Appendix A: Water Quality Regulation Tables

TABLE A-1
PRIMARY MAXIMUM CONTAMINANT LEVELS

Contaminant	Primary MCL (mg/l)
Inorganic Chemicals	
Aluminum*	1
Antimony	0.006
Arsenic	0.05
Asbestos (MFL = million fibers per liter, for fibers exceeding 10 microns in length)	7 MFL
Barium	1
Beryllium	0.004
Cadmium	0.005
Chromium	0.05
Cyanide	0.15
Fluoride	2.0
Mercury	0.002
Nickel	0.1
Nitrate (as NO_3)	45
Nitrate + Nitrite (sum as nitrogen)	10
Nitrite (as nitrogen)	1
Selenium	0.05
Thallium	0.002
Optimal Fluoride Levels	
Annual average of maximum daily air temperature (degrees Fahrenheit, °F)	*Optimal Level (Range)*
50.0 to 53.7 °F	1.2 (1.1-1.7)
53.8 to 58.3 °F	1.1 (1.0-1.6)
58.4 to 63.8 °F	1.0 (0.9-1.5)
63.9 to 70.6 °F	0.9 (0.8-1.4)
70.7 to 79.2 °F	0.8 (0.7-1.3)
79.3 to 90.5 °F	0.7 (0.6-1.2)
Radioactivity	
Gross alpha particle activity (including radium-226 but excluding radon and uranium)	15 picocuries per liter (pCi/L)
Gross beta particle activity	50 pCi/L
Combined Radium-226 and Radium-228	5 pCi/L
Strontium-90	8 pCi/L
Tritium	20,000 pCi/L
Uranium	20 pCi/L
Total Trihalomethanes	
Sum of bromodichloromethane, dibromochloromethane, bromoform, and chloroform	0.1

Contaminant	Primary MCL (mg/l)
Organic Chemicals	
(a) Volatile Organic Chemicals (VOCs)	
Benzene	0.001
Carbon tetrachloride	0.0005
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.6
1,4-Dichlorobenzene (p-DCB)	0.005
1,1-Dichloroethane (1,1-DCA)	0.005
1,2-Dichloroethane (1,2-DCA)	0.0005
1,1-Dichloroethylene (1,1-DCE)	0.006
cis-1,2-Dichloroethylene	0.006
trans-1,2-Dichloroethylene	0.01
Dichloromethane (Methylene chloride)	0.005
1,2-Dichloropropane (Propylene dichloride)	0.005
1,3-Dichloropropene	0.0005
Ethylbenzene (Phenylethane)	0.3
Monochlorobenzene (Chlorobenzene)	0.07
MTBE*	0.013
Styrene (Vinylbenzene)	0.1
1,1,2,2-Tetrachloroethane	0.001
Tetrachloroethylene (PCE)	0.005
Toluene (Methylbenzene)	0.15
1,2,4-Trichlorobenzene (Unsym-Trichlorobenzene)	0.005
1,1,1-Trichloroethane (1,1,1-TCA)	0.200
1,1,2-Trichloroethane (1,1,2-TCA)	0.005
Trichloroethylene (TCE)	0.005
Trichlorofluoromethane (Freon 11)	0.15
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1.2
Vinyl chloride	0.0005
Xylenes (single isomer or sum of isomers)	1.750
(b) Non-Volatile Synthetic Organic Chemicals (SOCs)	
Alachlor (Alanex)	0.002
Atrazine (Aatrex)	0.001
Bentazon (Basagran)	0.018
Benzo(a)pyrene	0.0002
Carbofuran (Furadan)	0.018
Chlordane	0.0001
2,4-D	0.07
Dalapon	0.2
1,2-Dibromo-3-chloropropane (DBCP)	0.0002
Di(2-ethylhexyl)adipate	0.4
Di(2-ethylhexyl)phthalate (DEHP)	0.004
Dinoseb	0.007
Diquat	0.02
Endrin	0.002
Endothal	0.1
Ethylene dibromide (EDB)	0.00005
Glyphosate	0.7
Heptachlor	0.00001
Heptachlor epoxide	0.00001
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05

Contaminant	Primary MCL (mg/l)
Lindane (gamma-BHC)	0.0002
Methoxychlor	0.03
Molinate (Ordam)	0.02
Oxamyl	0.05
Pentachlorophenol	0.001
Picloram	0.5
Polychlorinated biphenyls (PCBs)	0.0005
Simazine (Princep)	0.004
2,4,5-TP (Silvex)	0.05
2,3,7,8-TCDD (Dioxin)	0.00000003
Thiobencarb (Bolero)*	0.07
Toxaphene	0.003

Note: * Contaminant also has a secondary MCL.

