



2011 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
PRIMARY STANDARDS--Mandatory Health-Related Standards							
CLARITY							
Combined Filter Effluent Turbidity	NTU	0.3 (a)	NA	NA	0.01 - 0.08	0.03	Soil runoff
MICROBIOLOGICAL							
Total Coliform Bacteria	%	5.0 (b)	(0)	NA	ND - 1.8	0.3	Naturally present in the environment
Fecal Coliform and <i>E. coli</i>	(c)	0	(0)	NA	ND	ND	Human and animal fecal waste
INORGANIC CHEMICALS							
Aluminum (d)	ppb	1000	600	50	ND - 84	36	Residue from water treatment process; Erosion of natural deposits
Arsenic	ppb	10	0.004	2	ND	ND	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 - 0.7	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 - 0.7	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	37 - 61	52	By-product of drinking water chlorination
Haloacetic Acids (five) (HAA5) (j)	ppb	60	NA	1	4 - 12	8	By-product of drinking water chlorination
Total Chlorine Residual (Distribution System-wide)	ppm	[4.0]	[4.0]	NA	1.08 - 1.64	1.31	Drinking water disinfectant added for treatment
DBP Precursors Control	ppm	TT	NA	0.30	TT	TT	Various natural and man-made sources
SECONDARY STANDARDS--Aesthetic Standards							
Aluminum (d)	ppb	200	600	50	ND - 84	36	Residue from water treatment process; Erosion of natural deposits
Chloride	ppm	500	NA	NA	27 - 45	36	Runoff/leaching from natural deposits; seawater influence
Color	Units	15	NA	NA	ND - 3.0	0.8	Naturally occurring organic materials
Odor Threshold	TON	3	NA	1	1	1	Naturally occurring organic materials
Specific Conductance	µs/cm	1600	NA	NA	250 - 360	303	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	NA	0.5	22 - 48	34	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000	NA	NA	140 - 210	165	Runoff/leaching from natural deposits; seawater influence
Turbidity (a)	NTU	5	NA	NA	0.05 - 0.24	0.07	Soil runoff
UNREGULATED CHEMICALS REQUIRING MONITORING							
Boron	ppb	NL=1000	NA	100	ND - 100	25	Runoff/leaching from natural deposits; industrial wastes
Vanadium	ppb	NL=50	NA	3	ND - 3.2	0.8	Naturally-occurring; industrial waste discharge



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OTHER PARAMETERS							
Alkalinity	ppm	NA	NA	NA	45 - 62	54	
Bicarbonate	ppm	NA	NA	NA	53 - 71	64	
Calcium	ppm	NA	NA	NA	13 - 17	15	
Hardness (CaCO ₃) (Total Hardness)	ppm	NA	NA	NA	59 - 79	69	Leaching from natural deposits
Magnesium	ppm	NA	NA	NA	6.2 - 9.0	7.7	
pH	pH Units	NA	NA	NA	7.94 - 8.75	8.46	
Potassium	ppm	NA	NA	NA	1.5 - 2.5	1.9	
Sodium	ppm	NA	NA	NA	25 - 37	31	Runoff/leaching from natural deposits; seawater influence
TOC	ppm	TT	NA	0.3	1.6 - 2.5	2.0	Various natural and man-made sources
Chromium VI (k)	ppb	NA	0.02	1	0.09	0.09	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) The turbidity level of the filter water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1 NTU at any time. Turbidity is a measure of cloudiness of the water and 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.
- (b) Total coliform MCL: 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 2011, 606 samples were analyzed and two samples were positive for total coliforms. The MCL was not violated.
- (c) Fecal coliform/E. Coli MCL: The occurrence of two (2) consecutive total coliform positive samples, one of which contains fecal coliform/E. Coli constitutes an acute MCL violation. The MCL was not violated in 2011.
- (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 the Stage 1 Disinfectant/Disinfection By-Products (D/DBP) Rule. Compliance was based on the RAA.
- (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.