Three Valleys Municipal Water District 2021 WATER QUALITY REPORT TO TVMWD MEMBER AGENCIES

WEYMOUTH refers to the Metropolitan Water District's Weymouth Water Treatment Plant in the city of La Verne.

MIRAMAR refers to the Three Valleys Municipal Water District's Miramar Water Treatment Plant in the city of Claremont.

		WEYMOUTH	MIRAMAR	MIRAMAR	REGUL	ATORY STAN	NDARDS	
		EFFLUENT Range/Average	PLANT Range/Average	GROUNDWATER Range/Average	State (Federal) MCL	PHG	State DLR (RL)	Major Sources in Drinking Water
SOURCE WATER % of State Project Water % of Groundwater		0 - 100/24	92.22	7.78	NA	NA	NA	
PRIMARY STANDARDS - Mand	atory Health-	Related Standards						
CLARITY Combined Filter Effluent (CFE)	NTU	0.03 (highest)	0.06 (highest)	0.57 (highest)	TT	NA NA	NA NA	Soil runoff
Turbidity (a)	N I U % ≤ 0.3	100%	100%	100%		NA	NA.	Suitului
MICROBIOLOGICAL (b)							ı	
Total Coliform Bacteria (c)	% Positive	0-0.4/0% distribution system-wide	0% distribution system-wide	0%	5.0	MCLG = 0	NA	Naturally present in the environment
Escherichia coli (E. coli) (c,d)	Number	0% distribution system-wide	0% distribution system-wide	0%	1	MCLG = 0	NA	Human and animal fecal waste
Heterotrophic Plate Count (e)	CFU/ mL	ND	ND	ND	TT	NA	(1)	Naturally present in the environment
Cryptosporidium	Oocyst 200 L	ND	ND	ND	TT	MCLG = 0	(1)	Human and animal fecal waste
Giardia	Cysts 200 L	ND	ND	ND	TT	MCLG = 0	(1)	Human and animal fecal waste
ORGANIC CHEMICALS	200 L			<u>.</u>			ı	
Synthetic Organic Compounds (f)	<u>Units</u>							
1,2,3-Trichloropropange (1,2,3-TCP)	ppt	ND	ND	ND	5	0.7	5	Discharge from industrial and agrichemical factories; byproducts of producing other compounds and pesticides, leaching from hazardous waste site
2,4,5-TP (Silvex)	ppb	ND	ND	ND	50	3	1	Residue of banned herbicide
2,4-D	ppb	ND	ND	ND	70	20	10	Runoff from herbicide used on row crops, range land, lawns and aquatic weeds
Acrylamide	ppm	NA	NA	NA	TT	MCLG = 0	NA	Water treatment chemical impurities
Alachlor	ppb	ND	ND	ND	2	4	1	Runoff from herbicide used on row crops
Atrazine	ppb	ND	ND	ND	1	0.15	0.5	Runoff from herbicide used on row crops and along railroad and highways rights-of-way
Bentazon	ppb	ND	ND	ND	18	200	2	Runoff/leaching from herbicide used on beans, peppers, corn, peanuts, rice, and ornamental grasses
Benzo(a)pyrene	ppt	ND	ND	ND	200	7	100	Leaching from linings of water storage tanks and distribution mains
Carbofuran	ppb	ND	ND	ND	18	0.7	5	Leaching of soil fumigant used on rice, alfalfa and grapes vineyards
Chlordane	ppt	ND	ND	ND	100	30	100	Residue of banned insecticide
Dalapon	ppb	ND	ND	ND	200	790	10	Runoff from herbicide used on rights of way, crops and landscape maintenance
Di(2-ethylhexyl) adipate	ppb	ND	ND	ND	400	200	5	Discharge from chemical factories
Di(2-ethylhexyl) phthalate	ppb	ND	ND	ND	4	12	3	Discharge from rubber and chemical factories; inert ingredient in pesticides
Dibromochloropropane (DBCP)	ppt	ND	ND	ND	200	1.7	10	Banned nematicide that may still be present in soils due to runoff/leaching
Dinoseb	ppb	ND	ND	ND	7	14	2	Runoff from herbicide used on soybeans, vegetables and fruits