TABLE A-2
SECONDARY MAXIMUM CONTAMINANT LEVELS

Chemical or Characteristic	Secondary MCL (mg/l)
Aluminum (**1° MCL = 1 mg/l**)	0.2
Color	15 units
Copper	1.0
Foaming agents (MBAS)	0.5
Iron	0.3
Manganese	0.05
Methyl tertiary butyl ether (MTBE) (**1° MCL = 0.013 mg/l**)	0.005
Odor-Threshold	3 units
Silver	0.1
Thiobencarb (Bolero) (**1° MCL = 0.07 mg/l**)	0.001
Turbidity	5 units
Zinc	5.0

	Consumer Acceptance Level Ranges		
Constituent	Recommended	Upper	Short Term
Total Dissolved Solids, or	500	1,000	1,500
Specific Conductance, micromhos	900	1,600	2,200
Chloride	250	500	600
Sulfate	250	500	600

TABLE A-3
MAXIMUM CONTAMINANT LEVEL GOALS

Contaminant	MCLG
Inorganic Chemicals	
Antimony	0.006 mg/l
Asbestos	7 MFL
Barium	2 mg/l
Beryllium	0.004 mg/l
Cadmium	0.005 mg/l
Chromium (total)	0.1 mg/l
Copper	1.3 mg/l
Cyanide	0.2 mg/l
Fluoride	4.0 mg/l
Mercury (inorganic)	0.002 mg/l
Nitrate (as N)	10 mg/l
Selenium	0.05 mg/l
Thallium	0.005 mg/l
Organic Chemicals	
Acrylamide	0 mg/l
Alachlor	0 mg/l
Atrazine	0.003 mg/l
Benzene	0 mg/l
Benzo(a)pyrene (PAHs)	0 mg/l
Carbofuran	0.04 mg/l
Carbon tetrachloride	0 mg/l
Chlordane	0 mg/l
Chlorobenzene	0.1 mg/l
2,4-D	0.07 mg/l
Dalapon	0.2 mg/l
1,2-Dibromo-3-chloropropane (DBCP)	0 mg/l
o-Dichlorobenzene	0.6 mg/l
p-Dichlorobenzene	0.075 mg/l
1,2-Dichloroethane	0 mg/l
1,1-Dichloroethylene	0.007 mg/l
cis-1,2-Dichloroethylene	0.07 mg/l
trans-1,2-Dichloroethylene	0.1 mg/l
Dichloromethane	0 mg/l
1,2-Dichloropropane	0 mg/l
Di(2-ethylhexyl) adipate	0.4 mg/l
Di(2-ethylhexyl) phthalate	0 mg/l
Dinoseb	0.007 mg/l
Dioxin (2,3,7,8-TCDD)	0 mg/l
Diquat	0.02 mg/l
Endothall	0.1 mg/l
Endrin	0.002 mg/l
Epichlorohydrin	0 mg/l
Ethylbenzene	0.7 mg/l
Ethylene dibromide	0 mg/l
Glyphosate	0.7 mg/l
Heptachlor	0 mg/l

Contaminant	MCLG
Heptachlor epoxide	0 mg/l
Hexachlorobenzene	0 mg/l
Hexachlorocyclopentadiene	0.05 mg/l
Lindane	0.0002 mg/l
Methoxychlor	0.04 mg/l
Oxamyl (Vydate)	0.2 mg/l
Polychlorinated biphenyls (PCBs)	0 mg/l
Pentachlorophenol	0 mg/l
Picloram	0.5 mg/l
Simazine	0.004 mg/l
Styrene	0.1 mg/l
Tetrachloroethylene	0 mg/l
Toluene	1 mg/l
Toxaphene	0 mg/l
2,4,5-TP (Silvex)	0.05 mg/l
1,2,4-Trichlorobenzene	0.07 mg/l
1,1,1-Trichloroethane	0.20 mg/l
1,1,2-Trichloroethane	0.003 mg/l
Trichloroethylene	0 mg/l
Vinyl chloride	0 mg/l
Xylenes (total)	10 mg/l

