	NA	0.5	Range	ND	ND	ND	ND	ND		Industrial waste discharge
					Average							
Ethyl-*tert*-butyl ether (ETBE)	ppb	NA	NA	3	Range	ND	ND	ND	ND	ND		Used as gasoline additive
					Average							
tert-Amyl-methyl ether (TAME)	ppb	NA	NA	3	Range	ND	ND	ND	ND	ND		Used as gasoline additive
					Average							
tert-Butyl alcohol (TBA)	ppb	NL = 12	NA	2	Range	ND	ND	ND	ND	ND		MTBE breakdown product; used as gasoline additive
					Average							
Nitrosamine Compounds												
N-Nitrosodimethylamine (NDMA)	ppt	NL = 10	3	(2)	Range	ND	ND	ND	2.5	ND	ND - 3.0	Byproducts of drinking water chloramination; industrial processes
					Average						ND	
N-Nitrosodiethylamine (NDEA)	ppt	NL = 10	NA	(2)	Range	ND	ND	ND	ND	ND	ND	
					Average							
N-Nitrosodi-n-propylamine (NDPA)	ppt	NL = 10	NA	(2)	Range	ND	ND	ND	ND	ND	ND	
					Average							
N-Nitrosomethylethylamine (NMEA)	ppt	NA	NA	(2)	Range	ND	ND	ND	ND	ND	ND	
					Average							
N-Nitrosodi-n-butylamine (NDBA)	ppt	NA	NA	(2)	Range	2.5	ND	ND	ND	ND	ND	
					Average							

2024 Water Quality Report to Member Agencies – The Metropolitan Water District of Southern California
Treatment Plant Effluents and Distribution System (PWS ID: 1910087)

Parameter	Units	State MCL	PHG	State DLR/ CCRDL (RL)	Range Average	Treatment Plant Effluent *					Distribution System	Major Sources in Drinking Water
						Diemer Plant	Jensen Plant	Mills Plant	Skinner Plant	Weymouth Plant		
N-Nitrosopyrollidine (NPYR)	ppt	NA	NA	(2)	Range	ND	ND	ND	ND	ND	ND	Byproducts of drinking water chloramination; industrial processes
					Average							
N-Nitrosopiperidine (NPIP)	ppt	NA	NA	(2)	Range	ND	ND	ND	ND	ND	ND	
					Average							
N-Nitrosomorpholine (NMOR)	ppt	NA	NA	(2)	Range	ND	ND	ND	ND	ND	ND	Industrial processes
					Average							
Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Analyzed by EPA Methods 533 and 537.1 (n,o)												
Perfluorooctanoic Acid (PFOA)	ppt	NL = 5.1	0.007	4	Range	ND	ND	ND	ND	ND		Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes
					Average							
Perfluorooctanesulfonic Acid (PFOS)	ppt	NL = 6.5	1	4	Range	ND	ND	ND	ND	ND		
					Average							
Perfluorobutanesulfonic acid (PFBS)	ppt	NL = 500	NA	3	Range	ND	ND	ND	ND	ND		
					Average							
Perfluorononanoic acid (PFNA)	ppt	NA	NA	4	Range	ND	ND	ND	ND	ND		
					Average							
Perfluorohexanesulfonic acid (PFHxS)	ppt	NL = 3	NA	3	Range	ND	ND	ND	ND	ND		
					Average							
Perfluoroheptanoic acid (PFHpA)	ppt	NA	NA	3	Range	ND	ND	ND	ND	ND		
					Average							
Perfluorodecanoic acid (PFDA)	ppt	NA	NA	3	Range	ND	ND	ND	ND	ND		
					Average							
Perfluorododecanoic acid (PFDoA)	ppt	NA	NA	3	Range	ND	ND	ND	ND	ND		
					Average							
Perfluorohexanoic Acid (PFHxA)	ppt	NL = 1,000	NA	3	Range	ND	ND	ND	ND	ND		
					Average							
Perfluoroundecanoic acid (PFUnA)	ppt	NA	NA	2	Range	ND	ND	ND	ND	ND		
					Average							
4,8-dioxa-3H-perfluorononanoate (ADONA)	ppt	NA	NA	3	Range	ND	ND	ND	ND	ND		
					Average							
F-53B Major (11Cl-PF3OUdS)	ppt	NA	NA	5	Range	ND	ND	ND	ND	ND		
					Average							
F-53B Minor (9Cl-PF3ONS)	ppt	NA	NA	2	Range	ND	ND	ND	ND	ND		
					Average							
GenX (HFPO-DA)	ppt	NA	NA	5	Range	ND	ND	ND	ND	ND		
					Average							
Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Analyzed by EPA Method 537.1 Only (n)												
Perfluorotetradecanoic acid (PFTA)	ppt	NA	NA	8	Range	ND	ND	ND	ND	ND		Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes
					Average							
Perfluorotridecanoic acid (PFTrDA)	ppt	NA	NA	7	Range	ND	ND	ND	ND	ND		
					Average							
N-ethyl Perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ppt	NA	NA	5	Range	ND	ND	ND	ND	ND		
					Average							
N-methyl Perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ppt	NA	NA	6	Range	ND	ND	ND	ND	ND		
					Average							

2024 Water Quality Report to Member Agencies – The Metropolitan Water District of Southern California
Treatment Plant Effluents and Distribution System (PWS ID: 1910087)