Dioxin (2,3,7,8-TCDD)	ND	ND	ND	30	0.05	5	Waste incineration emissions, chemical factory discharge
Diquat	ND	ND	ND	20	6	4	Runoff from herbicide used for terrestrial and aquatic weeds
Endothall	ND	ND	ND	100	94	45	Runoff from herbicide used for terrestrial and aquatic weeds
Endrin	ND	ND	ND	2	0.3	0.1	Residue of banned insecticide and rodenticide
Epichlorohydrin	ND	NA	NA	TT	MCLG = 0	NA	Water treatment chemical impurities
Ethylene dibromide (EDB)	ND	ND	ND	50	10	20	Discharge from petroleum refineries; underground gas tank leaks, banned nematicide that maybe still present in soils due to runoff and leaching
Glyphosate	ND	ND	ND	700	900	25	Runoff from herbicide use
Heptachlor	ND	ND	ND	10	8	10	Residue of banned insecticide
Heptachlor Epoxide	ND	ND	ND	10	6	10	Breakdown product of heptachlor
Hexachlorobenzene	ND	ND	ND	1	0.03	0.5	Discharge from metal refineries & agrichemical factories; wastewater chlorination reaction by-product
Hexachlorocyclopentadiene	ND	ND	ND	50	2	1	Discharge from chemical factories
Lindane	ND	ND	ND	200	32	200	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor	ND	ND	ND	30	0.09	10	Runoff/leaching from insecticide uses
Molinate (Ordram)	ND	ND	ND	20	1	2	Runoff/leaching from herbicide used on rice
Oxamyl (Vydate)	ND	ND	ND	50	26	20	Runoff/leaching from insecticide uses
Pentachlorophenol (PCP)	ND	ND	ND	1	0.3	0.2	Discharge from wood preserving factories, other insecticidal and herbicidal uses
Picloram	ND	ND	ND	500	166	1	Herbicide runoff
Polychlorinated Biphenyls (PCBs)	ND	ND	ND	500	90	500	Runoff from landfills; discharge of waste chemicals
Simazine	ND	ND	ND	4	4	1	
Thiobencarb	ND	ND	ND	70	42	1	Herbicide runoff
Toxaphene	ND	ND	ND	3	0.03	1	Runoff/leaching from herbicide used on rice
Volatile Organic Chemicals			,,,,		0.00		Runoff/leaching from insecticide used on cotton and cattle
1,1,1-Trichloroethane	ND	ND	ND	200	1000	0.5	Discharge from metal degreasing sites; manufacture of food wrappings
1,1,2,2-Tetrachloroethane	ND	ND	ND	1	0.1	0.5	Discharge from industrial, agricultural chemical factories; solvent used in production of TCE, pesticides,
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	1.2	4	0.01	varnish and lacquers Discharge from metal degreasing sites and other factories; dry-cleaning solvent; refrigerant
(Freon 113) 1,1,2-Trichloroethane	ND	ND	ND	5	0.3	0.5	Discharge from industrial chemical factories
1,1-Dichloroethane	ND	ND	ND	5	3	0.5	Extraction & degreasing solvent; fumigant
1,1-Dichloroethylene	ND	ND	ND	6	10	0.5	Discharge from industrial chemical factories
1,2,4-Trichlorobenzene	ND	ND	ND	5	5	0.5	Discharge from textile-finishing factories
1,2-Dichlorobenzene	ND	ND	ND	600	600	0.5	Discharge from industrial chemical factories
1,2-Dichloroethane	ND	ND	ND	500	400	500	Discharge from industrial chemical factories
1,2-Dichloropropane	ND	ND	ND	5	0.5	0.5	Discharge from industrial chemical factories; primary component of some fumigants
1,3-Dichloropropene	ND	ND	ND	500	200	500	Runoff/leaching from nematicide used on croplands
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1,4-Dichlorobenzene		ND	ND	ND	5	6	0.5	Discharge from industrial chemical factories		
Benzene		ND	ND	ND	1	0.15	0.5	Plastic factory discharge; gas tanks and landfill leaching		
Carbon Tetrachloride		ND	ND	ND	500	100	500	Discharge from chemical plants and other industrial activities		
cis-1,2-Dichloroethylene		ND	ND	ND	6	100	0.5			
Dichloromethane (methylene chloride)		ND	ND	ND	5	4	0.5	Industrial chemical factory discharge; biodegradation byproduct of TCE/PCE groundwater contamination Discharge from pharmaceutical and chemical factories		
Ethylbenzene		ND	ND	ND	300	300	0.5	Discharge from petroleum refineries; industrial chemical factories		
Methyl-tert-butyl-ether (MTBE)		ND	ND	ND	13	13	3	Gasoline discharge from watercraft engines		
Monochlorobenzene		ND	ND	ND	70	70	0.5	Discharge from industrial, agricultural chemical factories and dry-cleaning facilities		
Styrene		ND	ND	ND	100	0.5	0.5	Rubber and plastics factories discharge, landfill leaching		
Tetrachloroethylene (PCE)		ND	ND	ND	5	0.06	0.5	Discharge from factories, dry cleaners and auto shops		
Toluene		ND	ND	ND	150	150	0.5			
trans-1,2-Dichloroethylene		ND	ND	ND	10	60	0.5	Discharge from petroleum and chemical refineries		
•				ND				Industrial chemical factory discharge; biodegradation byproduct of TCE/PCE groundwater contamination		
Trichloroethylene (TCE)		ND	ND		5	1.7	0.5	Discharge from metal degreasing sites and other factories		
Trichlorofluoromethane (Freon 11)		ND	ND	ND	150	1300	5	Discharge from industrial factories; degreasing solvent; propellant		
Vinyl chloride		ND	ND	ND	500	50	500	Leaching from PVC piping; plastics factory discharge; biodegradation byproduct of TCE/PCE biodegradation		
Xylenes		ND	ND	ND	1.75	1.8	0.0005	Discharge from petroleum and chemical refineries; fuel solvent		
INORGANIC CHEMICALS										
				DUF 2023						
Aluminum (g)	ppb	ND - 240/148	ND	DUE 2023	1000	600	50	Residue from water treatment process; erosion of natural deposits		
	ppb	ND - 240/148 ND	ND ND	DUE 2023	1000	600	50 6	Residue from water treatment process; erosion of natural deposits Petroleum refinery discharges, fire retardants, solder, electronics		
Aluminum (g)				DUE 2023						
Aluminum (g) Antimony	ppb	ND	ND	DUE 2023	6	1	6	Petroleum refinery discharges, fire retardants, solder, electronics		
Aluminum (g) Antimony Arsenic	ppb	ND ND	ND ND	DUE 2023	6	0.004	6	Petroleum refinery discharges, fire retardants, solder, electronics Erosion of natural deposits; glass & electronics production wastes		
Aluminum (g) Antimony Arsenic Asbestos (h)	ppb ppb MFL	ND ND ND	ND ND ND	DUE 2023	6 10 7	1 0.004 7	6 2 0.2	Petroleum refinery discharges, fire retardants, solder, electronics Erosion of natural deposits; glass & electronics production wastes Internal corrosion of asbestos cement pipes; erosion of natural deposits		
Aluminum (g) Antimony Arsenic Asbestos (h) Barium	ppb ppb MFL ppb	ND ND ND	ND ND ND	DUE 2023	6 10 7 1000	1 0.004 7 2000	6 2 0.2 100	Petroleum refinery discharges, fire retardants, solder, electronics Erosion of natural deposits; glass & electronics production wastes Internal corrosion of asbestos cement pipes; erosion of natural deposits Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits Discharge from metal refineries; aerospace and defense industries Internal corrosion of galvanized pipes; discharge from electroplating industrial factories and metal		
Aluminum (g) Antimony Arsenic Asbestos (h) Barium Beryllium	ppb ppb MFL ppb ppb	ND ND 110 ND	ND ND ND ND ND	DUE 2023	6 10 7 1000	1 0.004 7 2000	6 2 0.2 100 1	Petroleum refinery discharges, fire retardants, solder, electronics Erosion of natural deposits; glass & electronics production wastes Internal corrosion of asbestos cement pipes; erosion of natural deposits Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits Discharge from metal refineries; aerospace and defense industries		