TABLE A-4
PUBLIC HEALTH GOALS
All PHGS Developed As Of 9 October 2003

Chemical	California PHG (ppb)
1,1 Dichloroethane	3
1,1 Dichloroethylene	10
1,2 Dibromo-3-chloropropane	0.0017
1,2 Dichloroethane	0.4
1,2 Dichloropropane	0.5
1,1,2,2 Tetrachloroethane	0.1
1,2,4 Trichlorobenzene	5
1,2 Dichlorobenzene	600
1,3 Dichloropropene (Telone II®)	0.2
1,4 Dichlorobenzene	6
2,4 Dichlorophenoxyacetic acid	70
Alachlor	4
Aluminum	600
Antimony	20
Asbestos	$7x10^6$ fibers/L
Atrazine	0.15
Barium	2,000
Bentazon	200
Benzene	0.15
Benzo[a]pyrene	0.004
Beryllium	1
Cadmium	0.07
Carbofuran	1.7
Carbon Tetrachloride	0.1

Chemical	California PHG (ppb)
Chlordane	0.03
Chlorobenzene	200
Chromium (total)	withdrawn
Copper	170
Cyanide	150
Dalapon	790
Dichloromethane	4
Diethylhexyl adipate	0.2 ppm
Diethylhexylphthalate (DEHP)	12
Dinoseb	14
Diquat	15
Endothall	580
Endrin	1.8
Ethylbenzene	300
Ethylene dibromide	0.01
Fluoride	1,000
Glyphosate	1,000
Heptachlor	0.008
Heptachlor epoxide	0.006
Hexachlorobenzene	0.03
Hexachlorocyclyopentadiene	50
Lead	2
Lindane	0.032
Mercury, inorganic	1.2
Methoxychlor	30
Methyl tertiary butyl ether (MTBE)	13
Nickel	12
Nitrate	10,000 as N
Nitrate and Nitrite	10,000 as N
Nitrite	1,000 as N
Oxamyl	50
Pentachlorophenol	0.4
Picloram	500
Silvex	25
Simazine	4
Tetrachloroethylene	0.06
Thallium	0.1
Thiobencarb	70
Toluene	150
Toxaphene	0.03
Trichloroethylene	0.8
Trichlorofluoromethane (Freon 11)	700
Trichlorotrifluoroethane (Freon 113)	4,000
Uranium	0.5
Vinyl Chloride	0.05
Xylene	1,800

TABLE A-5
CONTAMINANT CANDIDATE LIST
MARCH 2, 1998, 63 FR 10273

Microbiological Contaminants	Chemical Contaminants	
Acanthamoeba[a]	1,1,2,2-tetrachloroethane	Disulfoton
Adenoviruses	1,2,4-trimethylbenzene	Diuron
Aeromonas hydrophila	1,1-dichloroethane	EPTC (s-ethyl-dipropylthiocarbamate)
Caliciviruses	1,1-dichloropropene	Fonofos
Coxsackieviruses	1,2-diphenylhydrazine	**Hexachlorobutadiene**
Cyanobacteria (blue-green algae), other freshwater algae, and their toxins	1,3-dichloropropane	p-Isopropyltoluene (p-cymene)
Echoviruses	**1,3-Dichloropropene**[b]	Linuron
Helicobacter pylori	2,4,6-trichlorophenol	**Manganese**
Microsporidia (Enterocytozoon & Septata)	2,2-dichloropropane	Methyl bromide
Mycobacterium avium intracellulare (MAC)	2,4-dichlorophenol	Methyl-t-butyl ether (MTBE)
	2,4-dinitrophenol	**Metolachlor**[b]
	2,4-dinitrotoluene	**Metribuzin**[b]
	2,6-dinitrotoluene	Molinate
	2-methyl-Phenol	**Naphthalene**
	Acetochlor	Nitrobenzene
	Alachlor ESA & other acetanilide pesticide degradation products	Organotins
	Aldrin[b]	Perchlorate
	Aluminum	Prometon
	Boron	RDX
	Bromobenzene	**Sodium**[c]
	DCPA mono-acid degradate	**Sulfate**
	DCPA di-acid degradate	Terbacil
	DDE	Terbufos
	Diazinon	Triazines & degradation products of triazines
	Dieldrin[b]	Vanadium

Notes:
Constituents in bold are on the Regulatory Determination Priorities List. USEPA will select five or more contaminants from this list and issue a preliminary determination as to whether to regulate them. This determination was scheduled to be published by August 2001, but has been delayed to October 2001. If USEPA determines regulations are necessary, they must be proposed by August 2003, and promulgated by February 2005.

