

2003 Annual Water Quality Report

PRIMARY STANDARDS – Mandatory, Health Related Standards Established by California DHS

PARAMETER	UNITS	MCL	MCLG or PHG	Carmichael Surface Water		Carmichael Ground Water	
				RANGE	AVERAGE	RANGE	AVERAGE
CLARITY							
Turbidity	NTU	5.0	n/s	.02-.06	.04	.20-1.7	0.56
MICROBIOLOGICAL (% test positive)							
Coliform Bacteria		5.0	n/s	ND-ND	0%		
ORGANIC CHEMICALS							
Total Trihalomethanes*	PPM	0.1	n/s	ND-ND	ND	ND-ND	ND
Bromodichloromethane	PPM			ND-ND	ND	ND-ND	ND
Bromoform (THM)	PPM			ND-ND	ND	ND-ND	ND
Chloroform (THM)	PPM			ND-ND	ND	ND-ND	ND
Dibromochloromethane	PPM			ND-ND	ND	ND-ND	ND
Benzene	PPM	0.001	n/s	ND-ND	ND	ND-ND	ND
Carbon Tetrachloride	PPM	0.0005	n/s	ND-ND	ND	ND-ND	ND
1,4-Dichlorobenzene	PPM	0.005	(0.006)	ND-ND	ND	ND-ND	ND
1,1-Dichloroethane	PPM	0.005	n/s	ND-ND	ND	ND-ND	ND
1,2-Dichloroethane	PPM	0.0005	n/s	ND-ND	ND	ND-ND	ND
1,1-Dichloroethylene	PPM	0.006	0.007	ND-ND	ND	ND-ND	ND
1,3-Dichloropropene	PPM	0.005	n/s	ND-ND	ND	ND-ND	ND
Total 1,3-Dichloropropene	PPM	0.0005	n/s	ND-ND	ND	ND-ND	ND
Ethylbenzene	PPM	0.68	(0.3)	ND-ND	ND	ND-ND	ND
Monochlorobenzene	PPM	0.03	n/s	ND-ND	ND	ND-ND	ND
1,1,2,2-Tetrachloroethane	PPM	0.001	n/s	ND-ND	ND	ND-ND	ND
Tetrachloroethylene	PPM	0.005	0.0006	ND-ND	ND	1.4	0.0015
1,1,1-Trichloroethane (1,1,1-TCA)	PPM	0.2	0.2	ND-ND	ND	ND-ND	ND
1,1,2-Trichloroethane (1,1,2-TCA)	PPM	0.032	0.003	ND-ND	ND	ND-ND	ND
Trichloroethylene (TCE)	PPM	0.005	n/s	ND-ND	ND	ND-ND	ND
Vinyl Chloride (VC)	PPM	0.0005	n/s	ND-ND	ND	ND-ND	ND
Perchlorate	PPM	0.04	n/s	ND-ND	ND	ND-ND	ND
N-nitrosodimethylamine (NDMA)	PPM	0.001	n/s	ND-ND	ND	ND-ND	ND
Methyl tertiary butyl ether (MTBE)	PPM	0.013	n/s	ND-ND	ND	ND-ND	ND
Total Xylenes (m, p & o)	PPM	1.75	(1.8)	ND-ND	ND	ND-ND	ND
m.p.-Xylene	PPM	1.75	(1.8)	ND-ND	ND	ND-ND	ND
o-Xylene	PPM	1.75	(1.8)	ND-ND	ND	ND-ND	ND
cis-1,2-Dichloroethylene	PPM	0.006	0.7	ND-ND	ND	ND-ND	ND
trans-1,2-Dichloroethylene	PPM	0.01	0.1	ND-ND	ND	ND-ND	ND
Trichlorofluoromethane (Freon 11)	PPM	150	(0.7)	ND-ND	ND	ND-ND	ND
Trichlorotrifluoroethane (Freon 113)	PPM	1200	(4.0)	ND-ND	ND	ND-ND	ND
INORGANIC CHEMICALS							
Aluminum	PPM	1.0	n/s	ND-ND	ND	ND-ND	ND
Antimony	PPM	0.006	(0.02)	ND-ND	ND	ND-ND	ND
Arsenic	PPM	0.05	n/s	0.005-0.005	0.005	ND-0.002	.0002
Barium	PPM	1.0	2	ND-ND	ND	0.026-0.12	0.026
Beryllium	PPM	0.004	.004	ND-ND	ND	ND-ND	ND
Cadmium	PPM	0.01	.005	ND-ND	ND	ND-ND	ND
Chromium	PPM	0.05	0.1	ND-ND	ND	ND-ND	ND
Cyanide	PPM	0.2	(0.15)	ND-ND	ND	ND-ND	ND
Fluoride	PPM	1.4-2.4**	(1)	ND-ND	ND	ND-0.2	0.108
Lead	PPM	0.05	(0.002)	ND-ND	ND	ND-ND	ND
Mercury	PPM	0.002	0.002	ND-ND	ND	ND-ND	ND
Nickel	PPM	0.1	0.1	ND-ND	ND	ND-.07	.0069
Nitrate (as NO3)	PPM	45	(10)	0.4-0.4	0.4	ND-34	6.13
Nitrite	PPM	45	(1)	ND-ND	ND	ND-ND	ND
Selenium	PPM	0.01	.05	ND-ND	ND	ND-ND	ND
Silver	PPM	0.05	n/s	ND-ND	ND	ND-ND	ND
Thallium	PPM	0.05	0.0005	ND-ND	ND	ND	ND
RADIOACTIVITY							
Gross Alpha Activity	pCi/l	15	n/s	2.0-2.0	2.0	ND-2.3	1.06

