



# 2012 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
<b>PRIMARY STANDARDS--Mandatory Health-Related Standards</b>							
<b>CLARITY</b>							
Combined Filter Effluent Turbidity	NTU	TT=1 NTU TT (a)	NA	NA	0.13 Highest % ≤ 0.3 100%		Soil runoff
<b>MICROBIOLOGICAL</b>							
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
<b>INORGANIC CHEMICALS</b>							
Aluminum (d)	ppb	1000	600	50	83 - 150	110	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 - 0.6	0.3	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 - 0.6	0.3	Runoff & leaching from fertilizer use; sewage; erosion of natural deposits
<b>RADIOLOGICALS (f)</b>							
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
<b>DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BY-PRODUCTS PRECURSORS (h)</b>							
Total Trihalomethanes (i)	ppb	80	NA	1	37 - 78	47	By-product of drinking water chlorination
Haloacetic Acids (five) (HAA5) (j)	ppb	60	NA	1	1 - 11	8	By-product of drinking water chlorination
Total Chlorine Residual (Distribution System-wide)	ppm	[4.0]	[4.0]	NA	1.00 - 1.68	1.27	Drinking water disinfectant added for treatment
DBP Precursors Control	ppm	TT	NA	0.30	TT	TT	Various natural and man-made sources
<b>SECONDARY STANDARDS--Aesthetic Standards</b>							
Aluminum (d)	ppb	200	600	50	83 - 150	110	Residue from water treatment process; Erosion of natural deposits
Chloride	ppm	500	NA	NA	27 - 45	35	Runoff/leaching from natural deposits; seawater influence
Color	Units	15	NA	NA	<3	<3	Naturally occurring organic materials
Odor Threshold	TON	3	NA	1	1 - 3	2	Naturally occurring organic materials
Specific Conductance	µs/cm	1600	NA	NA	360 - 510	455	Substances that form ions when in water; seawater influence
Sulfate	ppm	500	NA	0.5	28 - 49	29	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000	NA	NA	280 - 360	315	Runoff/leaching from natural deposits; seawater influence
Turbidity (a)	NTU	5	NA	0.1	0.09 - 0.18	0.12	Soil runoff
<b>UNREGULATED CHEMICALS REQUIRING MONITORING</b>							
Boron	ppb	NL=1000	NA	100	ND - 160	108	Runoff/leaching from natural deposits; industrial wastes
Vanadium	ppb	NL=50	NA	3	ND - 3.8	2.6	Naturally-occurring; industrial waste discharge



# 2012 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
<b>OTHER PARAMETERS</b>							
Alkalinity	ppm	NA	NA	NA	68 - 84	74	
Bicarbonate	ppm	NA	NA	NA	77 - 91	83	
Calcium	ppm	NA	NA	NA	16 - 24	20	
Hardness (CaCO <sub>3</sub> ) (Total Hardness)	ppm	NA	NA	NA	84 - 110	97	Leaching from natural deposits
Magnesium	ppm	NA	NA	NA	9.8 - 13.0	11.7	
pH	pH Units	NA	NA	NA	7.78 - 8.50	8.26	
Potassium	ppm	NA	NA	NA	1.9 - 2.9	2.5	
Sodium	ppm	NA	NA	NA	36 - 66	53	Runoff/leaching from natural deposits; seawater influence
TOC	ppm	TT	NA	0.3	1.7 - 2.4	2.0	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 2012 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 2012, 603 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 2012.
- (d) Aluminum has both primary and secondary standards.
- (e) Nitrate is reported either as NO<sub>3</sub> or as nitrogen N. To convert data from N to NO<sub>3</sub>, 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 and 2 Disinfectant/Disinfection By-Products Rules (D/DBPR). Stage 2 D/DBPR monitoring began in the 2nd quarter of 2012. 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.