

2012 Annual Water Quality Report

	Unit Measurement	MCL/MRDL	PHG (MCLG)	Surface Water Average	Ground Water Range	Ground Water Average
Microbiological Contaminants						
1. Total Coliform Bacteria	% of tests positive	5%	(zero)	< 1%	N/D	N/D
2. Turbidity	NTU	TT	N/S	0.03	N/D-.10	0.10
Radioactive Contaminants (2006)						
4. Gross Beta Activity DLR=3.00	pCi/L	50	0	N/D	N/D	N/D
5. Strontium 90	pCi/L	8	0.35	N/D	N/D	N/D
6. Tritium	pCi/L	20,000	400	N/D	N/D	N/D
7. Gross Alpha Activity	pCi/L	15	0	N/D	<3.00	N/D
8. Radium 226 & 228 (total)	pCi/L	5	0	N/D	N/D	N/D
9. Uranium	pCi/L	20	0.43	N/D	N/D	N/D
Inorganic Contaminants						
10. Aluminum	ppm	1	0.6	N/D	N/D	N/D
11. Antimony	ppb	6	20	N/D	N/D	N/D
12. Arsenic	ppb	10	0.004	N/D	N/D	N/D
14. Barium	ppm	1	2	N/D	N/D-0.078	0.026
15. Beryllium	ppb	4	1	N/D	N/D	N/D
16. Cadmium	ppb	5	0.04	N/D	N/D	N/D
17. Chromium	ppb	50	(100)	N/D	N/D	N/D
18. Copper	ppm	1.3	0.3	N/D	N/D	N/D
19. Cyanide	ppb	150	150	N/D	N/D	N/D
20. Fluoride	ppm	2	1	N/D	0.10-0.12	0.11
21. Lead	ppb	15	0.2	N/D	N/D	N/D
22. Mercury(inorganic)	ppb	2	1.2	N/D	N/D	N/D
23. Nickel	ppb	100	12	N/D	N/D	N/D
24. Nitrate(as nitrite, NO3)	ppm	45	45	N/D	4.4-6.7	5.6
25. Nitrite(as nitrogen, N)	ppm	1	1	N/D	N/D	N/D
26. Perchlorate	ppb	6	6	N/D	N/D	N/D
27. Selenium	ppb	50	(50)	N/D	N/D	N/D
28. Thallium	ppb	2	0.1	N/D	N/D	N/D
Volatile Organic Contaminants						
29. Benzene	ppb	1	0.15	N/D	N/D	N/D
30. Carbon tetrachloride	ppt	500	100	N/D	N/D	N/D
31. 1,2-Dichlorobenzene[o-DCB]	ppb	600	600	N/D	N/D	N/D
32. 1,4-Dichlorobenzene[p-DCB]	ppb	5	6	N/D	N/D	N/D
33. 1,1-Dichloroethane	ppb	5	3	N/D	N/D	N/D
34. 1,2-Dichloroethane	ppt	500	400	N/D	N/D	N/D
35. 1,1-Dichloroethylene	ppb	6	10	N/D	N/D	N/D
36. cis-1,2-Dichloroethylene	ppb	6	100	N/D	N/D	N/D
37. trans-1,2-Dichloroethylene	ppb	10	60	N/D	N/D	N/D
38. Dichloromethane	ppb	5	4	N/D	N/D	N/D
39. 1,2-Dichloropropane	ppb	5	0.5	N/D	N/D	N/D
40. 1,3-Dichloropropane	ppt	500	200	N/D	N/D	N/D
41. Ethylbenzene	ppb	300	300	N/D	N/D	N/D
42. Methyl-tert-butyl ether	ppb	13	13	N/D	N/D	N/D
43. Monochlorobenzene	ppb	70	200	N/D	N/D	N/D
44. Styrene	ppb	100	0.5	N/D	N/D	N/D
45. 1,1,2,2-Tetrachlorethane	ppb	1	0.1	N/D	N/D	N/D
46. Tetrachloroethylene[PCE]	ppb	5	0.06	N/D	N/D-2.0	1.1
47. 1,2,4-Trichlorobenzene	ppb	5	5	N/D	N/D	N/D
48. 1,1,1-Trichloroethane	ppb	200	1000	N/D	N/D	N/D
49. 1,1,2-Trichloroethane	ppb	5	0.3	N/D	N/D	N/D
50. Trichloroethylene[TCE]	ppb	5	1.7	N/D	N/D	N/D
51. Toluene	ppb	150	150	N/D	N/D	N/D
52. Trichlorofluoromethane	ppb	150	700	N/D	N/D	N/D
53. 1,1,2-Trichloro1,2,2-trifluoroethane	ppb	1.2	4	N/D	N/D	N/D
54. Vinyl Chloride	ppt	500	50	N/D	N/D	N/D
55. Xylenes	ppm	1.75	1.8	N/D	N/D	N/D
Disinfection Byproducts (Distribution System)						
56. TTHM [Total Trihalomethanes] (HRAA)	ppb	80	N/S	8.8	N/A	N/A
57. Haloacetic Acids (HRAA)	ppb	60	N/S	7.4	N/A	N/A
58. Chlorine (Annual Average)	ppm	4 [MRDL]	4 [MRDL]	0.84	N/A	N/A
59. Total Organic Carbon (TOC)	ppm	TT	N/S	0.75	N/A	N/A

