

EBMUD First Half of 2021 Data Update

These tables include data for detected water quality parameters from January 1, 2021 to June 30, 2021 in accordance with the requirements of the America’s Water Infrastructure Act of 2018 (AWIA). EBMUD’s 2020 report, with data from the entire calendar year, is here: <https://www.ebmud.com/wqr>.

1	Regulated for public health Primary MCL (Unit)		State or federal goal <i>PHG, MCLG or MRDLG</i>	Highest amount allowed <i>MCL, MRDL or AL</i>	System average	Walnut Creek	Water treatment plants Lafayette		Orinda	Sobranite	Upper San Leandro	Typical sources
Microbiological	Total Coliform	state rule	0	5%	NA	None detected in 2,262 samples					Naturally present in the environment	
		federal rule	NA	TT		met requirement						
	Turbidity (NTU)		NA	1	0.03	0.02 - 0.09	0.02 - 0.09	0.02 - 0.10	0.02 - 0.10	0.02 - 0.10	Soil runoff	
			NA	95% ≤ 0.3	100%	100%	100%	100%	100%	100%		
Inorganic	Aluminum (ppb)		600	1000	<50	<50	<50	<50	<50	<50	<50 - 60	Erosion of natural deposits; water treatment residue
	Fluoride ^a (ppm)		1	2	0.7	0.6 - 0.7	0.7	0.6 - 0.8	0.6 - 0.7	0.7 - 0.8	Erosion of natural deposits; water additive that promotes strong teeth	
D/DBPs	Bromate (ppb)		0.1	10	3.5 ^b	NA	NA	NA	<1.0 - 2.0	<1.0 - 2.4	By-product of drinking water disinfection	
	Chloramine as chlorine ^c (ppm)		4	4	2.5 ^b	0.1 - 3.7					Drinking water disinfectant added for treatment	
	Control of DBP precursors – TOC		NA	TT	NA	NA	NA	NA	met requirement		Various natural and man-made sources	
	Haloacetic acids, 5 species ^e (ppb)		NA	60	44 ^d	21 - 29	21 - 24	18 - 25	23 - 35	20 - 31	By-product of drinking water disinfection	
	Trihalomethanes ^e (ppb)		NA	80	45 ^d	30 - 36	33 - 36	31 - 37	30 - 35	39 - 42	By-product of drinking water disinfection	

2	Regulated for drinking water aesthetics Secondary MCL (Unit)	State or federal goal PHG, MCLG	Highest amount allowed MCL	System average	Walnut Creek	Water treatment plants Lafayette		Orinda	Sobranite	Upper San Leandro	Typical sources
	Aluminum (ppb)	NA	200	<50	<50	<50	<50	<50	<50	<50 - 60	Erosion of natural deposits; water treatment residue
	Chloride (ppm)	NA	250	7	4 - 5	4 - 5	4 - 7	14 - 15	15 - 19	Runoff/leaching from natural deposits	
	Color (color units)	NA	15	2	1	1	2	2	1	Naturally-occurring organic materials	
	Odor (TON)	NA	3	<1	<1	<1	<1	1	<1	Naturally-occurring organic materials	
	Specific conductance (µS/cm)	NA	900	124	70	69	72	234	403	Substances that form ions when in water	
	Sulfate (ppm)	NA	250	9	1 - 2	1 - 2	1 - 18	24 - 26	36 - 46	Runoff/leaching from natural deposits	
	Total dissolved solids (ppm)	NA	500	83	40 - 59	38 - 55	43 - 110	130 - 140	200 - 270	Runoff/leaching from natural deposits	
	Turbidity (NTU)	NA	5	0.03	0.02 - 0.09	0.02 - 0.09	0.02 - 0.10	0.02 - 0.10	0.02 - 0.10	Soil runoff	

Units	
gpg	grains per gallon
NTU	Nephelometric Turbidity Unit, a measure of the cloudiness of water
ppm	parts per million. One ppm is like 1 second in 11.5 days. (mg/L)
ppb	parts per billion. One ppb is like 1 second in nearly 32 years. (µg/L)
ppt	parts per trillion. One ppt is like 1 second in nearly 32,000 years. (ng/L)
TON	Threshold Odor Number, a measure of odor in water
µS/cm	microsiemens per centimeter, a measure of electrical conductance

Notes	
a	Please see page 11 of 2020 Annual Water Quality Report for additional information about fluoride in drinking water.
b	Shown under System Average is the highest running annual average (RAA), and includes data from 2020. Shown under each water treatment plant is the range of values from January through June, 2021
c	Chloramine residuals in the distribution system are measured as an equivalent quantity of chlorine. When the chloramine residual cannot be detected, the sample is further analyzed to ensure that microbiological water quality is in compliance with regulations.
d	Compliance is determined based on the highest locational running annual average results. Water treatment plant values show the range of individual sample results
e	Shown under System Average is the highest locational running annual average (LRAA) and includes data from 2020. Shown under each water treatment plant is the range of values from distribution system sample locations from January through June 2021. These locations are assigned to the most representative water treatment plant, but the data may also represent water from another plant.