Parameter	Units	State MCL	PHG	State DLR/ CCRDL (RL)	Range Average	Treatment Plant Effluent *					Distribution System	Major Sources in Drinking Water
						Diemer Plant	Jensen Plant	Mills Plant	Skinner Plant	Weymouth Plant		
Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Analyzed by EPA Method 533 Only (n)												
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	ppt	NA	NA	3	Range	ND	ND	ND	ND	ND		Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes
					Average							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	ppt	NA	NA	5	Range	ND	ND	ND	ND	ND		
					Average							
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ppt	NA	NA	5	Range	ND	ND	ND	ND	ND		
					Average							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ppt	NA	NA	4	Range	ND	ND	ND	ND	ND		
					Average							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ppt	NA	NA	3	Range	ND	ND	ND	ND	ND		
					Average							
Perfluorobutanoic acid (PFBA)	ppt	NA	NA	5	Range	ND	ND	ND	ND	ND		
					Average							
Perfluoroheptanesulfonic acid (PFHpS)	ppt	NA	NA	3	Range	ND	ND	ND	ND	ND		
					Average							
Perfluoropentanesulfonic acid (PFPeS)	ppt	NA	NA	4	Range	ND	ND	ND	ND	ND		
					Average							
Perfluoropentanoic acid (PFPeA)	ppt	NA	NA	3	Range	ND	ND	ND	ND	ND		
					Average							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ppt	NA	NA	20	Range	ND	ND	ND	ND	ND		
					Average							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ppt	NA	NA	3	Range	ND	ND	ND	ND	ND		
					Average							
Miscellaneous (p)												
Calcium Carbonate Precipitation Potential (CCPP) (as $CaCO_3$) (q)	ppm	NA	NA	NA	Range	5.4 - 10	2.0 - 4.4	1.2 - 4.4	5.0 - 10	5.5 - 11		
					Average	7.7	3.4	2.9	7.6	8.4		
Corrosivity (as Aggressiveness Index) (r)	AI	NA	NA	NA	Range	12.4 - 12.6	12.2	12.2 - 12.3	12.3 - 12.4	12.4 - 12.6		Measures of the balance between pH and calcium carbonate saturation in the water
					Average	12.5		12.2	12.4	12.5		
Corrosivity (as Saturation Index) (s)	SI	NA	NA	NA	Range	0.58 - 0.65	0.36 - 0.39	0.40 - 0.41	0.46 - 0.57	0.60 - 0.65		
					Average	0.62	0.38	0.40	0.52	0.62		
pH	pH Units	NA	NA	NA	Range	8.2	8.2 - 8.3	8.7 - 8.8	8.1	8.2		Not applicable
					Average		8.3	8.7				
Radon (k)	pCi/L	NA	NA	100	Range	ND	ND	ND	ND	ND		Gas produced by the decay of naturally-occurring uranium in soil and water
					Average							
Total Dissolved Solids, Calculated (TDS) (t)	ppm	1,000	NA	NA	Range	492 - 682	295 - 313	169 - 262	493 - 597	506 - 680		Runoff/leaching from natural deposits
					Average	590	304	222	559	587		

2024 Water Quality Report to Member Agencies – The Metropolitan Water District of Southern California
Treatment Plant Effluents and Distribution System (PWS ID: 1910087)

DEFINITION OF TERMS AND FOOTNOTES

*** As a wholesale water system, Metropolitan provides its member agencies with relevant treated water information and monitoring results that they may need for their annual water quality report. Metropolitan compliance with state or federal regulations is determined at the treatment plant effluent locations and/or distribution system, or plant influent per frequency stipulated in Metropolitan's State-approved monitoring plan, and is based on TT, RAA, or LRAA, as appropriate. Data above Metropolitan's laboratory reporting limit (RL) but below the State DLR or CCRDL are reported as ND in this report; these data are available upon request. Metropolitan was in compliance with all primary and secondary drinking water regulations for the current monitoring period.**

Note: Metropolitan monitors the distribution system for constituents under the Revised Total Coliform Rule (RTCR), Water Fluoridation Standards, and Disinfectants/Disinfection Byproduct Rule (TTHM, HAA5, and total chlorine residual). Constituents with grayed out areas in the distribution system column are routinely monitored at treatment plant effluents and not in the distribution system.

Definition of Terms

AI	Aggressiveness Index	MFL	Million Fibers per Liter	RAA	Running Annual Average; highest RAA is the highest of all
AL	Action Level	MRDL	Maximum Residual Disinfectant Level		RAAs calculated as an average of all the samples collected
Average	Arithmetic mean	MRDLG	Maximum Residual Disinfectant Level Goal		within a 12-month period
$CaCO_3$	Calcium Carbonate	MRL	Minimum Reporting Level	Range	Minimum and maximum values; range and
CCPP	Calcium Carbonate Precipitation Potential	NA	Not Applicable		average values are the same if a single value is reported for
CCRDL	Consumer Confidence Report Detection Level	ND	Not Detected at or above DLR or RL		samples collected once or twice annually
CFE	Combined Filter Effluent	NL	Notification Level to SWRCB	SI	Saturation Index (Langelier)
CFU	Colony-Forming Units	NTU	Nephelometric Turbidity Units	TDS	Total Dissolved Solids
DLR	Detection Limit for Purposes of Reporting	pCi/L	picoCuries per Liter	TON	Threshold Odor Number
EPA	Environmental Protection Agency	PHG	Public Health Goal	TT	Treatment Technique is a required process intended to reduce
LRAA	Locational Running Annual Average; highest LRAA	ppb	parts per billion or micrograms per liter (µg/L)		the level of a contaminant in drinking water
	is the highest of all LRAAs calculated as an average	ppm	parts per million or milligrams per liter (mg/L)	UCMR5	Fifth Unregulated Contaminant Monitoring Rule
	of all samples collected within a 12-month period	ppq	parts per quadrillion or picograms per liter (pg/L)	µS/cm	microSiemen per centimeter; or micromho per centimeter
MCL	Maximum Contaminant Level	ppt	parts per trillion or nanograms per liter (ng/L)		(µmho/cm)
MCLG	Maximum Contaminant Level Goal	PWS ID	Public Water System Identification		