Secondary Drinking Water Standards

59. Aluminum	ppb	200	N/S	N/D	N/D	N/D
60. Color	units	15 units	N/S	N/D	N/D	N/D
61. Copper	ppm	1	N/S	N/D	N/D	N/D
62. Corrosivity	---	Non-corrosive	N/S	N/D	N/D	N/D
63. Foaming Agents [MBAS]	ppb	500	N/S	N/D	N/D	N/D
64. Iron	ppb	300	N/S	N/D	N/D	N/D
65. Manganese	ppb	50	N/S	N/D	N/D	N/D
66. Methyl-tert-butyl ether [MTBE]	ppb	5	N/S	N/D	N/D	N/D
67. Odor-Threshold	TON (units)	3	N/S	1	N/D	N/D
68. Silver	ppb	100	N/S	N/D	N/D	N/D
69. Thiobencarb	ppb	1	N/S	N/D	N/D	N/D
70. Turbidity	units	5 units	N/S	0.03	N/D-0.10	0.10
71. Zinc	ppm	5	N/S	N/D	N/D	N/D
72. Total Dissolved Solids	ppm	1000	N/S	34	130-210	170
73. Specific Conductance	micromhos	1600	N/S	76	180-250	217
74. Chloride	ppm	500	N/S	2.9	5.2-6.4	5.6
75. Sulfate	ppm	500	N/S	2.3	6.1-8.1	7.3

Synthetic Organic Contaminants including Pesticides and Herbicides (Sampled in 2011)

76. DBCP	ppt	200	1.7	N/D	N/D	N/D
77. EDB	ppt	50	10	N/D	N/D	N/D
78. Aldrin	ppb	N/S	N/S	N/D	N/D	N/D
79. Chlordane	ppt	100	30	N/D	N/D	N/D
80. Chorothonil	ppb	N/S	5	N/D	N/D	N/D
81. Dieldrin	ppb	N/S	0.02	N/D	N/D	N/D
82. Endrin	ppb	2	2	N/D	N/D	N/D
83. Heptachlor	ppt	10	8	N/D	N/D	N/D
84. Heptachlor Epoxide	ppt	10	6	N/D	N/D	N/D
85. Hexachlobenzene	ppb	1	0.03	N/D	N/D	N/D
86. Hexachlorocyclopentadiene	ppb	50	50	N/D	N/D	N/D
87. Lindane	ppt	200	32	N/D	N/D	N/D
88. Methoxychlor	ppb	30	0.09	N/D	N/D	N/D
89. PCB Arochlor Screen	ppt	500	90	N/D	N/D	N/D
90. Toxaphene	ppb	3	0.03	N/D	N/D	N/D
91. Triflualin	ppb	N/S	N/S	N/D	N/D	N/D
92. 2,4,5-T (2C)	ppb	N/S	N/S	N/D	N/D	N/D
93. 2,4,5-TP (Silvex) (2C)	ppb	50	25	N/D	N/D	N/D
94. 2,4-D (2C)	ppb	70	20	N/D	N/D	N/D
95. Bentazon	ppb	18	200	N/D	N/D	N/D
96. Dalapon	ppb	200	200	N/D	N/D	N/D
97. Dicamba	ppb	N/S	N/S	N/D	N/D	N/D
98. Dinoseb	ppb	7	14	N/D	N/D	N/D
99. Pentachlorophenol	ppb	1	1	N/D	N/D	N/D
100. Picloram	ppb	500	500	N/D	N/D	N/D
101. N-Nitrosodiethylamine (NDEA)	ppt	N/S	10	N/D	N/D	N/D
102. N-Nitrosodimethylamine (NDMA)	ppt	N/S	10	N/D	N/D	N/D
103. N-Nitrosodi-n-butylamine (NDBA)	ppt	N/S	10	N/D	N/D	N/D
104. N-Nitrosodi-n-propylamine (NDPA)	ppt	N/S	10	N/D	N/D	N/D
105. N-Nitrosopyrollidine (NMEA)	ppt	N/S	10	N/D	N/D	N/D
106. N-Nitrosopyrollidine (NPYR)	ppt	N/S	10	N/D	N/D	N/D
107. Alachlor	ppb	2	4	N/D	N/D	N/D
108. Atrazine	ppb	1	0.15	N/D	N/D	N/D
109. Benzo(a)pyrene	ppt	200	7	N/D	N/D	N/D
110. Bis(2-ethylhexyl) adipate	ppb	N/S	N/S	N/D	N/D	N/D
111. Bis(2-ethylhexyl) phthalate	ppb	N/S	N/S	N/D	N/D	N/D
112. Bromcil	ppb	N/S	N/S	N/D	N/D	N/D
113. Butachlor	ppb	N/S	N/S	N/D	N/D	N/D
114. Diazinon	ppb	N/S	N/S	N/D	N/D	N/D
115. Dimethoate	ppb	N/S	N/S	N/D	N/D	N/D
116. Metolachlor	ppb	N/S	N/S	N/D	N/D	N/D
117. Metribuzin	ppb	N/S	N/S	N/D	N/D	N/D
118. Molinate	ppb	20	1	N/D	N/D	N/D
119. Propachlor	ppb	N/S	N/S	N/D	N/D	N/D
120. Simazine	ppb	4	4	N/D	N/D	N/D
121. Thiobencarb	ppb	70	70	N/D	N/D	N/D
122. 3-Hydroxycarbofuran	ppb	N/S	N/S	N/D	N/D	N/D