Aluminum (g) Antimony Arsenic Asbestos (h) Barium Beryllium Cadmium	ppb ppb MFL ppb ppb	ND ND ND 110 ND ND	ND ND ND ND ND ND ND ND	DUE 2023	6 10 7 1000 4 5	1 0.004 7 2000 1 0.04	6 2 0.2 100 1	Petroleum refinery discharges, fire retardants, solder, electronics Erosion of natural deposits; glass & electronics production wastes Internal corrosion of asbestos cement pipes; erosion of natural deposits Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits Discharge from metal refineries; aerospace and defense industries Internal corrosion of galvanized pipes; discharge from electroplating industrial factories and metal refineries, runoff from waste batteries and paints, natural deposits erosion		
Aluminum (g) Antimony Arsenic Asbestos (h) Barium Beryllium Cadmium Chromium	ppb ppb ppb ppb ppb	ND ND ND 110 ND ND ND ND ND	ND	DUE 2023	6 10 7 1000 4 5	1 0.004 7 2000 1 0.04 MCLG = 100	6 2 0.2 100 1 1	Petroleum refinery discharges, fire retardants, solder, electronics Erosion of natural deposits; glass & electronics production wastes Internal corrosion of asbestos cement pipes; erosion of natural deposits Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits Discharge from metal refineries; aerospace and defense industries Internal corrosion of galvanized pipes; discharge from electroplating industrial factories and metal refineries, runoff from waste batteries and paints, natural deposits erosion Discharge from steel and pulp mills; erosion of natural deposits		
Aluminum (g) Antimony Arsenic Asbestos (h) Barium Beryllium Cadmium Chromium Copper (i)	ppb ppb ppb ppb ppb ppb	ND ND 110 ND ND ND ND ND ND ND ND	ND N		6 10 7 1000 4 5 50 AL=1.3	1 0.004 7 2000 1 0.04 MCLG = 100	6 2 0.2 100 1 1 10 0.05	Petroleum refinery discharges, fire retardants, solder, electronics Erosion of natural deposits; glass & electronics production wastes Internal corrosion of asbestos cement pipes; erosion of natural deposits Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits Discharge from metal refineries; aerospace and defense industries Internal corrosion of galvanized pipes; discharge from electroplating industrial factories and metal refineries, runoff from waste batteries and paints, natural deposits erosion Discharge from steel and pulp mills; erosion of natural deposits Internal corrosion of household pipes; erosion of natural deposits		
Aluminum (g) Antimony Arsenic Asbestos (h) Barium Beryllium Cadmium Chromium Copper (i) Cyanide	ppb ppb ppb ppb ppb ppb ppb ppb	ND	ND N	(naturally occurring)	6 10 7 1000 4 5 50 AL=1.3	1 0.004 7 2000 1 0.04 MCLG = 100 0.3	6 2 0.2 100 1 1 10 0.05	Petroleum refinery discharges, fire retardants, solder, electronics Erosion of natural deposits; glass & electronics production wastes Internal corrosion of asbestos cement pipes; erosion of natural deposits Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits Discharge from metal refineries; aerospace and defense industries Internal corrosion of galvanized pipes; discharge from electroplating industrial factories and metal refineries, runoff from waste batteries and paints, natural deposits erosion Discharge from steel and pulp mills; erosion of natural deposits Internal corrosion of household pipes; erosion of natural deposits Discharge from steel/metal, plastic and fertilizer factories		
Aluminum (g) Antimony Arsenic Asbestos (h) Barium Beryllium Cadmium Chromium Copper (i) Cyanide Fluoride (j)	ppb ppb ppb ppb ppb ppb ppm ppb	ND ND 110 ND	ND N		6 10 7 1000 4 5 50 AL=1.3	1 0.004 7 2000 1 0.04 MCLG = 100 0.3 150	6 2 0.2 100 1 1 10 0.05 100	Petroleum refinery discharges, fire retardants, solder, electronics Erosion of natural deposits; glass & electronics production wastes Internal corrosion of asbestos cement pipes; erosion of natural deposits Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits Discharge from metal refineries; aerospace and defense industries Internal corrosion of galvanized pipes; discharge from electroplating industrial factories and metal refineries, runoff from waste batteries and paints, natural deposits erosion Discharge from steel and pulp mills; erosion of natural deposits Internal corrosion of household pipes; erosion of natural deposits Discharge from steel/metal, plastic and fertilizer factories Erosion of natural deposits; water additive that promotes strong teeth		
Aluminum (g) Antimony Arsenic Asbestos (h) Barium Beryllium Cadmium Chromium Copper (i) Cyanide Fluoride (j) Lead (i)	ppb ppb ppb ppb ppb ppb ppm ppb ppm ppb	ND ND 110 ND	ND N		6 10 7 1000 4 5 50 AL=1.3 150 2 AL=15	1 0.004 7 2000 1 0.04 MCLG = 100 0.3 150 1	6 2 0.2 100 1 1 10 0.05 100 0.1	Petroleum refinery discharges, fire retardants, solder, electronics Erosion of natural deposits; glass & electronics production wastes Internal corrosion of asbestos cement pipes; erosion of natural deposits Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits Discharge from metal refineries; aerospace and defense industries Internal corrosion of galvanized pipes; discharge from electroplating industrial factories and metal refineries, runoff from waste batteries and paints, natural deposits erosion Discharge from steel and pulp mills; erosion of natural deposits Internal corrosion of household pipes; erosion of natural deposits Discharge from steel/metal, plastic and fertilizer factories Erosion of natural deposits; water additive that promotes strong teeth Internal corrosion of household pipes; erosion of natural deposits		
Aluminum (g) Antimony Arsenic Asbestos (h) Barium Beryllium Cadmium Chromium Copper (i) Cyanide Fluoride (j) Lead (i) Mercury	ppb ppb ppb ppb ppb ppb ppm ppb ppb ppb	ND N	ND N		6 10 7 1000 4 5 50 AL=1.3 150 2 AL=15	1 0.004 7 2000 1 0.04 MCLG = 100 0.3 150 1	6 2 0.2 100 1 1 1 0.05 100 0.1 5	Petroleum refinery discharges, fire retardants, solder, electronics Erosion of natural deposits; glass & electronics production wastes Internal corrosion of asbestos cement pipes; erosion of natural deposits Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits Discharge from metal refineries; aerospace and defense industries Internal corrosion of galvanized pipes; discharge from electroplating industrial factories and metal refineries, runoff from waste batteries and paints, natural deposits erosion Discharge from steel and pulp mills; erosion of natural deposits Internal corrosion of household pipes; erosion of natural deposits Discharge from steel/metal, plastic and fertilizer factories Erosion of natural deposits; water additive that promotes strong teeth Internal corrosion of household pipes; erosion of natural deposits Erosion of natural deposits; discharge from factories; runoff from landfills		

