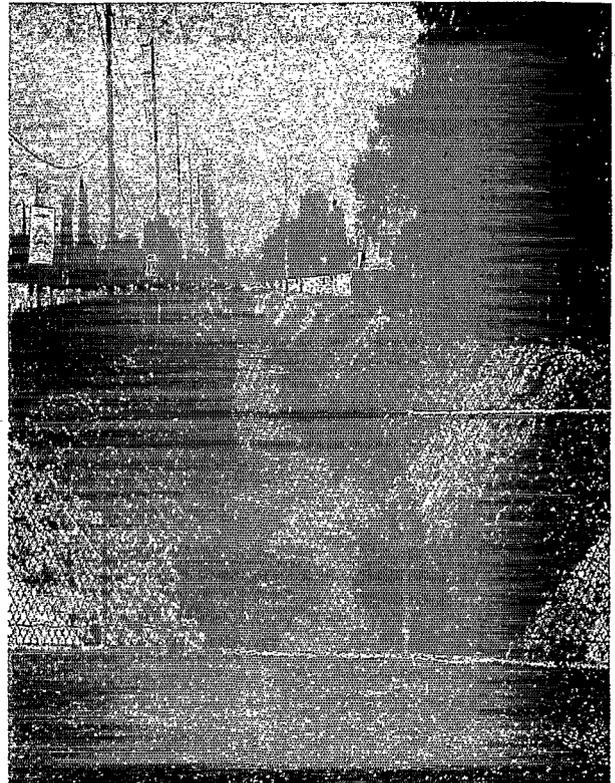


Santa Ana Delhi Channel F01

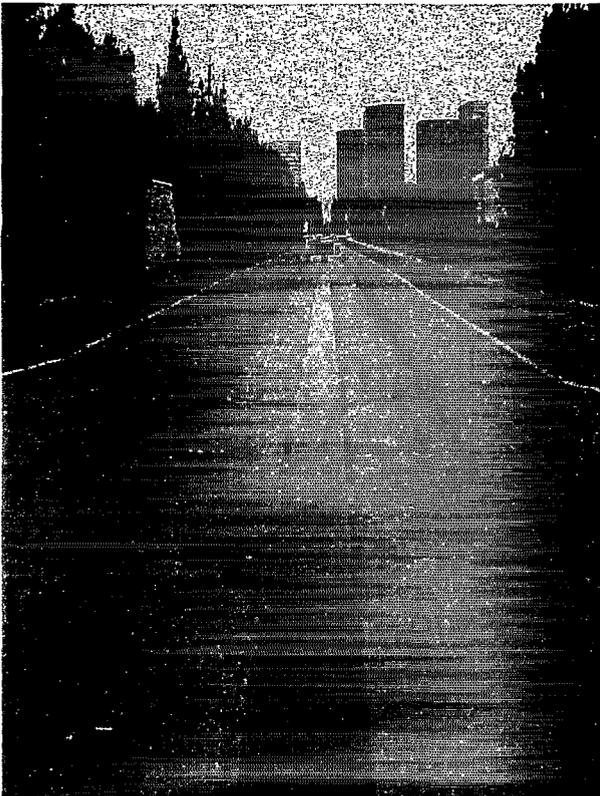
212



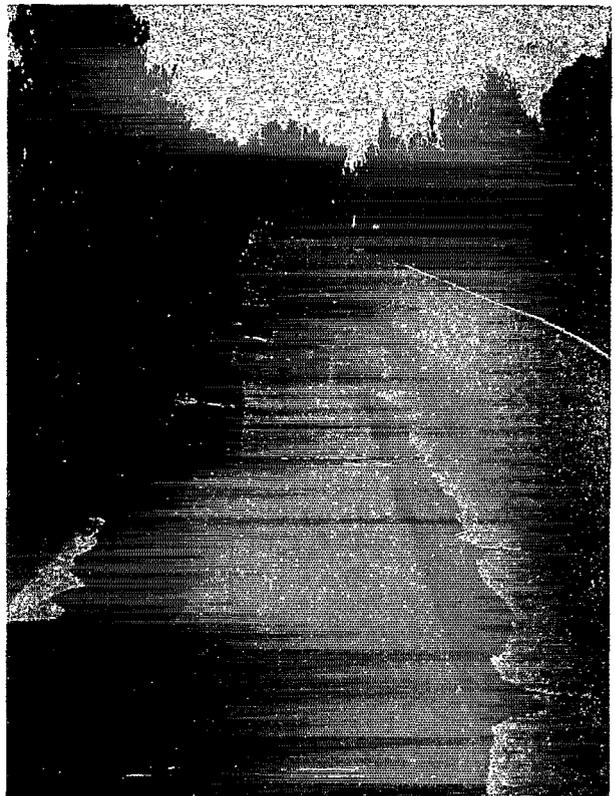
Down Stream Dyer / Flower pg 859 E1



Up Stream Flower / Sunflower pg 859 E3



Up Stream Paularino / Enterprise pg 859 D5



Up Stream Irvine Av below Bristol pg 889 D1

F.V.I
Dove

3. PROJECT DESCRIPTION

3.1 Project History

The following information is taken from "Project Report, Santa Ana-Delhi Channel (F01), Upper Newport Bay to San Diego Freeway and Paularino Channel (F03), From Newport Freeway to Harbor Boulevard" prepared for the Orange County Environmental Management Agency by Willdan Associates, July 1982.

The Santa Ana-Delhi Channel and its tributaries drain approximately 11,000 acres principally located in Santa Ana and Costa Mesa. It appears that the land historically drained to the Santa Ana River; however, drainage was sluggish at best. The land probably flooded each time the Santa Ana River flowed. The area was marked with natural sumps and swamps.

Around the turn of the century, farming interests began development of the land. In 1870, a community called Delhi was formed in the vicinity of Warner Avenue. The land was used for the production of sugar beets and several sugar factories were established in the area.

As farming intensified and prospered, a better drainage system was required. It is probable that during the late 19th century, farming interests excavated a ditch to the Upper Newport Bay to drain the land since the river was now leveed and local drainage was blocked.