123. Aldicarb	ppb	N/S	N/S	N/D	N/D	N/D
124. Aldicarb Sulfone	ppb	N/S	N/S	N/D	N/D	N/D
125. Aldicarb Sulfoxide	ppb	N/S	N/S	N/D	N/D	N/D
126. Carbaryl	ppb	N/S	N/S	N/D	N/D	N/D
127. Carbofuran	ppb	18	1.7	N/D	N/D	N/D
128. Methomyl	ppb	N/S	N/S	N/D	N/D	N/D
129. Oxamyl	ppb	50	26	N/D	N/D	N/D
130. Glyphosate	ppb	700	900	N/D	N/D	N/D
131. Endothall	ppb	100	580	N/D	N/D	N/D
132. Diquat	ppb	20	15	N/D	N/D	N/D
133. 1,4 Dioxane	ppb	N/S	1	N/D	N/D	N/D

Unregulated Contaminants and Constituents of Interest

134. Dimethoate	ppb	N/S	N/S	N/D	N/D	N/D
135. Terbufos sulfone	ppb	N/S	N/S	N/D	N/D	N/D
136. 2,2',4,4'-tetrabromodiphenyl ether	ppb	N/S	N/S	N/D	N/D	N/D
137. 2,2',4,4',5-pentabromodiphenyl ether	ppb	N/S	N/S	N/D	N/D	N/D
138. 2,2',4,4',5,5'-hexabromodiphenyl ether	ppb	N/S	N/S	N/D	N/D	N/D
139. 2,2',4,4',5,5'-hexabromodiphenyl ether	ppb	N/S	N/S	N/D	N/D	N/D
140. 2,2',4,4',6-pentabromodiphenyl ether	ppb	N/S	N/S	N/D	N/D	N/D
141. 1,3-dinitrobenzene	ppb	N/S	N/S	N/D	N/D	N/D
142. 2,4,6-trinitrotoluene (TNT)	ppb	N/S	N/S	N/D	N/D	N/D
143. hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	ppb	N/S	N/S	N/D	N/D	N/D
144. Sodium	ppm	N/S	N/S	6.4	7.2-10	8.5
145. Calcium	ppm	N/S	N/S	6	14.0- 21.0	17.6
146. Hardness	ppm	N/S	N/S	23	71-110	92
147. Magnesium	ppm	N/S	N/S	1.9	8.7-13	11.2

Lead and Copper (Sampled in 2011)		AL	PHG	90th Percentile	Number of sites exceeding AL
148. Lead	ppb	15	0.2	N/D	1
149. Copper	ppm	1.3	0.17	0.055	Zero

LEGEND:

HRAA = Highest Running Annual Average

N/D = Analyzed; Non Detected

NTU = Nephelometric Turbidity Unit

PPM = Parts Per Million

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

MRDL = Maximum Residual Disinfection Level

PCi/l = Picocuries per Liter

PHG = Public Health Goal

N/A = Not Applicable

N/S = No Standard

TT = Treatment Technique

AL = Alert Level

***Total Trihalomethanes =**

Sum of results for Chloroform, Bromoform, Dibromochloromethane and Bromochloromethane

Notes:

1. Surface water samples collected in 2012.
2. Groundwater samples collected in 2012. (Except Fluoride & TDS 2011)
3. Nitrates sampled annually.
4. Groundwater samples for NDMA, Pechlorate, and VOC's are collected quarterly.

**For additional water quality data, contact:
Carmichael Water District at 483-2452**