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 treatment technique of primary drinking water standard and the secondary drinking water standard of less than 5 NTU.

(b) Per the Surface Water Treatment Rule, treatment techniques that remove or inactivate *Giardia* cysts will also remove HPC bacteria, *Legionella*, and viruses. *Legionella* and virus monitoring are not required.

(c) Compliance is based on monthly samples from the distribution system. No Level 1 Assessments occurred and no *E. coli* was detected.

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

(e) Samples collected in 2024 and reported once every three-year compliance cycle until the next required triennial monitoring in 2027.

(f) Metropolitan uses acrylamide for water treatment processes and was in compliance with the treatment technique requirements regarding its use when treating drinking water. Metropolitan does not use any epichlorohydrins.

(g) Compliance with the State MCL for aluminum is based on RAA.

(h) Samples collected in 2020 for the required 9-year monitoring cycle (2020-2028).

(i) As a wholesaler, Metropolitan has no retail customers and is not required to collect samples at consumer taps. Compliance monitoring under Title 22 is required at the treatment plant effluents.

(j) Metropolitan was in compliance with all provisions of the State's fluoridation requirements. When fluoride feed systems were temporarily out of service during treatment plant shutdowns and/or maintenance work, an occasional fluoride level was measured below 0.7 mg/L.

(k) Samples are collected quarterly for gross beta particle activity, and annually for tritium and strontium-90. Gross alpha particle activity, radium, and uranium data are from samples collected quarterly in 2023 for the required triennial monitoring (2023-2025). Radon is monitored voluntarily with the triennial radionuclides.

(l) 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.

(m) 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 Parameters" section.

(n) CCRDL is based on the EPA UCMR5 MRLs for the 29 constituents detected by EPA Methods 533 and 537.1. Results below CCRDLs are considered "ND".

(o) Average of the results from the two analytical methods.

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(p) Voluntary monitoring of constituents provided for informational purposes.

(q) Positive CCPP indicates non-corrosive; tendency to precipitate and/or deposit scale on pipes. Negative CCPP indicates corrosive; tendency to dissolve calcium carbonate. Reference: Standard Method 2330

(r) 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)

(s) Positive SI indicates non-corrosive; tendency to precipitate and/or deposit scale on pipes. Negative SI indicates corrosive; tendency to dissolve calcium carbonate. Reference: Standard Method 2330

(t) 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 standards. Metropolitan's calculated TDS goal is 500 mg/L.

2024 Water Quality Report to Member Agencies—The Metropolitan Water District of Southern California
Treatment Plant Influents (PWS ID: 1910087)

