

APPENDIX B: GROUNDWATER AND MUNICIPAL WATER SUPPLY

Groundwater

Groundwater quality in surface aquifers in the Carpinteria Groundwater Basin has historically shown to be at risk from elevated nitrate concentrations, which are thought to be derived from fertilizer use and septic systems in Carpinteria Valley. Historical data show the western portion of the Carpinteria Groundwater Basin to have elevated nitrate conditions (RWQCB, 1994). General groundwater quality of the Carpinteria Groundwater Basin has indicated that there is a predominance of calcium bicarbonate with varying amounts of sodium. The Total Dissolved Solids (TDS) content has been reported to range from 436 to 980 mg/L.

Groundwater nitrate levels from the deep confined aquifers (Table B1) where the Carpinteria Valley Water District extracts drinking water for the district (about 40% of the District's supply) showed in their 2001 Annual Water Quality Report some elevated levels but did not exceed the current drinking water standards of 45 mg/L for nitrate as nitrate (or 10 mg/L for nitrate as nitrogen), as established by the EPA's National Primary Drinking Water Regulations. In order to monitor the potential for a nitrate problem, the district adopted AB 3030, a Groundwater Management Plan, which monitors nitrate levels in private irrigation wells throughout the district with the voluntary cooperation of the landowners (CVWD, 2001).

Table B1: Nitrate as nitrate levels (EPA standards of 45 mg/L) in Carpinteria Valley Water District, adapted from CVWD, May 2001. Units are in mg/L nitrate as nitrate. ND is no data.

Year of sample	Location				
	El Carro	High School	Lyon	Smillie	Santa Ynez
1990	ND	1.3	3.5	ND	ND
1991	6.2	0.4	3.5	ND	11
1992	8	ND	ND	ND	2.2
1993	ND	<0.4	5.3	ND	2.7
1994	ND	<0.1	5.3	12.5	ND
1995	ND	ND	ND	ND	ND
1996	ND	0.7	3.9	ND	ND
1997	ND	<2.0	4.9	12.7	ND
1998(Spring)	ND	23.6	ND	ND	ND
1998(Fall)	ND	<2.0	5	11.6	ND
1999(Spring)	26.3	<2.0	9	11.3	ND
2000(Spring)	15.7	<2.0	4.9	11.8	ND
2000(Fall)	6.8	<2.0	17.8	13.5	ND
2001(Spring)	<2.0	<2.0	8.6	13	ND

Municipal Water

According to the CVWD's 2000 Annual Water Quality Report, the Carpinteria Valley Water District treats its water to meet all state and federal drinking water standards in accordance with US-EPA drinking water standards which is administered by the California Department of Health Services. Lake Cachuma surface water (about 60% of the district's supply) is treated at the City of Santa Barbara's Cater Treatment Plant, after which it is stored in two reservoirs, the Ortega Reservoir located in the western end of the valley, and the Carpinteria Reservoir (covered), situated in the eastern end of the valley.