Perchlorate	ppb	ND	ND	ND	6	1	2	Industrial waste discharge
Selenium	ppb	ND	ND	ND	50	30	5	Refineries, mines and chemical waste discharge; runoff from livestock lots
Thallium	ppb	ND	ND	ND	2	0.1	1	Leaching from ore-processing sites; factory discharge
RADIOLOGICALS		L			ı			
Gross Alpha Particle Activity	pCi/L	ND	ND (2018) due 2023	ND (2016) due 2028	15	(0)	3	Erosion of natural deposits
Gross Beta Particle Activity	pCi/L	4 - 9/5	3.35 - 4.29/3.82	NR	50	(0)	4	Decay of natural and man-made deposits
Combined Radium	pCi/L	ND	ND (2015) due 2022	0.148 (2016) due 2028	5	(0)	NA	Erosion of natural deposits
Radium 226	pCi/L	ND	0.88	0.147 (2016) due 2028	NA	0.05	1	Erosion of natural deposits
Radium 228	pCi/L	ND- 1/ND	0	0.001 (2016) due 2028	NA	0.019	1	Erosion of natural deposits
Strontium-90	pCi/L	ND	0.560	NR	8	0.35	2	Decay of natural and man-made deposits
Tritium	pCi/L	ND	293	NR	20,000	400	1,000	Decay of natural and man-made deposits
Uranium	pCi/L	1 - 3/2	ND (2018) DUE 2023	2.2	20	0.43	1	Erosion of natural deposits
DISINFECTION BY-PRODUCTS, DIS	SINFECTANT R	ESIDUALS. AND DIS		ICTS PRECURSORS	(k)			
Total Trihalomethanes (TTHM)	ppb	12 - 39/33 Distribution system-wide	25.40 - 54.30/37.61 Distribution system-wide	NR	80	NA NA	1	Donas donat of detection contact distinct attention
Sum of Five Haloacetic Acids (HAA5)			Distribution system-wide				!	By-product of drinking water disinfection
	ppb	15 - 14/9.8 Distribution system-wide	6.8 - 20.9/12.19 Distribution system-wide	NR	60	NA	1	By-product of drinking water disinfection
Total Chlorine Residual	ppb	15 - 14/9.8 Distribution system-wide 1.4 - 2.9/2.4	6.8 - 20.9/12.19 Distribution system-wide 2.62 - 2.64/2.63	NR NR	60 [4.0]			, , , , , , , , , , , , , , , , , , ,
		15 - 14/9.8 Distribution system-wide	6.8 - 20.9/12.19 Distribution system-wide			NA	1	By-product of drinking water disinfection
		15 - 14/9.8 Distribution system-wide 1.4 - 2.9/2.4 highest RAA Distribution system-wide ND - 7.0/ND	6.8 - 20.9/12.19 Distribution system-wide 2.62 - 2.64/2.63 highest RAA			NA	1	By-product of drinking water disinfection
Total Chlorine Residual	ppm	15 - 14/9.8 Distribution system-wide 1.4 - 2.9/2.4 highest RAA Distribution system-wide	6.8 - 20.9/12.19 Distribution system-wide 2.62 - 2.64/2.63 highest RAA Distribution system-wide	NR	[4.0]	NA [4.0]	1 NA	By-product of drinking water disinfection Drinking water disinfectant added for treatment
Total Chlorine Residual Bromate (I) Total Organic Carbon (TOC)	ppm ppb ppm	15 - 14/9.8 Distribution system-wide 1.4 - 2.9/2.4 highest RAA Distribution system-wide ND - 7.0/ND highest RAA 1.8 - 2.5/2.4	6.8 - 20.9/12.19 Distribution system-wide 2.62 - 2.64/2.63 highest RAA Distribution system-wide NR	NR NA NR	[4.0] 10	NA [4.0]	1 NA 1.0	By-product of drinking water disinfection Drinking water disinfectant added for treatment Byproduct of drinking water ozonation
Total Chlorine Residual Bromate (I)	ppm ppb ppm	15 - 14/9.8 Distribution system-wide 1.4 - 2.9/2.4 highest RAA Distribution system-wide ND - 7.0/ND highest KAA 1.8 - 2.5/2.4 ards ND - 240/148	6.8 - 20.9/12.19 Distribution system-wide 2.62 - 2.64/2.63 highest RAA Distribution system-wide NR	NR NA	[4.0] 10	NA [4.0]	1 NA 1.0	By-product of drinking water disinfection Drinking water disinfectant added for treatment Byproduct of drinking water ozonation
Total Chlorine Residual Bromate (I) Total Organic Carbon (TOC) SECONDARY STANDARDS - A	ppm ppb ppm	15 - 14/9.8 Distribution system-wide 1.4 - 2.9/2.4 highest RAA Distribution system-wide ND - 7.0/ND highest KAA 1.8 - 2.5/2.4	6.8 - 20.9/12.19 Distribution system-wide 2.62 - 2.64/2.63 highest RAA Distribution system-wide NR 1.26 - 1.39/1.33	NR NA NR	[4.0] 10 TT	NA [4.0] 0.1 NA	1 NA 1.0 0.30	By-product of drinking water disinfection Drinking water disinfectant added for treatment Byproduct of drinking water ozonation Various natural and man-made sources; TOC as a medium for the formation of disinfection byproducts