Parameter	Units	Range Average	Treatment Plant Influent *					Major Sources in Drinking Water
			Diemer Plant	Jensen Plant [a]	Mills Plant	Skinner Plant	Weymouth Plant	
Percent State Water Project	%	Range	0 - 98	100	100	0 - 64	0 - 100	Not applicable
COMPLIANCE MONITORING PARAMETERS								
Microbiological								
Total Coliform Bacteria	MPN/100 mL	Range	ND - 480	64 - 11,000	28 - 1,000	81 - 3,100	1 - 3,700	Naturally present in the environment
		Median	57	260	310	640	500	
Escherichia coli (E. coli)	MPN/100 mL	Range	ND - 2	ND - 1	ND - 1	ND - 6	ND - 4	Human and animal fecal waste
		Median	ND	ND	1	3	ND	
Chemical								
Alkalinity, Total (as $CaCO_3$)	ppm	Range	92 - 130	88 - 97	62 - 77	100 - 135	84 - 130	Runoff/leaching of natural deposits; carbonate, bicarbonate, hydroxide, and occasionally borate, silicate, and phosphate
		Highest RAA	116	93	72	116	116	
Fluoride	ppm	Range	0.2 - 0.4	0.3	0.1	0.2 - 0.3	0.1 - 0.4	Erosion of natural deposits; discharge from fertilizer and aluminum factories
		Average	0.3			0.3	0.3	
Total Organic Carbon (TOC)	ppm	Range	2.5 - 3.7	2.7 - 3.3	2.4 - 4.2	3.0 - 3.7	2.6 - 3.8	Various natural and man-made sources
		Highest RAA	3.4	3.2	3.8	3.5	3.5	
OTHER PARAMETERS								
Aluminum	ppb	Range	ND	120	ND	58	ND	Natural deposits erosion
		Average						
Antimony	ppb	Range	ND	ND	ND	ND	ND	Petroleum refinery discharges; fire retardants; solder; electronics
		Average						
Arsenic	ppb	Range	ND	ND	ND	ND	ND	Natural deposits erosion, glass and electronics production wastes
		Average						
Barium	ppb	Range	132	ND	ND	ND	132	Oil and metal refineries discharges; natural deposits erosion
		Average						
Beryllium	ppb	Range	ND	ND	ND	ND	ND	Discharge from metal refineries, aerospace, and defense industries
		Average						
Boron	ppb	Range	160	190	150	150	160	Runoff/leaching from natural deposits; Industrial wastes
		Average						
Cadmium	ppb	Range	ND	ND	ND	ND	ND	Discharge from electroplating, industrial factories, and metal refineries; runoff from waste batteries and paints; natural deposits erosion
		Average						
Chromium	ppb	Range	ND	ND	ND	ND	ND	Discharge from steel and pulp mills; natural deposits erosion
		Average						
Chromium VI	ppb	Range	ND	ND	ND	ND	ND	Runoff/leaching from natural deposits; Industrial wastes
		Average						
Copper	ppm	Range	ND	ND	ND	ND	ND	Natural deposits erosion; leaching from wood preservatives
		Average						
Cryptosporidium (b)	oocysts/10 L	Range	ND - 1	ND	ND - 2	ND	ND - 2	Human and animal fecal waste
		Average	ND		ND		ND	
Giardia (b)	cysts/10 L	Range	ND - 9	ND	ND - 4	ND	ND - 5	
		Average	1		1		ND	
Hardness, Total (as $CaCO_3$)	ppm	Range	96 - 306	135 - 158	60 - 96	166 - 308	91 - 304	Runoff/leaching from natural deposits; sum of polyvalent cations, generally magnesium and calcium present in the water
		Average	256	145	78	244	254	
Iron	ppb	Range	ND	ND	ND	ND	ND	Leaching from natural deposits; industrial wastes
		Average						
Lead	ppb	Range	ND	ND	ND	ND	ND	Internal corrosion of household water plumbing systems; industrial manufacturers' discharge; erosion of natural deposits
		Average						
Lithium	ppb	Range	35 - 50	10 - 11	ND	21 - 36	36 - 51	Naturally-occurring; used in electrochemical cells, batteries, and organic syntheses and pharmaceuticals
		Average	42	10		28	44	
Manganese	ppb	Range	ND	ND	ND	ND	ND	Leaching from natural deposits
		Average						
Mercury	ppb	Range	ND	ND	ND	ND	ND	Erosion of natural deposits; factory discharge; landfill runoff
		Average						

2024 Water Quality Report to Member Agencies—The Metropolitan Water District of Southern California
Treatment Plant Influents (PWS ID: 1910087)

Parameter	Units	Range / Average	Treatment Plant Influent *					Major Sources in Drinking Water
			Diemer Plant	Jensen Plant [(a)]	Mills Plant	Skinner Plant	Weymouth Plant	
Nickel	ppb	Range	ND	ND	ND	ND	ND	Erosion of natural deposits; discharge from metal factories
		Average						
Perchlorate	ppb	Range	ND	ND	ND	ND	ND	Industrial waste discharge
		Average						
pH	pH Units	Range	7.9 - 8.4	7.5 - 8.0	7.6 - 8.2	7.7 - 8.7	7.9 - 8.3	Not applicable
		Average	8.2	7.7	7.9	8.2	8.1	
Selenium	ppb	Range	ND	ND	ND	ND	ND	Refineries, mines, and chemical waste discharge; runoff from livestock lots
		Average						
Specific Conductance	µS/cm	Range	667 - 1,080	452 - 495	256 - 456	788 - 1,057	530 - 1,065	Substances that form ions in water; seawater influence
		Average	921	475	361	857	914	
Silver	ppb	Range	ND	ND	ND	ND	ND	Industrial discharges
		Average						
Thallium	ppb	Range	ND	ND	ND	ND	ND	Leaching from ore processing; discharge from electronics, glass, and pharmaceutical factories
		Average						
Turbidity	NTU	Range	0.2 - 4.5	0.5 - 16	0.5 - 6.1	0.7 - 3.2	0.1 - 5.4	Soil runoff
		Average	1.0	2.0	1.1	1.4	0.7	
Vanadium	ppb	Range	ND	ND	ND	ND	ND	Naturally-occurring; industrial waste discharge
		Average						
Zinc	ppm	Range	ND	ND	ND	ND	ND	Runoff/leaching from natural deposits; industrial wastes
		Average						

DEFINITION OF TERMS AND FOOTNOTES

*** As a wholesale water system, Metropolitan provides its member agencies with relevant source water information and monitoring results that they may need for their annual water quality report. Metropolitan compliance with state or federal regulations is determined at the treatment plant effluent locations and/or distribution system or plant influent per frequency stipulated in Metropolitan's State-approved monitoring plan. MCLs, PHGs, and state DLRs are included in the Treatment Plant Effluent Report. Data above Metropolitan's laboratory reporting limit (RL) but below the State DLR are reported as ND in this report.**

Definition of Terms

Average	Arithmetic mean	ppm	parts per million or milligrams per liter (mg/L)
$CaCO_3$	Calcium Carbonate	RAA	Running Annual Average; highest RAA is the highest of all Running Annual Averages calculated as an average of the all samples collected within a 12-month period
MPN	Most Probable Number		
DLR	Detection Limits for Purposes of Reporting		
MCL	Maximum Contaminant Level	Range	Results based on minimum and maximum values; range and average values are the same if a single value is reported for sample collected once or twice annually
ND	Not Detected at or above DLR or RL		
NTU	Nephelometric Turbidity Units		
PHG	Public Health Goal	µS/cm	microSiemen per centimeter; or micromho per centimeter (µmho/cm)
ppb	parts per billion or micrograms per liter (µg/L)		

Footnotes

(a) Results reflect water quality of two supplies, which include Castaic Lake and the groundwater well located at the Jensen Treatment Plant facility. Based on a 10-year average, groundwater accounts for up to 0.19% of the overall Jensen treatment plant flow. Flow-weighted results are available upon request.