(a) USEPA may issue a guidance rather than a regulation, as risk of exposure to this adenovirus is associated with improper care and use of contact lenses.
(b) These chemicals deferred to USEPA Office of Pesticide Programs for health research and assessments.
(c) USEPA may issue a guidance rather than a regulation. Seawater intrusion in a drinking water aquifer is one possible source of sodium. High levels of salt intake may be associated with hypertension in some individuals. Generally, sodium levels in drinking water are low and unlikely to be a significant contribution to adverse health effects. This low level of concern is compounded by the legitimate criticisms of USEPA's 20 mg/l for sodium. USEPA believes this guidance level for sodium needs updating, and is probably low.

TABLE A-6
EPA UCMR MONITORING LIST

LIST 1 Assessment Monitoring of Contaminants with Available Methods	LIST 2 Screening Surveys of Contaminants with Methods Just Developed	LIST 3 Pre-Screen Testing of Contaminants Needing Research on Methods[b]
2,4-dinitrotoluene	1,2-diphenylhydrazine	Lead-210
2,6-dinitrotoluene	2-methyl-phenol	Polonium-210
Acetochlor	2,4-dichlorophenol	Cyanobacteria
DCPA mono-acid degradate	2,4-dinitrophenol	Echoviruses
DCPA di-acid degradate	2,4,6-trichlorophenol	Coxsackieviruses
4,4'-DDE	Diazinon	Helicobacter pylori
EPTC	Disulfoton	Microsporidia
Molinate	Diuron	Caliciviruses
MTBE	Fonofos	Adenoviruses
Nitrobenzene	Linuron	
Perchlorate	Nitrobenzene	
Terbacil	Prometon	
	Terbufos	
	Aeromonas[a]	
	Alachlor ESA[b]	
	RDX[b]	

Notes:
(a) Monitoring will occur pending promulgation of a UCMR MUFRN.
(b) The monitoring period for Alachlor ESA, RDX and all List 3 contaminants will be performed only after future rulemaking specifies methods.

TABLE A-7
UNREGULATED CHEMICALS REQUIRING MONITORING

Detects[a]	Chemical (symbol or synonym)	Method	Preliminary DLR (μg/L)	Action Level (mg/l)
Inorganic				
1,732	Boron (B)	200.7 and 200.8	100	1
--	Chromium VI (CrVI, Cr^{-6})	218.6	1	--[b]
–	Perchlorate (ClO_4^-)	314	4	0.004
2,874	Vanadium (V)	200.8 and 200.9	3	0.05
Organics				
76	Dichlorodifluoromethane (Freon 12)	524.2 and 502.2	0.5	1
3	Ethyl tertiary butyl ether (ETBE)	524.2 and 502.2	3	--
0	Tertiary amyl methyl ether (TAME)	524.2 and 502.2	3	--
22	Tertiary butyl alcohol (TBA)	524.2	2	0.012
–	1,2,3-Trichloropropane (1,2,3-TCP)	LLE-GC/MS & PT-GC/MS[c]	0.005	0.000005

Notes: (a) Includes sources with single (unconfirmed) detections (2002).
(b) Chromium VI is regulated under the total chromium MCL.
(c) Methods are continuous Liquid-Liquid Extraction- Gas Chromatography/ Mass Spectrometry and Purge and Trap – Gas Chromatography/ Mass Spectrometry.

Appendix B

2002 Consumer Confidence Report for CCSD

2002 Consumer Confidence Report

Water System Name: **Cambria Community Services District** Report Date: **July 2003**

We test the drinking water quality for many constituents as required by State and Federal Regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2002.

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

Type of water source(s) in use: Underflow of Streams (Ground Water)

Name & location of source(s): San Simeon Creek Well Field, 3 miles north of Cambria. Also Santa Rosa Creek Well #4, located 1 mile east of Cambria's East Village

Drinking Water Source Assessment information: N/A

Time and place of regularly scheduled board meetings for public participation: 4th Thursday of every Month, at the Cambria Veteran's Memorial Building, 1000 Main Street, Cambria, Ca.

For more information, contact Bryan H. Bode *Phone:* (805)927-6255

TERMS USED IN THIS REPORT:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Primary Drinking Water Standards (PDWS): MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (ug/L)

ppt: parts per trillion or nanograms per liter (ng/L)

pCi/L: picocuries per liter (a measure of radiation)

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Variances and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

- *Inorganic contaminants*, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining , or farming.
- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- *Radioactive contaminants*, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA and the state Department of Health Services (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Tables 1, 2, 3, 4, and 5 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The Department requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 - SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (to be completed only if there was a detection of bacteria)	Highest No. of detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	(In a mo.)	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli*	(In the year)	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or *E. coli*	0	Human and animal fecal waste

TABLE 2 - SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (to be completed only if there was a detection of lead or copper in the last sample set)	No. of samples collected	90th percentile level detected	No. Sites exceeding AL	AL	MCLG	Typical Source of Contaminant
Lead (ppb)	22	6.5	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper (ppm)	22	0.27	0	1.3	0.17	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.