Total Chlorine Residual Bromate (I) Total Organic Carbon (TOC) SECONDARY STANDARDS - Aduminum (g)	ppm ppb ppm esthetic Stand	15 - 14/9.8 Distribution system-wide 1.4 - 2.9/2.4 highest RAA Distribution system-wide ND - 7.0/ND highest RAA 1.8 - 2.5/2.4 ards ND - 240/148 Highest RAA	6.8 - 20.9/12.19 Distribution system-wide 2.62 - 2.64/2.63 highest RAA Distribution system-wide NR 1.26 - 1.39/1.33	NR NA NR	[4.0] 10 TT	NA [4.0] 0.1 NA	1 NA 1.0 0.30	By-product of drinking water disinfection Drinking water disinfectant added for treatment Byproduct of drinking water ozonation Various natural and man-made sources; TOC as a medium for the formation of disinfection byproducts Residue from water treatment processes; natural deposits erosion
Total Chlorine Residual Bromate (I) Total Organic Carbon (TOC) SECONDARY STANDARDS - Aduminum (g) Chloride	ppm ppb ppm esthetic Stand	15 - 14/9.8 Distribution system-wide 1.4 - 2.9/2.4 highest RAA Distribution system-wide ND - 7.0/ND highest RAA 1.8 - 2.5/2.4 ards ND - 240/148 Highest RAA 95 - 97/96	6.8 - 20.9/12.19 Distribution system-wide 2.62 - 2.64/2.63 highest RAA Distribution system-wide NR 1.26 - 1.39/1.33	NR NA NR	[4.0] 10 TT 200 500	NA [4.0] 0.1 NA 600 NA	1 NA 1.0 0.30 50 (2)	By-product of drinking water disinfection Drinking water disinfectant added for treatment Byproduct of drinking water ozonation Various natural and man-made sources; TOC as a medium for the formation of disinfection byproducts Residue from water treatment processes; natural deposits erosion Runoff/leaching from natural deposits; seawater influence
Total Chlorine Residual Bromate (I) Total Organic Carbon (TOC) SECONDARY STANDARDS - Adluminum (g) Chloride Color	ppb ppm esthetic Stand	15 - 14/9.8 Distribution system-wide 1.4 - 2.9/2.4 highest RAA Distribution system-wide ND - 7.0/ND highest RAA 1.8 - 2.5/2.4 ards ND - 240/148 Highest RAA 95 - 97/96	6.8 - 20.9/12.19 Distribution system-wide 2.62 - 2.64/2.63 highest RAA Distribution system-wide NR 1.26 - 1.39/1.33 ND 94 ND	NR NA NR	[4.0] 10 TT 200 500 15	NA [4.0] 0.1 NA 600 NA NA	1 NA 1.0 0.30 50 (2) (1)	By-product of drinking water disinfection Drinking water disinfectant added for treatment Byproduct of drinking water ozonation Various natural and man-made sources; TOC as a medium for the formation of disinfection byproducts Residue from water treatment processes; natural deposits erosion Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials
Total Chlorine Residual Bromate (I) Total Organic Carbon (TOC) SECONDARY STANDARDS - Adluminum (g) Chloride Color Copper (i)	ppm ppb ppm esthetic Stand	15 - 14/9.8 Distribution system-wide 1.4 - 2.9/2.4 highest RAA Distribution system-wide ND - 7.0/ND highest KAA 1.8 - 2.5/2.4 ards ND - 240/148 Highest RAA 95 - 97/96 1 ND	6.8 - 20.9/12.19 Distribution system-wide 2.62 - 2.64/2.63 highest RAA Distribution system-wide NR 1.26 - 1.39/1.33	NR NA NR	[4.0] 10 TT 200 500 15	NA [4.0] 0.1 NA 600 NA NA 0.3	1 NA 1.0 0.30 50 (2) (1) 0.05	By-product of drinking water disinfection Drinking water disinfectant added for treatment Byproduct of drinking water ozonation Various natural and man-made sources; TOC as a medium for the formation of disinfection byproducts Residue from water treatment processes; natural deposits erosion Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching
Total Chlorine Residual Bromate (I) Total Organic Carbon (TOC) SECONDARY STANDARDS - Adluminum (g) Chloride Color Copper (i) Foaming Agents-Methylene Blue Act	ppm ppb ppm esthetic Stand ppm units ppm	15 - 14/9.8 Distribution system-wide 1.4 - 2.9/2.4 highest RAA Distribution system-wide ND - 7.0/ND highest KAA 1.8 - 2.5/2.4 ards ND - 240/148 Highest RAA 95 - 97/96 1 ND	6.8 - 20.9/12.19 Distribution system-wide 2.62 - 2.64/2.63 highest RAA Distribution system-wide NR 1.26 - 1.39/1.33 ND 94 ND ND ND	NR NA NR	[4.0] 10 TT 200 500 15 1 500	NA [4.0] 0.1 NA 600 NA NA 0.3	1 NA 1.0 0.30 50 (2) (1) 0.05 (50)	By-product of drinking water disinfection Drinking water disinfectant added for treatment Byproduct of drinking water ozonation Various natural and man-made sources; TOC as a medium for the formation of disinfection byproducts Residue from water treatment processes; natural deposits erosion Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges

NA

NA

NA

NA

42

10

NA

0.5

100

1,600

500

Naturally occurring organic materials

Runoff/leaching from rice herbicide

Substances that form ions when in water; seawater influence

Runoff/leaching from natural deposits; industrial wastes

Industrial discharges

TON

ppb

μS/cm

ppm

ppb

1

ND

962 - 965/964

217 - 221/219

ND

1

ND

560

40

ND

Odor Threshold

Specific Conductance

Silver

Sulfate

Thiobencarb

NTU NO NO NO NO S. NA S. S. NA S. S. S. S. S. S. S. S	Total Dissolved Solids (TDS) (m)	ppm	599 - 609/604	310		1,000	NA	(2)	Runoff/leaching from natural deposits; seawater influence	
	Turbidity (a)	NTU	ND	ND		5	NA	0.1		
Calcium Pipe 123-128/128 85-888 NA NA NA (1) Measure of outer quality	Zinc	ppm	ND	ND		5.0	NA	0.05	Runoff/leaching from natural deposits; industrial wastes	
Alkalani, (ac CaCO3) Pipm 123 - 128/1128 83 - 89/88 N.A. N.A. (1) Massizer of enter quality	OTHER PARAMETERS									
Part Section Part Section Part Section Part		nnm	400 400/400	05.00/00	DUE 2023	NA I	NA	(4)		
Part frees (as CaCO ₂)	Alkalinity (as CaCO3)	ррпі	123 - 128/126	85 - 89/88		NA	NA	(1)	Measure of water quality	
Magnesium	Calcium	ppm	64 - 70/67	24 - 28/26		NA	NA	(0.1)	Measure of water quality	
Potassium	Hardness (as CaCO ₃)	ppm	270 - 273/272	110		NA	NA	(1)	Measure of water quality	
Sodium	Magnesium	ppm	25 - 26/26	12		NA	NA	(0.01)	Measure of water quality	
Direction of content quality Direction Direction of content quality Direction Direction of content quality Direction quality Direction quality Direction quality Directi	Potassium	ppm	4.4 - 4.7/4.6	2.7 - 3.0/2.85		NA	NA	(0.2)	Measure of water quality	
Ppb 130 190-270/200 DUE 2023 NL=1,000 NA 100 Runofflicaching from natural deposits: industrial wastes	Sodium	ppm	95 - 101/98	73		NA	NA	(1)	Measure of water quality	
Chrorate ppb 55 ND NR NL=800 NA 20 by-product of drinking water chlorination; industrial processes Chromium VI ppb ND ND ND NR NL=50 NA 3 Naturally occurring; industrial waste discharge from industrial waste factories Vanadium ppb ND ND ND NR NL=12 NA 2 MTBE breakdown product; used as gasoline additive ppb ND ND ND NR NL=112 NA 0.5 industrial waste discharge ppb ND ND ND NR NL=11,000 NA 0.5 industrial waste discharge ppb ND ND ND NR NL=10 3 (2) by-product of drinking water chlorination; industrial processes Miscellaneous (n) Caclium Carbonate Precipitation Potential (CCPP) (as CaCO3) (p) Corrosivity (q) (as Saturation index) pH units 8.1 8.5 7.711 NA NA NA Elemental balance in water; affected by temperature, other factors Caclium Carbonate Precipitation Potential (CCPP) (as CaCO3) (p) PH units 8.1 8.5 7.711 NA NA NA NA Elemental balance in water; affected by temperature, other factors PDF Units PDF Units 8.1 8.5 7.711 NA NA NA NA Elemental balance in water; affected by temperature, other factors PDF Units PDF Un										
Chromium VI ppb ND ND ND ND ND NR NL=50 NA	Boron	ppb	130	190 - 210/200	DUE 2023	NL=1,000	NA	100	Runoff/leaching from natural deposits; industrial wastes	
Anadium ppb ND ND NR NL=50 NA 3 Naturally occurring; industrial waste factories tert-Butlyl alcohol (TBA) ppb ND ND NR NL=12 NA 2 MTBE breakdown product; used as gasoline additive ppb ND ND NR NL=1,000 NA 0.5 Industrial waste discharge N-Nitrosodimethylamine (NUMA) NESCELLANDE PER PRODUCT (NUMA) NA NA NA Elemental balance in water; affected by temperature, other factors NESCELLANDE PER PRODUCT (NUMA) NESCELLANDE PER PRODUCT (NUMA) NA NA NA NA NA Elemental balance in water; affected by temperature, other factors NESCELLANDE PER PRODUCT (NUMA) NESCELLANDE PER PRODUCT (NUMA) NA N	Chlorate	ppb	55	ND	NR	NL=800	NA	20	By-product of drinking water chlorination; industrial processes	
tert-Butyl alcohol (TBA) ppb ND ND ND ND ND ND ND ND ND N	Chromium VI	ppb	ND	ND	DUE 2023	NA	0.02	1	Runoff/leaching from natural deposits; discharge from industrial waste factories	