(b) *Cryptosporidium* and/or *Giardia* were detected in raw water after heavy storm and runoff into Silverwood Lake.

2024 Water Quality Report to Member Agencies—The Metropolitan Water District of Southern California
Source Waters (PWS ID: 1910087)

Parameter	Units	Range Average	Source Water *							Major Sources in Drinking Water
			Diamond Valley Lake	Lake Skinner	Lake Havasu	Lake Mathews	Castaic Lake	Lake Perris	Silverwood Lake	
Percent State Water Project	%	Range	100	12 - 58	0	0	100	100	100	Not applicable
ORGANIC CHEMICALS										
Synthetic Organic Compounds (a)										
1,2,3-Trichloropropane (1,2,3-TCP)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial and agrichemical factories; byproduct of producing other compounds and pesticides; leaching from hazardous waste sites
		Average								
2,4,5-TP (Silvex)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Residue of banned herbicide
		Average								
2,4-D	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide used on row crops, rangeland, lawns, and aquatic weeds
		Average								
Alachlor	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide used on row crops
		Average								
Atrazine	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide used on row crops and along railroad and highway right-of-ways
		Average								
Bentazon	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff/leaching from herbicide used on beans, peppers, corn, peanuts, rice, and ornamental grasses
		Average								
Benzo(a)pyrene	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Leaching from water storage tank linings and distribution lines
		Average								
Carbofuran	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Leaching of soil fumigant used on rice, alfalfa, and grape vineyards
		Average								
Chlordane	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Residue of banned insecticide
		Average								
Dalapon	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide used on right-of-ways, and crops and landscape maintenance
		Average								
Di(2-ethylhexyl)adipate	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from chemical factories
		Average								
Di(2-ethylhexyl)phthalate	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from rubber and chemical factory; inert ingredient in pesticides
		Average								
Dibromochloropropane (DBCP)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Banned nematocide that may still be present in soils due to runoff/leaching
		Average								
Dinoseb	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide used on soybeans, vegetables, and fruits
		Average								
Dioxin (2,3,7,8-TCDD)	ppq	Range	ND	ND	ND	ND	ND	ND	ND	Waste incineration emissions; chemical factory discharge
		Average								
Diquat	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide used for terrestrial and aquatic weeds
		Average								
Endothall	ppb	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Endrin	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Residue of banned insecticide and rodenticide
		Average								
Ethylene Dibromide (EDB)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Petroleum refinery discharges; underground gas tank leaks; banned nematocide that may still be present in soils due to runoff and leaching
		Average								
Glyphosate	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide use
		Average								
Heptachlor	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Residue of banned insecticide
		Average								
Heptachlor Epoxide	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Breakdown product of heptachlor
		Average								
Hexachlorobenzene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from metal refineries and agrichemicals factories; wastewater chlorination reaction byproduct
		Average								
Hexachlorocyclopentadiene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from chemical factories
		Average								
Lindane	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Runoff/leaching from insecticide used on cattle, lumber, and gardens
		Average								
Methoxychlor	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff/leaching from insecticide uses on fruits, vegetables, alfalfa, and livestock
		Average								
Molinate (Ordram)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff/leaching from herbicide used on rice
		Average								
Oxamyl (Vydate)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff/leaching from insecticide uses
		Average								

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			Diamond Valley Lake	Lake Skinner	Lake Havasu	Lake Mathews	Castaic Lake	Lake Perris	Silverwood Lake	
Pentachlorophenol	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from wood preserving factories other insecticidal and herbicidal uses
		Average								
Picloram	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Herbicide runoff
		Average								
Polychlorinated Biphenyls (PCBs)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Runoff from landfills; discharge of waste chemicals
		Average								
Simazine	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Herbicide runoff
		Average								
Thiobencarb	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff/leaching from herbicide used on rice
		Average								
Toxaphene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff/leaching from insecticide used on cotton and cattle
		Average								
Volatile Organic Compounds										
1,1,1-Trichloroethane	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Metal degreasing site discharge; manufacture of food wrappings
		Average								
1,1,2,2-Tetrachloroethane	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial and agrichemical factories; solvent used in production of TCE, pesticides, varnish, and lacquers
		Average								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ppm	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from metal degreasing sites and other factories; dry cleaning solvent; refrigerant
		Average								
1,1,2-Trichloroethane	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
		Average								
1,1-Dichloroethane	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Extraction and degreasing solvent; fumigant
		Average								
1,1-Dichloroethylene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
		Average								
1,2,4-Trichlorobenzene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from textile-finishing factories
		Average								
1,2-Dichlorobenzene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
		Average								
1,2-Dichloroethane	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
		Average								
1,2-Dichloropropane	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Industrial chemical factory discharge; primary component of some fumigants
		Average								
1,3-Dichloropropene	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Runoff/leaching from nematocide used on croplands
		Average								
1,4-Dichlorobenzene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
		Average								
Benzene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Plastics factory discharge; gas tanks and landfill leaching
		Average								
Carbon Tetrachloride	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from chemical plants and other industrial waste
		Average								
cis-1,2-Dichloroethylene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Industrial chemical factory discharge; byproduct of TCE and PCE biodegradation
		Average								
Dichloromethane (Methylene Chloride)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from pharmaceutical and chemical factories
		Average								
Ethylbenzene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Petroleum refinery discharge; industrial chemical factories
		Average								
Methyl-*tert*-butyl ether (MTBE)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Gasoline discharge from watercraft engines
		Average								
Monochlorobenzene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial and agrichemical factories, and dry cleaners
		Average								
Styrene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Rubber and plastics factories discharge; landfill leaching
		Average								
Tetrachloroethylene (PCE)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from factories, dry cleaners, and auto shops
		Average								
Toluene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from petroleum and chemical refineries
		Average								
trans-1,2-Dichloroethylene	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Industrial chemical factory discharge; byproduct of TCE and PCE biodegradation
		Average								
Trichloroethylene (TCE)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from metal degreasing sites and other factories
		Average								

