

Date	Monitoring Wells					Springs								Streams				pond in quarry pit	drainage to quarry ponds	Source
	BD40	BD41	BD42	BD44	BD45	Liddell	Plant	Wil-liams	White-sell	Reg-giardo	Martin	Pipe	Dump	Reg-giardo Creek	Laguna Creek	Majors Creek	Mill Creek			
Mar-53														0	0	0				B&C, 1956 Todd, 1963
Jul-57						0									0					
1962						0.6									0.6					3.8 C&D'A, 1984 EMKO, 1999 WJE, 1992 EMKO, 1999
Jun-82																	5.0			
Mar-92	1.7	2.4	2.4	2.4	3.4	3.4	1.5		56											
Jul-92	1.1	1.3	1.4	1.5	2.5	2.6	1.4	1.4	28			1.4	4.2							
Oct-92	1.7	<1	<1	<1	1.4															
Nov-92	5.8	3.0	5.8	4.5	2.8															
Mar-95	4.7	<1	13	15	1.9															
Sep-95	8.6	1.3	12	5.7	1.9															
Mar-96	5.8	<1	<1	5.6	<1															
Oct-96	1.0	<1	13	3.2	7.9															
Mar-97	6.3	<1	5.9	3.2	2.0															
May-97						0.01	2.1		35					0.01						Farallon, 2000
Sep-97			0.8		0.9	1.7	0.7		31					0.6						EMKO, 1999 Farallon, 2000
Oct-97	<1	<1	<1	<1	7.1															
Nov-97														0.6 (a) <0.1 (b)						
Apr-98	2.4	1.3	1.0	<1	<1															EMKO, 1999
Oct-98	2.0	1.4	1.0	<1	8.4															Farallon, 2000 Nolan Assoc.
Mar-00																		2.3		
Jun-06										<1	<1									
Summary of Above Dates																				
N	12	12	13	12	13	6	4	1	4	1	1	1	1	5	3	1	1	1	1	
Min	<1	<1	<1	<1	<1	0	0.7		28					0	0.0					
Max	8.6	3.0	13	15	8.4	3.4	2.1		56					0.6	0.6					
Avg	3.4	0.9	4.3	3.4	3.1	1.4	1.4	1.4	37	<1	<1	1.4	4.2	0.2	0.2	0.0	5.0	2.3		
Avg >1990						1.9														
N						1967-2006						1973-2006					City of Santa Cruz diversions			
						179						104			102					
						0.2						0.1			0.1					
						10						2.6			2.1					
						1.8						0.4			1.1					
Approx. average flow (gpm)						900	180		10					2,420	1,980	720				
Average nitrogen loading (lb/day-N)						4.5	0.7		1.0					2.6	5.7	9.8				
No. of homes at 0.1 lb-N/day/septic tank*						45	7		10					26	57	98				

* Assumes 3 people/home, 70 gpd per person, 50 mg/L-N; estimated for the sake of discussion; other significant sources of nitrogen exist.

(a) upstream of swallow hole
(b) at diversion dam

Nitrate Concentrations of Groundwater, Springs, and Streams (mg/L, as NO₃)