Dichlorodifluoromethane (Freon 12) N-Nitrosodimethylamine (NUMA) Ppt ND ND NR NL=1,000 NA 0.5 Industrial waste discharge Ppt ND ND NR NL=10 3 (2) By-product of drinking water chlorination; industrial processes Miscellaneous (n) Calcium Carbonate Precipitation Potential (CCPP) (as CaCO3) (p) Corrosivity (q) (as Aggressiveness Index) (as Sagressiveness Index) Corrosivity (r) (as Saturation Index) PH Badon Total Dissolved Solids (TDS) (s) Ethyl-fert-butyl-ether (EIE) Ppt ND ND NR NR NR NA	Vanadium	ppb	ND	ND	NR	NL=50	NA	3	Naturally occurring; industrial waste discharge	
N-Nitrosodimethylamine (NUMA) ND ND NR NL=10 3 (2) By-product of drinking water chlorination; industrial processes	tert-Butyl alcohol (TBA)	ppb	ND	ND	NR	NL=12	NA	2	MTBE breakdown product; used as gasoline additive	
Miscellaneous (n) Calcium Carbonate Precipitation Potential (CCPP) (as CaCO3) (p) Corrosivity (q) (as Aggressiveness Index) (Corrosivity (r) (as Saturation Index) pH units PH units Ph units PCI/L ND NR NR NR NA	Dichlorodifluoromethane (Freon 12)	ppb	ND	ND	NR	NL=1,000	NA	0.5	Industrial waste discharge	
Calcium Carbonate Precipitation Potential (CCPP) (as CaCO3) (p) Corrosivity (q) (as Aggressiveness Index) Corrosivity (r) (as Saturation Index) pH Radon Total Dissolved Solids (TDS) (s) Ethyl-tert-butyl-ether (ETBE) ppm 2.4 - 11/8.3 NR NR NR NR NR NR NR NA NA NA		ppt	ND	ND	NR	NL=10	3	(2)	By-product of drinking water chlorination; industrial processes	
Calcium Carbonate Precipitation Potential (CCPP) (as CaCO3) (p) Corrosivity (q) (as Aggressiveness Index) Corrosivity (r) (as Saturation Index) pH Radon Total Dissolved Solids (TDS) (s) Ethyl-tert-butyl-ether (ETBE) ppm 2.4 - 11/8.3 NR NR NR NR NR NR NR NA NA NA	Miscellaneous (n)									
Potential (CCPP) (as CaCO3) (p) Corrosivity (q) (as Aggressiveness Index) Corrosivity (r) (as Saturation Index) pH Radon Radon Potential (CCPP) (as CaCO3) (p) Al	, ,	ppm	2.4 - 11/8.3	NR	NR	NA	NA	NA	Elemental balance in water; affected by temperature, other factors	
Corrosivity (r) (as Aggressiveness Index) Corrosivity (r) (as Saturation Index) pH pH units pCi/L ND NR NR NR NA NA Elemental balance in water; affected by temperature, other factors Measure of water quality Naturally occurring, comes from decay of uranium in nearly all soils Total Dissolved Solids (TDS) (s) Ethyl-tert-butyl-ether (ETBE) PD ND ND ND ND ND ND ND ND ND										
Corrosivity (r) (as Saturation Index) pH Radon Total Dissolved Solids (TDS) (s) Ethyl-tert-butyl-ether (ETBE) PA SI 0.52 - 0.61/0.56 0.39 - 0.43/0.41 NR NA NA NA NA NA NA NA NA NA		Al	12.4 - 12.5/12.4	12.22 - 12.25/12.23	NR	NA	NA	NA	Elemental balance in water; affected by temperature, other factors	
PH Radon Radon Rotal Dissolved Solids (TDS) (s) Ethyl-tert-butyl-ether (ETBE) PH units PCI/L ND NR NR NR NA	Corrosivity (r)	SI	0.52 - 0.61/0.56	0.39 - 0.43/0.41	NR	NA	NA	NA	Elemental balance in water; affected by temperature, other factors	
Radon PCI/L ND NR NR NA NA 100 Naturally occurring, comes from decay of uranium in nearly all soils Total Dissolved Solids (TDS) (s) Ppm 400 - 604/567 260 - 340/304 322.75 - 446.5/357 1,000 NA (2) Runoff/leaching from natural deposits; seawater influence Ethyl-tert -butyl-ether (ETBE) ppb ND ND NR NA NA 3 Used as gasoline additive	· ·	pH units	8.1	8.5	7.71	NA	NA	NA	Measure of water quality	
Ethyl-tert-butyl-ether (ETBE) ppb ND ND NR NA NA Sagasoline additive tert A myl methyl ether (TAME)	Radon	•	ND	NR	NR	NA	NA	100	Naturally occurring, comes from decay of uranium in nearly all soils	
text Amyl methyl ether (TAME) Discrete Amyl methyl ether (TAME) NO N	Total Dissolved Solids (TDS) (s)	ppm	400 - 604/567	260 - 340/304	322.75 - 446.5/357	1,000	NA	(2)	Runoff/leaching from natural deposits; seawater influence	
tert-Amyl-methyl-ether (TAME) ppb ND ND NR NA NA 3 Used as gasoline additive	Ethyl- <i>tert</i> -butyl-ether (ETBE)	ppb	ND	ND	NR	NA	NA	3	Used as gasoline additive	
	tert-Amyl-methyl-ether (TAME)	ppb	ND	ND	NR	NA	NA	3	Used as gasoline additive	