PARAMETER	UNITS	MCL	MCLG or PHG	Carmichael Surface Water		Carmichael Ground Water	
				RANGE	AVERAGE	RANGE	AVERAGE
PESTICIDES							
1016 Aroclor		n/s	n/s	ND-ND	ND	ND-ND	ND
1221 Aroclor		n/s	n/s	ND-ND	ND	ND-ND	ND
1232 Aroclor		n/s	n/s	ND-ND	ND	ND-ND	ND
1242 Aroclor		n/s	n/s	ND-ND	ND	ND-ND	ND
1248 Aroclor		n/s	n/s	ND-ND	ND	ND-ND	ND
1254 Aroclor		n/s	n/s	ND-ND	ND	ND-ND	ND
1260 Aroclor		n/s	n/s	ND-ND	ND	ND-ND	ND
Alpha – BHC		n/s	n/s	ND-ND	ND	ND-ND	ND
Alachlor	PPM	.002	n/s	ND-ND	ND	ND-ND	ND
Aldrin		n/s	n/s	ND-ND	ND	ND-ND	ND
Beta –BHC		n/s	n/s	ND-ND	ND	ND-ND	ND
Chlordane	PPM	.0001	n/s	ND-ND	ND	ND-ND	ND
Chlorthalonil		n/s	n/s	ND-ND	ND	ND-ND	ND
p,p DDD		n/s	n/s	ND-ND	ND	ND-ND	ND
p,p DDE		n/s	n/s	ND-ND	ND	ND-ND	ND
p,p DDT		n/s	n/s	ND-ND	ND	ND-ND	ND
Dieldrin		n/s	n/s	ND-ND	ND	ND-ND	ND
Delta – BHC		n/s	n/s	ND-ND	ND	ND-ND	ND
Endrin Aldehyde	PPM	.002	n/s	ND-ND	ND	ND-ND	ND
Endrin Aldehyde	PPM	.002	n/s	ND-ND	ND	ND-ND	ND
Endosulfan 1		n/s	n/s	ND-ND	ND	ND-ND	ND
Endosulfan 2		n/s	n/s	ND-ND	ND	ND-ND	ND
Endosulfan Sulfate		n/s	n/s	ND-ND	ND	ND-ND	ND
Heptachlor Epoxide	PPM	.00001	n/s	ND-ND	ND	ND-ND	ND
Lindane	PPM	.0002	n/s	ND-ND	ND	ND-ND	ND
Methoxychlor	PPM	.03	n/s	ND-ND	ND	ND-ND	ND
Toxaphene	PPM	.003	n/s	ND-ND	ND	ND-ND	ND

SECONDARY STANDARDS—Aesthetic Standards Established by California DHS

PARAMETER	UNITS	MCL	MCLG/PHG	RANGE	AVERAGE	RANGE	AVERAGE
Color	Units	15	n/s	ND-ND	ND	ND-3	0.60
Oder-Threshold	Units	3.0	n/s	1-1	1	1.0-2.0	1.5
Chloride	PPM	500	n/s	3-3	3	3-33	12.67
Copper	PPM	0.1	(0.17)	ND-ND	ND	ND-ND	ND
Foaming Agents (MBAS)	PPM	0.5	n/s	ND-ND	ND	ND-ND	ND
Iron	PPM	0.3	n/s	ND-ND	ND	ND-.49	0.02
Manganese	PPM	0.05	n/s	ND-ND	ND	.02-.079	.029
Sulfate	PPM	500	n/s	3.4-3.4	3.4	3.4-21.25	12.33
Zinc	PPM	5.0	n/s	ND-ND	ND	ND-0.0142	.0008
Total Dissolved Solids	PPM	1000	n/s	38-38	38	67-335	205.85

ADDITIONAL CONSTITUTENTS

pH	Units	n/s		6.5-6.5	6.5	7.15-7.95	7.52
Hardness (CaCo3)	PPM	n/s		29-29	29	34.5-206	122.9
Sodium	PPM	n/s		2.5-2.5	2.5	4.3-26	14.36
Calcium	PPM	n/s		7.4-7.4	7.4	9.58-42.5	24.99
Potassium	PPM	n/s		ND-ND	ND	ND-4.15	2.34
Magnesium	PPM	n/s		2.5-2.5	2.5	2.7-24	14.09

LEGEND:

ND = Analyzed; n/s Detected

NTU = Nephelometric Turbidity Unit

PPM = Parts per Million

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

PCi/l = Picocuries per Liter

PHG = Public Health Goal

n/s = No Standard

* **Total Trihalomethanes** =
Sum of results for
Chloroform, Bromoform,
Dibromochloromethane and
Bromochloromethane

** **Fluoride Standard**
Depends on
Temperature

In addition to the constituents noted above, the Carmichael Water District has conducted monitoring for 43 additional organic chemicals for which the California Department of Health Services has not yet set a standard. Water quality information is based on data collected from 1999 through 2002.

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