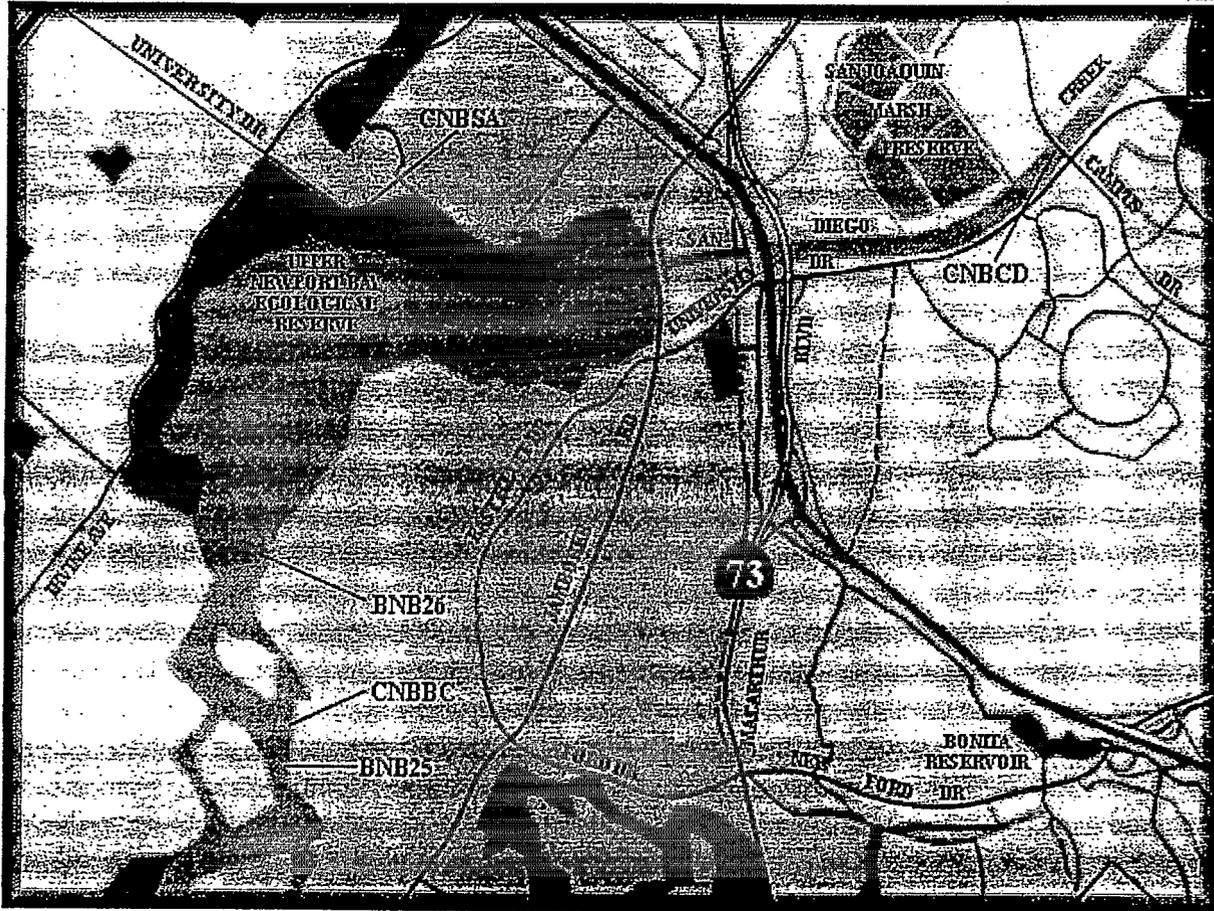
In 1909, the Orange County Board of Supervisors formed the Delhi Drainage District. The district was bounded roughly by Fairview Street on the west, Edinger Street on the north, Myford Road on the east, and the San Diego Freeway on the south.

The early activities of the Delhi Drainage District are not well known, but it appears that the district maintained facilities which drained the area to Newport Bay. In 1929 the district acquired drainage easements between the Back Bay and approximately Newport Boulevard (approximately the boundary of the drainage district in this area) from The Irvine Company. The Santa Ana-Delhi Channel followed approximately its existing alignment between Newport Bay and Sunflower Avenue, although it appears that the ditch upstream of Newport Avenue was on private lands.

In the late 1940s and early 1950s, the Orange County Flood Control District began acquiring easements for the Santa Ana-Delhi Channel between the Back Bay and Sunflower Avenue. The Flood Control District, by agreement with the Delhi Drainage District and The Irvine Company, acquired Delhi easements downstream of Newport Avenue. The Flood Control District acquired easements at nominal cost between Newport Avenue and Sunflower Avenue for the Santa Ana-Delhi Channel, formerly known as the "Main Ditch."

The Flood Control District's 1955 Engineers Report included Santa Ana-Delhi Channel and Santa Ana Gardens Channel as projects F01 and F02, respectively. The subsequent 1956

