



2013 Water Quality Report to Water Facilities Authority Member Agencies

Parameter	Units	State or Federal MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR	Range	Average	Major Sources in Drinking Water
CLARITY							
Combined Filter Effluent Turbidity	NTU	TT=1 NTU TT (a)	NA	NA	0.21 Highest % ≤ 0.3 100%		Soil runoff
MICROBIOLOGICAL							
Total Coliform Bacteria	%	5.0 (b)	(0)	NA	ND	ND	Naturally present in the environment
<i>E. coli</i>	(c)	0	(0)	NA	ND	ND	Human and animal fecal waste
INORGANIC CHEMICALS							
Aluminum (d)	ppb	1000	600	50	68 - 300	131	Residue from water treatment process; Erosion of natural deposits
Arsenic	ppb	10	0.004	2	ND - 2.2	0.5	Natural deposits erosion, glass and electronics production wastes
Fluoride (naturally-occurring)	ppm	2	1	0.1	ND	ND	Erosion of natural deposits; water additive that promotes strong teeth
Nitrate (as N) (e)	ppm	10	10	0.4	ND - 0.9	0.4	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
Nitrite (as N)	ppm	1	1	0.4	ND	ND	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
Nitrate and Nitrite (as N)	ppm	10	10	0.4	ND - 0.9	0.4	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
RADIOLOGICALS (f)							
Gross Alpha Particle Activity	pCi/L	15	(0)	3	ND	ND	Erosion of natural deposits
Gross Beta Particle Activity (g)	pCi/L	50	(0)	4	ND - 4	ND	Decay of natural and man-made deposits
Uranium	pCi/L	20	0.43	1	ND - 1	1	Erosion of natural deposits
DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BY-PRODUCTS PRECURSORS (h)							
Total Trihalomethanes (i)	ppb	80	NA	1	28 - 70	69	By-product of drinking water chlorination
Haloacetic Acids (five) (HAA5) (j)	ppb	60	NA	1	1 - 8	7	By-product of drinking water chlorination
Total Chlorine Residual (Distribution System-wide)	ppm	[4.0]	[4.0]	NA	0.94 - 1.80	1.34	Drinking water disinfectant added for treatment
DBP Precursors Control	ppm	TT	NA	0.30	TT	TT	Various natural and man-made sources
ADDITIONAL PARAMETERS							
Aluminum (d)	ppb	200	600	50	68 - 300	131	Residue from water treatment process; Erosion of natural deposits
Chloride	ppm	500	NA	NA	55 - 97	79	Runoff/leaching from natural deposits; seawater influence
Color	Units	15	NA	NA	<3	<3	Naturally occurring organic materials
Odor Threshold	TON	3	NA	1	2 - 3	2	Naturally occurring organic materials
Specific Conductance	µs/cm	1600	NA	NA	530 - 550	540	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	NA	0.5	35 - 62	48	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000	NA	NA	270 - 320	298	Runoff/leaching from natural deposits; seawater influence
Turbidity (a)	NTU	5	NA	0.1	0.07 - 0.39	0.20	Soil runoff
ADDITIONAL PARAMETERS (continued)							
Boron	ppb	NL=1000	NA	100	130 - 210	165	Runoff/leaching from natural deposits; industrial wastes
Vanadium	ppb	NL=50	NA	3	3.7 - 4.5	4.1	Naturally-occurring; industrial waste discharge



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OTHER PARAMETERS							
Alkalinity	ppm	NA	NA	NA	67 - 83	75	
Bicarbonate	ppm	NA	NA	NA	81 - 100	91	
Calcium	ppm	NA	NA	NA	20 - 28	24	
Hardness (CaCO ₃) (Total Hardness)	ppm	NA	NA	NA	100 - 120	113	Leaching from natural deposits
Magnesium	ppm	NA	NA	NA	12 - 14	13	
pH	pH Units	NA	NA	NA	7.94 - 8.57	8.24	
Potassium	ppm	NA	NA	NA	2.8 - 3.2	3.0	
Sodium	ppm	NA	NA	NA	61 - 72	65	Runoff/leaching from natural deposits; seawater influence
TOC	ppm	TT	NA	0.3	1.6 - 2.8	2.3	Various natural and man-made sources
Chromium VI (k)	ppb	NA	0.02	1	ND	ND	Industrial waste discharge; could be naturally present as well

ABBREVIATIONS

DBP	Disinfection by-products	NTU	Nephelometric Turbidity Units
DLR	Detection Limits for Purpose of Reporting	pCi/L	PicoCuries per liter
MCL	Maximum Contaminant Level	PHG	Public Health Goal
MCLG	Maximum Contaminant Level Goal	ppb	Parts Per Billion
MRDL	Maximum Residual Disinfectant Level	ppm	Parts Per Million
MRDLG	Maximum Residual Disinfectant Level Goal	TOC	Total Organic Carbon
NA	Not Applicable	TON	Threshold Odor Number
ND	Monitored for but not detected	TT	Treatment Techniques
NL	Notification Level	µs/cm	MicroSiemen per centimeter

FOOTNOTES

- (a) As a Primary Standard, the turbidity levels of the filtered water were less than or equal to 0.3 NTU in 95% of the online measurements taken each month and did not exceed 1 NTU for more than one hour. Turbidity, a measure of cloudiness of the water, is an indicator of the treatment performance. The range and average of turbidity shown in the Secondary Standards were based on the treatment plant effluent. Per the 2013 Consumer Confidence report Guidance, the state DLR for turbidity is 0.1 NTU.
- (b) Total coliform MCLs: No more than 5% of the monthly samples may be total coliform-positive. Standards and results are based on distribution system monthly sampling averages. In 2013, 611 samples were analyzed and zero (0) samples were positive for total coliforms. The MCL was not violated.
- (c) E. Coli MCL: The occurrence of two (2) consecutive total coliform positive samples, one of which contains E. Coli constitutes an acute MCL violation. The MCL was not violated in 2013.
- (d) Aluminum has both primary and secondary standards.
- (e) Nitrate is reported either as NO₃ or as nitrogen N. To convert data from N to NO₃, multiply by 4.43
- (f) Data collected (triennially) from four consecutive quarters of monitoring in 2011
- (g) CDPH considers 50 pCi/L to be the level of concern for beta particles; the gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ.
- (h) WFA was in compliance with all provisions of Stage 2 Disinfectant/Disinfection By-Products Rules (D/DBPR). Compliance was based on the highest Locational Running Annual Average (LRAA) of all data collected at distribution system-wide monitoring locations. The averages reported for THM's and HAA5 is the highest LRAA.
- (i) Reporting level is 0.5 ppb for each of the following: Bromodichloromethane, Bromoform, Chloroform, and Dibromochloromethane.
- (j) DLR = 1.0 ppb for each HAA5 analyte (dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid) except for monochloroacetic acid which has a DLR = 2.0 ppb.
- (k) Chromium VI reporting level is 0.03 ppb.