Key Terms	
AL	Regulatory Action Level. The concentration which, if exceeded, triggers treatment or other requirements that a water system must follow.
DBP	Disinfection By-Products. These are formed when chlorine and/or ozone reacts with natural constituents in water. Trihalomethanes (THMs), haloacetic acids (HAAs), chlorate, and bromate are disinfection by-products.
D/DBPs	Disinfection By-products, disinfection residuals and disinfection by-product precursors.
MCL	Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs or MCLGs as is economically and technologically feasible. Secondary MCLs address odor, taste and appearance of drinking water.
MCLG	Maximum Contaminant Level Goal. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.
MRDL	Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfectant Level Goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
NA	Not Applicable.
Primary Drinking Water Standard	These standards regulate contaminants that affect health by setting MCLs, MRDLs, and Treatment Techniques (TT) along with their monitoring and reporting requirements.
PHG	Public Health Goal. The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.
TOC	Total Organic Carbon. A measure of organic content in the water.
Turbidity	A measure of the cloudiness of water. Turbidity is monitored because it is a good indication of the effectiveness of our filtration systems.
TT	Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.

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3 Unregulated contaminants <i>No established MCL (Unit)</i>		Year sampled	State NL	System average	Water treatment plants				Upper San Leandro
					Walnut Creek	Lafayette	Orinda	Sobrante	
UCMR4	Bromide in source water (ppb)	2018-2019	NA	<5	<5	<5	<5	22 - 26	35 - 46
	Haloacetic acids, 5 species (ppb) ^f	2018-2019	NA	35	24 - 40	27 - 37	23 - 46	40 - 58	19 - 57
	Haloacetic acids, 9 species (ppb) ^f	2018-2019	NA	36	25 - 41	28 - 37	24 - 47	43 - 66	25 - 68
	Haloacetic acids, 6 brominated species (ppb) ^f	2018-2019	NA	2	0.3 - 2	0.4 - 1	0.4 - 2	3 - 10	0.6 - 12
	Manganese (ppb)	2018-2019	500	1	<0.4	<0.4	<0.4	<0.4 – 13	2 - 4
	TOC in source water (ppm)	2018-2019	NA	2.5	1.5 - 2.3	1.5 - 2.3	1.5 - 3.0	3.4 - 5.5	5.3 - 7.2
Others ^g	Boron (ppb)	2021	1000	<100	<100	<100	<100	<100	136
	Chlorate (ppb)	2021	800	112	110	110	100	140 - 290	79 - 140
	N-Nitrosodimethylamine (NDMA) ^f	2021	10	1	<1 - 1	1	<1	7	3 - 4

4 Other parameters of interest to customers (Unit)		Water treatment plants				Upper San Leandro
		Walnut Creek	Lafayette	Orinda	Sobrante	
Alkalinity, Total as CaCO ₃ (ppm)		23 - 28	22 - 27	23 - 53	67 - 71	120 - 160
Calcium (ppm)		4 - 6	4 - 5	4 - 13	16	28 - 36
Hardness as CaCO ₃	(gpg) ^h	1	1	1 - 3	4	7 - 9
	(ppm)	15 - 20	14 - 20	16 - 48	60 - 62	120 - 160
Magnesium (ppb)		1	1	1 - 3	5	11 - 15
pH (pH)		9.3 - 9.4	9.0 - 9.4	9.2 - 9.4	8.4 - 8.7	8.2 - 8.4
Potassium (ppm)		1	1	1	1	1 - 2
Silica (ppm)		8 - 9	8 - 9	7 - 9	7 - 8	10 - 12
Sodium (ppm)		5 - 7	6 - 7	6 - 14	20 - 23	23 - 32

Notes

^f These data are collected in the distribution system. The sample locations are assigned to the most representative water treatment plant, but the data may also represent water from another plant.

^g Parameters with a notification level.

^h **Grains Per Gallon (gpg)** is a measure of water hardness. Knowing the amount can help improve the function of dishwashers, cooling equipment and other industrial processes. Refer to your appliance manufacturer's instruction manual for the optimum grains per gallon level.

Key Terms

NL Notification Level.
A health-based advisory level established by the State Water Board for contaminants in drinking water that lack MCLs.

UCMR4
The federal unregulated contaminant monitoring rule part 4.