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			Diamond Valley Lake	Lake Skinner	Lake Havasu	Lake Mathews	Castaic Lake	Lake Perris	Silverwood Lake	
Trichlorofluoromethane (Freon-11)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Industrial factory discharge; degreasing solvent; propellant
		Average								
Vinyl Chloride	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Leaching from PVC piping; plastic factory discharge; byproduct of TCE and PCE biodegradation
		Average								
Xylenes, Total	ppm	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from petroleum and chemical refineries; fuel solvent
		Average								
INORGANIC CHEMICALS										
Aluminum	ppb	Range	ND	58	ND	ND	120	ND	71	Natural deposits erosion
		Average								
Antimony	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Petroleum refinery discharges; fire retardants; solder; electronics
		Average								
Arsenic	ppb	Range	ND	ND	2	2	ND	ND	ND	Natural deposits erosion, glass and electronics production wastes
		Average								
Asbestos (b)	MFL	Range	ND	ND	ND	ND	ND	ND	ND	Natural deposits erosion
		Average								
Barium	ppb	Range	ND	ND	143	133	ND	ND	ND	Oil and metal refineries discharge; natural deposits erosion
		Average								
Beryllium	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from metal refineries, aerospace, and defense industries
		Average								
Cadmium	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from electroplating, industrial factories, and metal refineries; runoff from waste batteries and paints; natural deposits erosion
		Average								
Chromium	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from steel and pulp mills; natural deposits erosion
		Average								
Chromium VI	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff/leaching from natural deposits; discharge from industrial waste factories
		Average								
Copper	ppm	Range	ND	ND	ND	ND	ND	ND	ND	Natural deposits erosion; leaching from wood preservatives
		Average								
Cyanide	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Discharge from steel/metal, plastic, and fertilizer factories
		Average								
Fluoride	ppm	Range	0.1	0.2 - 0.3	0.3 - 0.4	0.3 - 0.4	0.3	0.1	ND	Erosion of natural deposits; discharge from fertilizer and aluminum factories
		Average		0.2	0.3	0.3				
Lead	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Industrial manufacturers' discharge; erosion of natural deposits
		Average								
Mercury	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Erosion of natural deposits; factory discharge; landfill runoff
		Average								
Nickel	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Erosion of natural deposits; discharge from metal factories
		Average								
Nitrate (as Nitrogen)	ppm	Range	ND	ND	0.6	ND	0.5	ND	0.5	Runoff and leaching from fertilizer use; leaching from septic tank and sewage; natural deposits erosion
		Average								
Nitrite (as Nitrogen)	ppm	Range	ND	ND	ND	ND	ND	ND	ND	Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion
		Average								
Perchlorate	ppb	Range	ND	ND	1.8	ND	ND	ND	ND	Industrial waste discharge
		Average								
Selenium	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Refineries, mines, and chemical waste discharge; runoff from livestock lots
		Average								
Thallium	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Leaching from ore processing; discharge from electronics, glass, and pharmaceutical factories
		Average								
RADIOLOGICALS (c)										
Gross Alpha Particle Activity	pCi/L	Range	ND - 6.1	ND - 3.6	ND - 6.2	ND - 3.2	ND - 3.1	ND - 3.2	ND - 5	Erosion of natural deposits
		Average	ND	ND	ND	ND	ND	ND	ND	
Gross Beta Particle Activity	pCi/L	Range	ND	ND - 5	ND - 5.8	4.4 - 6.1	ND	ND	ND	Decay of natural and man-made deposits
		Average		ND	4.1	5.2				
Radium-226	pCi/L	Range	ND	ND	ND	ND	ND	ND	ND	Erosion of natural deposits
		Average								
Radium-228	pCi/L	Range	ND	ND	ND	ND	ND - 1	ND	ND	
		Average					ND			
Combined Radium-226 + 228	pCi/L	Range	ND	ND	ND	ND	ND - 1	ND	ND	
		Average					ND			
Strontium-90	pCi/L	Range	ND	ND	ND	ND	ND	ND	ND	Decay of natural and man-made deposits
		Average								