TABLE 3 - SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	7/15/02	20	18-36	none	none	Generally found in ground and surface water
Hardness (ppm)	7/15/02	312	283-517	none	none	Generally found in ground and surface water

**Any violation of an MCL or AL is asterisked. Additional information regarding the violation is provided on the next page.*

TABLE 4 - DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Barium (ppb)	7/15/02	125	113-168	1,000	N/A	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits.
Chromium (ppb)	7/15/02	3	3-4	50	2.5	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	7/15/02	0	0-0.1	2	1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Lead (ppb)	7/15/02	1	0-1.7	AL=15	2	Internal corrosion of household water plumbing systems; discharges from industrial factories; erosion of natural deposits.
Nitrate (as nitrate, NO3) (ppm)	7/15/02	2	1.5-3.7	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Gross Alpha Particle Activity (pCi/l)	10/15/02	1	2.3-0.8	15	N/A	Erosion of natural deposits

TABLE 5 - DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Color (units)	7/15/02	ND	ND	15 units	N/A	Naturally occurring organic materials
Corrosivity	6/2/2000	Non-Corrosive	Non-Corrosive	Non-Corrosive	N/A	Natural or industrially influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors.
Methyl-tertiary-butyl ether (MTBE) (ppb)	7/15/02	ND	ND	5	N/A	Leaking underground storage tanks; discharge from petroleum and chemical factories
Turbidity (units)	7/15/02	ND	ND	5 units	N/A	Soil runoff
Total Dissolved Solids (TDS) (ppm)	7/15/02	394	360-670	1000	N/A	Runoff/leaching from natural deposits
Specific Conductance (micromhos)	7/15/02	656	599-1050	1600	N/A	Substances that form ions when in water; seawater influence
Chloride (ppm)	7/15/02	18	15-25	500	N/A	Runoff/leaching from natural deposits; seawater influence
Sulfate (ppm)	7/15/02	49	40-121	500	N/A	Runoff/leaching from natural deposits; industrial wastes

**Any violation of an MCL or AL is asterisked. Additional information regarding the violation is provided below.*

Additional General Information On Drinking Water

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Note: Since November 2001, Chevron Corporation has been removing MtBE-contaminated groundwater at and around the Chevron gas station on Main Street. Chevron is currently trucking the removed water to a disposal and treatment site in the Los Angeles area. In March 2001, two CCSD wells on Santa Rosa Creek were shutdown because of their close proximity to the MtBE plume leaching from the Chevron station. As an interim emergency measure, two 20,000-pound granular activated carbon filters were installed to allow the shutdown wells to operate during a major fire emergency. For temporary emergency water replacement, the CCSD also installed a new well and treatment plant at Coast Union High School. The new treatment plant filters and disinfects the groundwater while removing iron and manganese. The new well at Coast Union High School produced about 10% of the Districts water during the 2002 year

It should be pointed out that the "Detected Levels" indicated in the Consumer Confidence Report are a mathematical composite of all wells sampled and used during the year, from both the San Simeon Basin and the Santa Rosa Basin.

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CONSUMER CONFIDENCE REPORT for 2002

Appendix C

Excerpt from "Task 3: Potable Water System Modeling" Report

3.3 Average Demands – Existing Conditions

1999 Billed vs. Production: The 1999 data provided by the CCSD represented total metered consumption and was originally imported into the hydraulic model. However, there are unaccounted for system losses that occur leading to a difference between the total value of produced water, versus that which was actually billed. These differences can be associated with meters not working properly as well as distribution system losses. The 1999 data provided by the CCSD that was linked to the GIS system represented metered consumption and totaled 388 gpm (approximately 625 AFA). From the December 8, 2000 Baseline Water Supply Analysis (Task 2 of the Water Master Plan) report, there were 3,586 residential, and 210 commercial connections in 1999. This same report noted a total production value (i.e., water pumped into the distribution system) at 779 AFA for 1999. Of this total production, 578 AFA was attributed to residential consumption and 201 AFA was for commercial consumption.