DEFINITION OF TERMS AND FOOTNOTES

Agaressiveness Index

Maximum Residual Disinfectant Level

Not Detected at or above DLR or RL

Not Applicable

Maximum Residual Disinfectant Level Goal

‡ As a wholesale water system, Metropolitan and Three Valleys MWD provides its member agencies with relevant source water information and monitoring results that they may need for their annual water quality report. 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 and Three Valleys MWD's State-approved monitoring plans, and is based on TT, RAA, or LRAA, as appropriate. Data above Metropolitan's laboratory reporting limit (RL) but below the State DLR are reported as ND in this report; these data are available upon request. Metropolitan and Three Valleys MWD were in compliance with all primary and secondary drinking water regulations for the current monitoring period.

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

NL

TDS

TON

TTHM

TT

Definition of Terms

	1991		
AL	Action Level	NR	Not required
Average	Result based on arithmetic mean	NTU	Nephelometric Turbidity Units
CaCO ₃	Calcium Carbonate	pCi/L	picoCuries per Liter
CCPP	Calcium Carbonate Precipitation Potential	PHG	Public Health Goal
CFE	Combined Filter Effluent	ppb	parts per billion or micrograms per liter (μg/L)
CFU	Colony-Forming Units	ppm	parts per million or milligrams per liter (mg/L)
DLR	Detection Limits for Purposes of Reporting	ppq	parts per quadrillion or picograms per liter (pg/L)
HAA5	Sum of five haloacetic acids	RAA	Running Annual Average; highest RAA is the highest of all Running Annual Averages calculated as an average of all the samples collected within a 12-month period
HPC	Heterotrophic Plate Count		Turning Arrival Average, highest twas is the highest of an intuiting Arrival ages calculated as an average of an title samples confected within a 12-month period
LRAA	Locational Running Annual Average; highest LRAA is the highest of all Locational Running Annual	Range	Results based on minimum and maximum values; range and average values are the same if a single value is reported for samples collected once or twice annually
	Averages calculated as an average of all samples collected within a 12-month period		
MCL	Maximum Contaminant Level	RL	reporting
MCLG	Maximum Contaminant Level Goal	SI	Saturation Index (Langelier)
MFL	Million Fibers per Liter	SWRCB	State Water Resources Control Board

Notification Level to SWRCB

Footnotes

MRDL

NA

ND

MRDLG

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

Total Dissolved Solids

Total Trihalomethanes

Threshold Odor Number

Treatment Technique is a required process intended to reduce the level of a contaminate in drinking water

- (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 sample 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*. No coliforms were found in the water treatment system and distribution system. No Level 1 assessment or MCL violations occurred.
- (e) All distribution system samples had detectable total chlorine residuals, so no HPC analysis was required. Metropolitan and TVMWD monitor HPC bacteria to ensure treatment process efficacy.
- (f) Data are from samples collected in 2021 for the required triennial monitoring period (2020-2022).
- (g) Compliance with the State MCL for aluminum is based on RAA. No secondary standard MCL exceedance occurred at the Metropolitan or TVMWD plant effluents
- (h) Metropolitan data reported for 2020 once every nine-year compliance cycle until the next samples are collected in 2029. TVMWD results are from 2021.
- (i) As a wholesaler, Metropolitan and Three Valleys MWD have no retail customers and are not required to collect samples at consumers' taps. However, compliance monitoring under Title 22 is required at plant effluents.
- (j) Metropolitan was in compliance with all provisions of the State's fluoridation system requirements. TVMWD does not have fluoride feed systems and all fluoride results are naturally occurring.
- (k) 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.
- (I) Compliance with the state and federal bromate MCL is based on RAA.
- (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 "Other Parameters". TVMWD is required to test once annually for TDS.
- (n) Data are from voluntary monitoring of constituents and are provided for informational purposes.
- (o) Compliance with odor threshold secondary MCL is based on RAA. Treatment Plant begin guarterly monitoring if annual monitoring results are above 3.
- (p) Positive CCPP = non-corrosive; tendency to precipitate and/or deposit scale on pipes. Negative CCPP = corrosive; tendency to dissolve calcium carbonate. Reference: Standard Methods (SM2330)
- (q) AI ≥ 12.0 = Non-aggressive water; AI 10.0–11.9 = Moderately aggressive water; AI ≤ 10.0 = Highly aggressive water. Reference: ANSI/AWWA Standard C400-93 (R98)
- (r) Positive SI = non-corrosive; tendency to precipitate and/or deposit scale on pipes. Negative SI = corrosive; tendency to dissolve calcium carbonate. Reference: Standard Methods (SM2330)
- (s) Statistical summary represents 12 months of flow-weighted data and values may be different than the TDS reported to meet compliance with secondary drinking water regulations for Metropolitan. Metropolitans and TVMWD TDS goal is < 500 mg/L

I		