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Tritium	pCi/L	Range	ND	ND	ND	ND	ND	ND	ND	Decay of natural and man-made deposits
		Average								
Uranium	pCi/L	Range	ND	1.5 - 3.1	2.6 - 3.0	2.8 - 3.1	2.5 - 3.7	1.6 - 2.0	ND - 3.0	Erosion of natural deposits
		Average		2.4	2.9	2.9	3.0	1.8	1.4	
AESTHETIC PARAMETERS (d)										
Aluminum	ppb	Range	ND	58	ND	ND	120	ND	71	Natural deposits erosion
		Average								
Chloride	ppm	Range	57 - 58	78 - 87	95 - 106	108	36 - 37	68 - 72	35 - 61	Runoff/leaching from natural deposits; seawater influence
		Average	58	82	100		36	70	48	
Color	Color Units	Range	5	5 - 10	3 - 5	3	5 - 10	5	5 - 15	Naturally-occurring organic materials
		Average		8	4		8		10	
Copper	ppm	Range	ND	ND	ND	ND	ND	ND	ND	Natural deposits erosion; wood preservatives leaching
		Average								
Foaming Agents - Methylene Blue Active Substances (MBAS)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Municipal and industrial waste discharges
		Average								
Iron	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Leaching from natural deposits; industrial wastes
		Average								
Manganese	ppb	Range	ND	ND	ND	ND	ND	ND	21	Leaching from natural deposits
		Average								
Methyl-*tert*-butyl ether (MTBE)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Gasoline discharge from watercraft engines
		Average								
Odor Threshold	TON	Range	7	9	6	5	4	6	5	Naturally-occurring organic materials
		Average								
Silver	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Industrial discharges
		Average								
Specific Conductance	µS/cm	Range	431 - 439	668 - 867	1,000 - 1,060	1,040 - 1,050	467 - 488	480 - 516	275 - 430	Substances that form ions in water; seawater influence
		Average	435	768	1,030	1,040	478	498	352	
Sulfate	ppm	Range	39 - 40	114 - 184	225 - 247	231 - 240	83 - 87	40 - 42	13 - 34	Runoff/leaching from natural deposits; industrial wastes
		Average	40	149	236	236	85	41	24	
Thiobencarb	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Runoff/leaching from rice herbicide
		Average								
Total Dissolved Solids (TDS)	ppm	Range	247 - 248	394 - 565	658 - 689	663 - 696	295 - 303	273 - 288	151 - 248	Runoff/leaching from natural deposits
		Average	248	480	674	680	299	280	200	
Turbidity	NTU	Range	0.4 - 0.8	1.0 - 2.2	0.6	0.6 - 1.3	1.2 - 2.4	0.5 - 0.9	1.3 - 1.6	Soil runoff
		Average	0.6	1.6		0.9	1.8	0.7	1.5	
Zinc	ppm	Range	ND	ND	ND	ND	ND	ND	ND	Runoff/leaching from natural deposits; industrial wastes
		Average								
OTHER PARAMETERS										
Microbiological										
Total Coliform Bacteria	MPN/100 mL	Range	4 - 24,000	40 - 61,000	9 - 110,000	7 - 5,200	NA (e)	51 - 580	110 - 4,600	Naturally present in the environment
		Median	39	340	1,000	300		320	1,200	
Escherichia coli (E. coli)	MPN/100 mL	Range	ND - 21	ND - 5	ND - 3	ND - 30	NA (e)	ND - 66	ND - 50	Human and animal fecal waste
		Median	ND	2	ND	4		ND	4	
General Minerals										
Alkalinity, Total (as $CaCO_3$)	ppm	Range	81 - 86	100 - 116	133 - 137	123 - 128	91 - 95	93 - 99	66 - 77	Runoff/leaching of natural deposits; carbonate, bicarbonate, hydroxide, and occasionally borate, silicate, and phosphate
		Average	84	108	135	126	93	96	72	
Calcium	ppm	Range	23 - 25	43 - 60	76 - 81	72 - 75	36 - 38	26 - 27	14 - 21	Runoff/leaching from natural deposits
		Average	24	52	78	74	37	26	18	
Hardness, Total (as $CaCO_3$)	ppm	Range	104 - 105	172 - 245	293 - 319	291 - 296	143 - 149	117 - 120	68 - 99	Runoff/leaching from natural deposits; sum of polyvalent cations, generally magnesium and calcium present in the water
		Average	104	208	306	294	146	118	84	
Magnesium	ppm	Range	11	17 - 22	26 - 28	28 - 29	12 - 14	13	8.2 - 11	Runoff/leaching from natural deposits
		Average		20	27	28	13		9.6	
Potassium	ppm	Range	3.2 - 3.4	4 - 4.6	5.2 - 5.6	5.4	2.5 - 2.6	3.5 - 3.6	1.9 - 3.2	Salt present in the water; naturally-occurring
		Average	3.3	4.3	5.4		2.5	3.5	2.5	
Sodium	ppm	Range	45 - 46	67 - 82	96 - 104	104 - 108	39 - 40	54 - 55	27 - 47	
		Average	46	74	100	106	40	54	37	
Unregulated Contaminants										
Boron	ppb	Range	150	150	140	150	190	170	150	Runoff/leaching from natural deposits; industrial wastes
		Average								
Lithium	ppb	Range	ND	21 - 36	45 - 47	47 - 49	10 - 11	ND	ND	Naturally-occurring; used in electrochemical cells, batteries, and organic syntheses and pharmaceuticals
		Average		28	46	48	10			