1999 Production AFA: Based on 1999 production, the residential consumption per residential connection averaged 0.161 AFA (about 11.7 ccf/bi-monthly billing period) whereas commercial consumption per commercial connection averaged 0.959 AFA (about 69.6 ccf/bi-monthly billing period). For both residential and commercial connections combined, the water produced per composite connection[1] equated to **0.205 AFA** (about 14.9 ccf/bi-monthly billing period when using a total production of 779 AFA divided by 3,796 total connections).

Adjustment to 1999 Production: The 1999 total production of 779 AFA equates to approximately 480 gpm. For long-term planning purposes, the total demand resulting from summing the modeling nodes (i.e., the old GIS-linked metered data) was first adjusted to match production values by a factor of 1.24 (480 gpm/388 gpm). This approach accounts for the difference in billed versus produced water. This approach also assumes the system losses currently experienced between billed and produced data will be similar in the future. Additionally, the cause of the loss could be self-correcting as defective meters (that normally read low) are eventually replaced and the billed metering totals get closer to the amount of water actually produced.

Adjustment of 1999 Production to Reflect 2003: In 2003, the District had 3,758 residential connections and 219 commercial connections, or a total of 3,977 connections. Using the 1999 combined use of .205 AFA per composite connection, the total baseline production amount for 2003 is approximately 815 AF (505 gpm). The resulting 505 gpm value was used in the hydraulic model in developing an adjusted 2003 average day demand. The 505 gpm value was subsequently adjusted to account for average and maximum day summer and winter demands within the hydraulic model.

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[1] "Composite connection" refers to an overall average that results by dividing total production by the number of residential and commercial connections.

3.6 Future Demands

During its July 24, 2003 Board meeting, staff was requested to plan for up to 18 ccf/bi-monthly billing period (which equals 0.248 AFA) for a typical residential connection. This directive was based in part on a desire to provide some relief to existing customers from current water conserving measures that have evolved from years of shortages. When compared to the December 8, 2000 Baseline Water Supply Analysis report data, this represents an increase of approximately 50 percent for the residential component.

Because the District also has a Coastal Development Permit[2] condition requiring at least 20-percent of its permitted capacity permit be reserved for "public commercial or recreational uses," further checking of the actual 1999 production total versus a hypothetical production total was considered. For example, the actual 1999 production of 779 AFA results in approximately 25-percent of the total being attributed to the CCSD's "commercial" accounts category. Using the 18-ccf per bi-monthly demand per residential connection, and no increase in the commercial use, results in a hypothetical 1999 production of 1,090 AFA. However, this approach results in only 18-percent of the total production being attributable to the commercial category. This review further begged the question on what was actually meant by the old permit condition, "public commercial or recreational uses."

If one assumes the 20-percent permit condition applies to all commercial customers, the commercial component from the hypothetical 1999 production exercise would need to be increased to at least 222 AFA, with a total production of 1,111 AFA. This equates to an overall increase of 43-percent over the actual 1999 production. From District staff's review of the Coastal Act, the intent of the old permit condition appears directed towards enhancing visitor-serving recreation of the coastline. If so, this would indicate that the majority of the District's commercial accounts serve such purposes. However, there may be a few minor commercial uses that are deemed to be outside of the 1981 Coastal Permit definition. Additionally, there are residential accounts that serve as commercial vacation rentals and could also be construed as meeting the Coastal Commission's 20-percent permit category. For these reasons, an across-the-board increase of 50-percent to both the residential and commercial uses was used in forecasting future demand scenarios. This also keeps the ratio between residential and commercial uses at its historic level (approximately 25-percent commercial). When applied to the 1999 production, the 50-percent increase results in a hypothetical 1999 production of 1,168 AFA (i.e., 1,168 AFA versus 1,111 AFA). This value also indicates that the overall sensitivity of the total production to an increase in the commercial use category is relatively low. Therefore, a 50-percent increase was applied to both the residential and

[2] May 29, 1981 Coastal Development Permit #428-10; issued by the California Coastal Commission to the Cambria Community Services District. Condition No. 5, Reservation of Capacity for Public Commercial and Recreation Uses.

commercial categories in developing a response to the July 24, 2003 Board meeting directive. (Note: For further discussion on percent increases, also see the Task 4 Water Master Plan Report, "Assessment of Long-Term Supply Alternatives," Sections 2.3 and 2.4.)

In addition to considering future quality of life percent increases, scenarios with 1.66 and 2.21 persons per residential unit were analyzed. From the 2000 census, the average occupancy rate in Cambria is 1.66 persons per household. This relatively low occupancy rate is due to the high vacancy rate of the area. The 2.21 persons per household value was based on the homes that were actually occupied during the 2000 census. To estimate the demand associated with 2.21 persons per household, a simple ratio was applied to the residential demand of 2.21/1.66, or 1.33. From the 1999 data used in the Baseline report, the residential unit demand would increase from about .161 AFA per residential connection to .214 AFA. At this residential density, the combined residential and commercial use equates to .255 AFA per composite connection. Based on 3,977 connections for 2003, a total production of 1,015 AFA results, or about 629 gpm.

As explained above, the 1999 data developed a 0.205 AFA composite connection demand for both residential and commercial connections. This value is based on approximately 25% commercial production as well as a residential demand based on about 1.66 persons per household. Additionally, the adjusted 0.255 AFA composite connection demand keeps the same 25% commercial production intact while adjusting the residential demand for a 33% increase in persons per household, to 2.21.

As each of these base composite connection demand factors (0.205 AFA for the 1.66 persons per household density and 0.255 AFA for the 2.21 persons per household density), an additional correction factor must be applied when multiplying the composite connection factor by the number of residential housing units. Using the District's 2003 data of 3,977 total connections divided by 3,758 residential connections, generates a correction factor of 1.058 (5.8%) to apply to the 0.205 AFA composite demand for 1.66 persons per household and the 0.255 AFA composite demand for 2.21 persons per household. This correction factor ensures the total demand projection will account for both residential and commercial connections while multiplying by composite demands times the total number of proposed housing units. Therefore, the composite base AFA factor for use in future projections was corrected to 0.217 AFA (1.058 times 0.205 AFA) for 1.66 persons per household, and 0.270 AFA (1.058 times 0.255 AFA) for 2.21 persons per household. This approach also maintains the commercial demand at the historical level of approximately 25% of total water production. The corrected composite demand factors of 0.217 AFA and 0.270 AFA also formed the basis for developing baseline demand projections in each of the four-buildout scenarios.