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Vanadium	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Naturally-occurring; industrial waste discharge
		Average								
Dichlorodifluoromethane (Freon-12)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Industrial waste discharge
		Average								
Ethyl-*tert*-butyl ether (ETBE)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	Used as gasoline additive
		Average								
tert-Amyl-methyl ether (TAME)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
tert-Butyl alcohol (TBA)	ppb	Range	ND	ND	ND	ND	ND	ND	ND	MTBE breakdown product; used as gasoline additive
		Average								
Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Analyzed by EPA Methods 533 and 537.1 (f)										
Perfluorooctanoic Acid (PFOA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes
		Average								
Perfluorooctanesulfonic Acid (PFOS)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluorobutanesulfonic acid (PFBS)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluorononanoic acid (PFNA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluorohexanesulfonic acid (PFHxS)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluoroheptanoic acid (PFHpA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluorodecanoic acid (PFDA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluorododecanoic acid (PFDoA)	ppt	Range	ND	ND	ND - 3.3	ND	ND	ND	ND	
		Average			ND					
Perfluorohexanoic Acid (PFHxA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluoroundecanoic acid (PFUnA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
4,8-dioxa-3H-perfluorononanoate (ADONA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
F-53B Major (11Cl-PF3OUdS)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
F-53B Minor (9Cl-PF3ONS)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
GenX (HFPO-DA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Analyzed by EPA Method 537.1 Only										
Perfluorotetradecanoic acid (PFTA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes
		Average								
Perfluorotridecanoic acid (PFTrDA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
N-ethyl Perfluorooctanesulfonamidoacetic acid	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
N-methyl Perfluorooctanesulfonamidoacetic acid	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Analyzed by EPA Method 533 Only										
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes
		Average								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluoro-3-methoxypropanoic acid (PFMPA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluoro-4-methoxybutanoic acid (PFMBA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								

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Perfluorobutanoic acid (PFBA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes
		Average								
Perfluoroheptanesulfonic acid (PFHpS)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluoropentanesulfonic acid (PFPeS)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluoropentanoic acid (PFPeA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA	ppt	Range	ND	ND	ND	ND	ND	ND	ND	
		Average								
Miscellaneous										
pH	pH Units	Range	7.6 - 8.2	8 - 8.4	8.0	8.1 - 8.2	7.5 - 7.8	7.7 - 7.9	7.7 - 7.9	Not applicable
		Average	7.9	8.2		8.1	7.7	7.8	7.8	
Radon (c)	pCi/L	Range	ND	ND	ND	ND - 130	ND	ND	ND	Gas produced by the decay of naturally-occurring uranium in soil and water
		Average				ND				
Total Organic Carbon (TOC)	ppm	Range	2.8 - 3.0	3.3 - 3.4	3.3 - 3.4	3.0 - 4.2	3.0 - 3.1	3.9 - 4.0	2.8 - 4.4	Various natural and man-made sources; TOC is a precursor for the formation of disinfection byproducts
		Average	2.9	3.3	3.3	3.6	3.1	4.0	3.6	

DEFINITION OF TERMS AND FOOTNOTES

***As a wholesale water system, Metropolitan provides its member agencies with relevant source water information and monitoring results that they may need for their annual water quality report. Metropolitan compliance with state or federal regulations is determined at the treatment plant effluent locations and/or distribution system, or plant influent per frequency stipulated in Metropolitan's State-approved monitoring plan. MCLs, PHGs, and state DLRs/CCRDLs are included in the Treatment Plant Effluent Report. Data above Metropolitan's laboratory Reporting Limit (RL) but below the State DLR or CCRDL are reported as ND in this report.**

Definition of Terms

Average	Arithmetic mean	pCi/L	picoCuries per Liter
$CaCO_3$	Calcium Carbonate	PHG	Public Health Goal
CCRDL	Consumer Confidence Report Detection Level	ppb	parts per billion or micrograms per liter (µg/L)
DLR	Detection Limit for Purposes of Reporting	ppm	parts per million or milligrams per liter (mg/L)
MCL	Maximum Contaminant Level	ppq	parts per quadrillion or picograms per liter (pg/L)
MFL	Million Fibers per Liter	ppt	parts per trillion or nanograms per liter (ng/L)
MPN	Most Probable Number	Range	Minimum and maximum values; range and average values
NA	Not Applicable		are the same if a single value is reported for samples collected
ND	Not Detected at or above DLR or RL		once or twice annually
NTU	Nephelometric Turbidity Units	TON	Threshold Odor Number
PWS ID	Public Water System Identification	µS/cm	microSiemen per centimeter; or micromho per centimeter (µmho/cm)

Footnotes

(a) Samples collected in 2024 and reported once every three-year compliance cycle until the next required triennial monitoring in 2027.

(b) Samples collected in 2020 for the required 9-year monitoring cycle (2020-2028).

(c) Samples collected quarterly for gross beta particle activity, and annually for tritium and strontium-90. Gross alpha particle activity, radium, and uranium samples collected quarterly in 2023 for the required triennial monitoring (2023-2025). Radon monitored voluntarily with the triennial radionuclides.

(d) Aesthetic parameters under the State Secondary Standards apply to water supplied to the public by community water systems; annual monitoring is required for approved surface water sources or distribution system entry points for treated water.

(e) Jensen Treatment Plant influent is the compliance monitoring location that represents Castaic Lake source water. See Treatment Plant Influent table for results.

(f) Average of results from two analytical methods.