Appendix D

CCSD Well Monthly and Annual Production for 1988 through 2002

2002
CAMBRIA COMMUNITY SERVICES DISTRICT
WATER PRODUCTION, BY SOURCE
ACRE-FEET

YEAR	SOURCE	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL	YEAR
	S.S.	51.2	57.9	63.2	47.3	57.4	44.2	50.0	51.7	41.9	37.4	27.4	36.0	565.6	
1988	S.R.	0.0	0.0	0.0	16.3	15.7	30.7	31.2	34.9	36.0	34.9	35.2	19.0	253.9	1988
	TOTAL	51.2	57.9	63.2	63.6	73.1	74.9	81.2	86.6	77.9	72.3	62.6	55.0	819.5	
	S.S.	51.0	47.9	53.9	61.9	57.2	62.2	69.2	60.9	36.3	38.7	42.6	40.6	622.4	
1989	S.R.	0.0	0.0	0.0	1.0	13.8	13.5	17.9	28.0	42.0	22.6	17.6	18.2	174.6	1989
	TOTAL	51.0	47.9	53.9	62.9	71.0	75.7	87.1	88.9	78.3	61.3	60.2	58.8	797.0	
	S.S.	45.7	47.0	55.3	44.8	31.5	32.3	40.0	38.0	31.9	31.4	29.4	29.9	457.1	
1990	S.R.	8.7	0.8	0.5	18.0	32.3	26.8	22.3	22.2	20.6	20.2	19.3	14.9	206.7	1990
	TOTAL	54.4	47.8	55.8	62.8	63.8	59.1	62.3	60.2	52.6	51.6	48.7	44.8	663.8	
	S.S.	26.9	23.1	32.7	39.6	48.6	44.1	40.1	34.8	30.5	28.0	26.4	30.1	404.9	
1991	S.R.	15.3	13.1	0.5	0.1	0.1	5.5	15.0	21.6	20.2	21.0	19.7	18.7	150.8	1991
	TOTAL	42.2	36.2	33.2	39.7	48.7	49.6	55.1	56.4	50.7	49.0	46.1	48.8	555.7	
	S.S.	45.3	42.2	45.9	55.2	64.0	58.1	44.9	41.8	35.0	32.8	34.0	43.1	542.3	
1992	S.R.	0.8	0.3	0.1	0.4	0.5	6.1	22.7	28.1	26.3	25.1	19.5	5.5	135.4	1992
	TOTAL	46.1	42.5	46.0	55.6	64.5	64.2	67.6	69.9	61.3	57.9	53.5	48.6	677.7	
	S.S.	50.1	45.7	52.6	56.3	68.3	68.8	68.1	69.8	59.8	56.1	51.4	43.5	690.5	
1993	S.R.	0.5	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1993
	TOTAL	50.6	46.0	52.6	56.3	68.4	68.8	68.1	69.8	59.8	56.1	51.4	43.5	691.4	
	S.S.	47.0	38.6	48.6	52.0	54.6	63.4	69.3	47.8	31.7	30.8	28.2	26.0	538.0	
1994	S.R.	0.0	0.0	0.0	0.0	0.1	0.0	0.0	25.0	30.2	27.7	21.2	19.9	124.1	1994
	TOTAL	47.0	38.6	48.6	52.0	54.7	63.4	69.3	72.8	61.9	58.5	49.4	45.9	662.1	
	S.S.	41.3	41.1	47.1	52.1	53.5	59.0	74.7	74.1	65.4	64.7	55.3	47.6	675.9	
1995	S.R.	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1995
	TOTAL	43.2	41.1	47.1	52.1	53.5	59.0	74.7	74.1	65.4	64.7	55.3	47.6	677.8	
	S.S.	46.66	43.40	47.39	56.95	66.18	70.83	75.70	77.27	68.23	65.58	50.37	49.43	718.0	
1996	S.R.	0.01	0.03	0.03	0.03	0.03	0.01	0.03	0.02	0.01	0.02	0.02	0.02	0.3	1996
	TOTAL	46.67	43.43	47.42	56.98	66.21	70.84	75.73	77.29	68.24	65.60	50.39	49.45	718.3	
	S.S.	50.61	49.20	65.66	68.65	76.18	79.14	82.31	57.02	37.32	27.50	38.96	45.96	678.5	
1997	S.R.	0.02	0.08	0.02	0.02	0.02	0.02	0.38	25.92	31.54	36.85	12.41	0.01	107.3	1997
	TOTAL	50.63	49.28	65.68	68.66	76.20	79.16	82.69	82.94	68.86	64.35	51.37	45.97	785.8	
	S.S.	44.39	46.36	47.00	50.53	56.43	63.43	77.75	80.30	68.35	66.58	54.06	52.13	707.3	
1998	S.R.	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.09	0.01	0.00	0.00	0.00	0.2	1998
	TOTAL	44.40	46.37	47.01	50.54	56.43	63.44	77.76	80.39	68.36	66.58	54.06	52.13	707.5	
	S.S.	56.40	45.26	52.16	57.40	70.43	71.35	85.41	82.68	69.45	68.04	57.78	57.69	774.1	
1999	S.R.	0.01	0.01	0.01	0.04	0.02	0.07	0.01	0.02	0.32	0.02	0.00	0.00	0.5	1999
	TOTAL	56.41	45.27	52.17	57.44	70.45	71.42	85.42	82.70	69.77	68.06	57.78	57.69	774.6	
	S.S.	56.41	50.43	55.27	65.40	70.84	73.60	85.00	84.68	73.30	65.60	58.49	59.80	798.8	
2000	S.R.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	2000
	TOTAL	56.41	50.43	55.27	65.40	70.84	73.60	85.00	84.68	73.30	65.60	58.49	59.80	798.8	
	S.S.	56.16	48.05	55.92	60.69	73.30	77.51	85.01	78.50	53.45	56.21	48.16	52.29	745.3	
2001	S.R.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.78	21.08	16.87	8.06	0.89	52.7	2001
	TOTAL	56.16	48.05	55.92	60.69	73.30	77.51	85.01	84.28	74.53	73.08	56.22	53.18	797.9	
	S.S.	54.43	52.23	60.70	65.43	60.75	55.13	66.79	73.35	66.59	62.03	56.36	53.98	727.8	
2002	S.R.	1.28	1.27	1.10	1.11	14.82	22.79	19.54	9.67	3.52	4.02	2.04	0.55	81.7	2002
	TOTAL	55.71	53.50	61.80	66.54	75.57	77.92	86.33	83.02	70.11	66.05	58.40	54.53	809.5	
DIFFERENCE		-0.45	5.45	5.88	5.85	2.27	0.41	1.32	-1.26	-4.42	-7.03	2.18	1.35		

TOTAL INCREASE 2002 11.55 ACRE-FT
Percent INCREASE 2002 1.45%

Appendix E

References and Persons Contacted

Appendix E: References and Persons Contacted

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E.2 Persons Contacted

- Bob Gresens, District Engineering – Cambria Community Services District
- Tim Giles – Greystone Engineering
- Christine Ferrara – San Luis Obispo County
- Gus Yates – Consulting Hydrologist