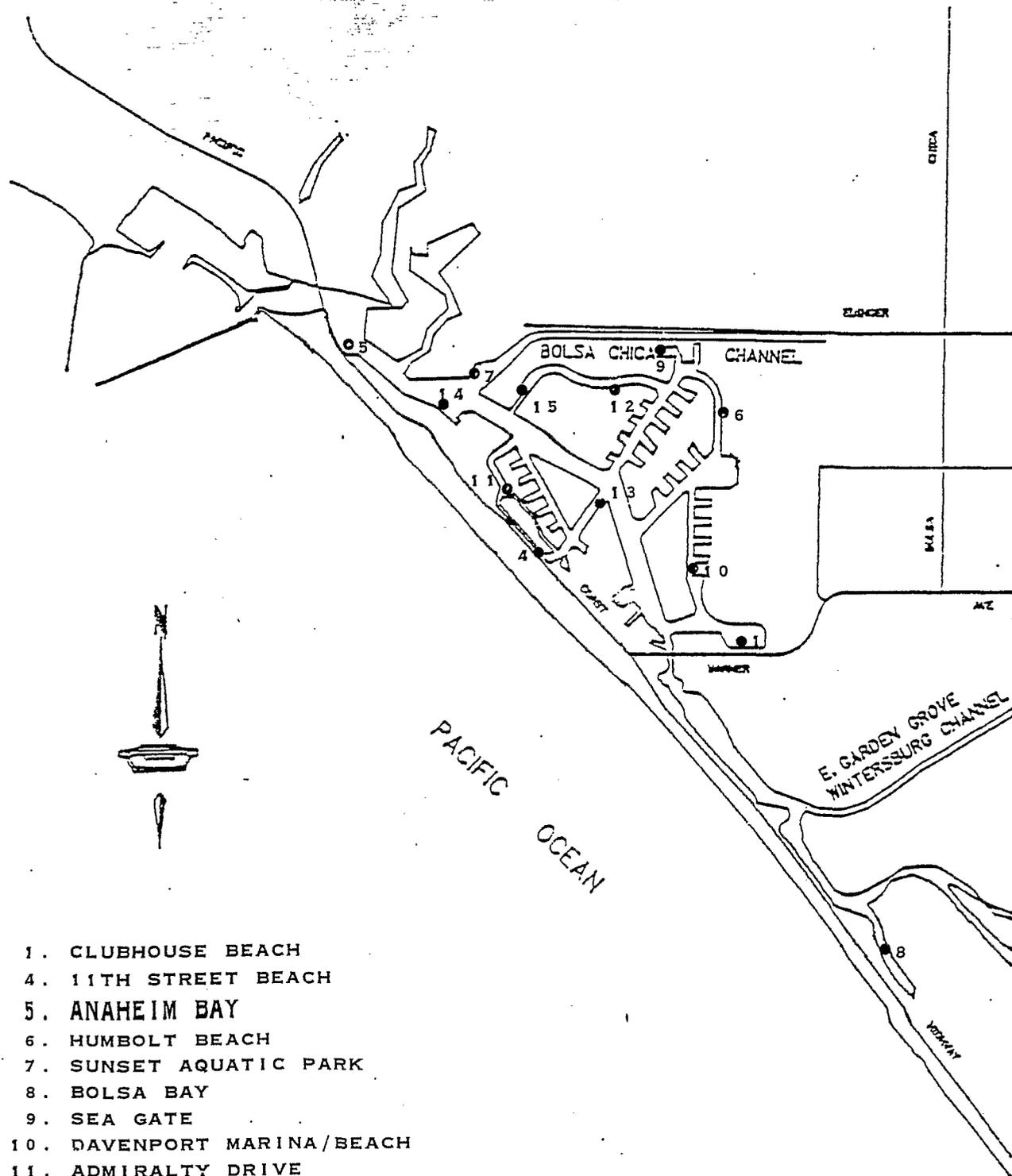
Select a Sampling Site



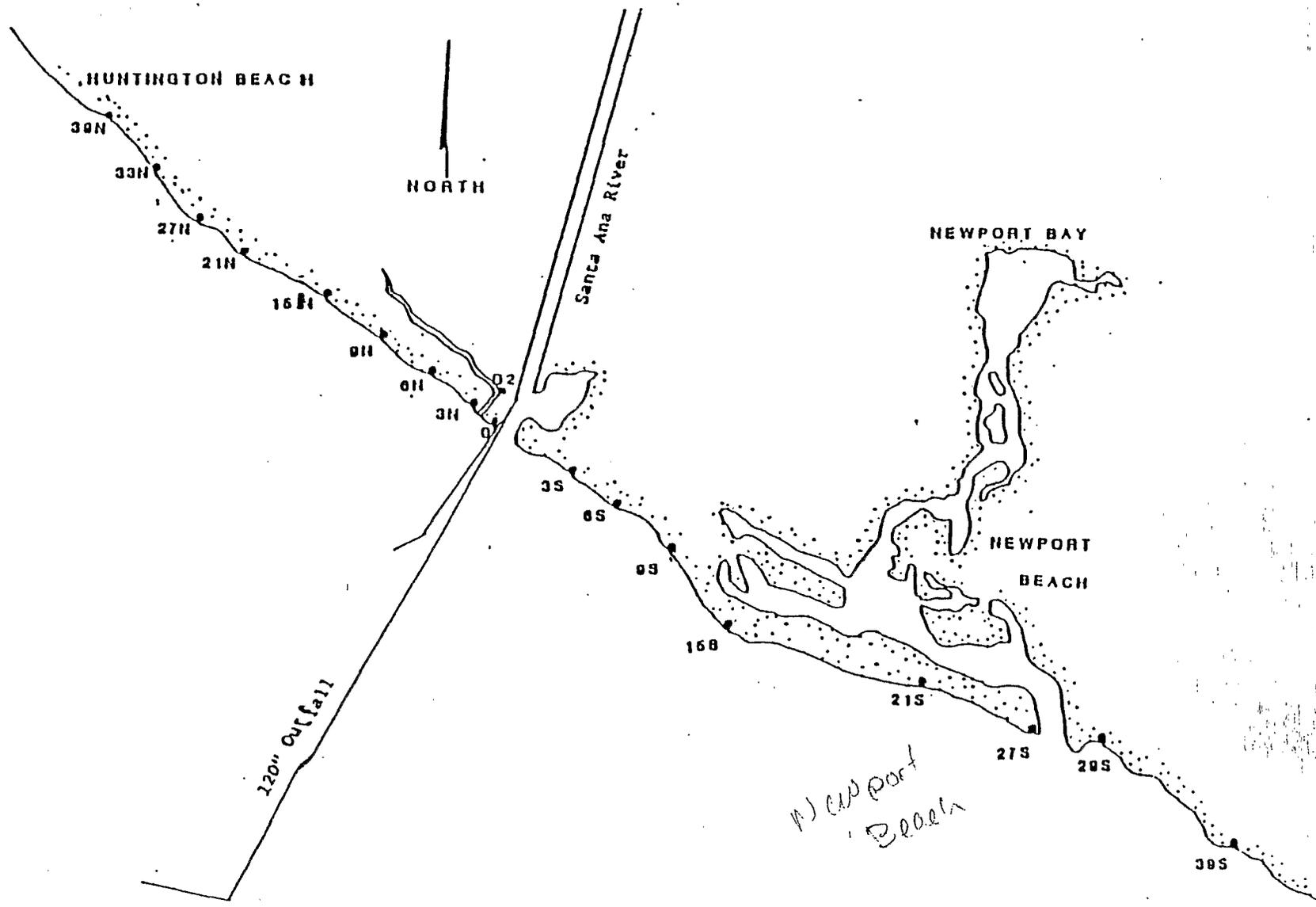
MAIN MAP	HOME	INFO.	SITE LOCATION
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Location of Sampling Sites
 BNB25 = Vaughns Launch
 BNB26 = Ski Zone
 CNBBC = Big Canyon Creek
 CNBSA = Santa Ana Delhi Channel ✓
 CNBCD = San Diego Creek-campus Drive ✓

HCA/ENVIRONMENTAL HEALTH
BACTERIOLOGICAL WATER SAMPLING STATIONS IN HUNTINGTON HARBOUR



1. CLUBHOUSE BEACH
4. 11TH STREET BEACH
5. ANAHEIM BAY
6. HUMBOLT BEACH
7. SUNSET AQUATIC PARK
8. BOLSA BAY
9. SEA GATE
10. DAVENPORT MARINA/BEACH
11. ADMIRALTY DRIVE
12. TRINIDAD LANE BEACH
13. HARBOR CHANNEL
14. ANDERSON STREET
15. MOTHER'S BEACH

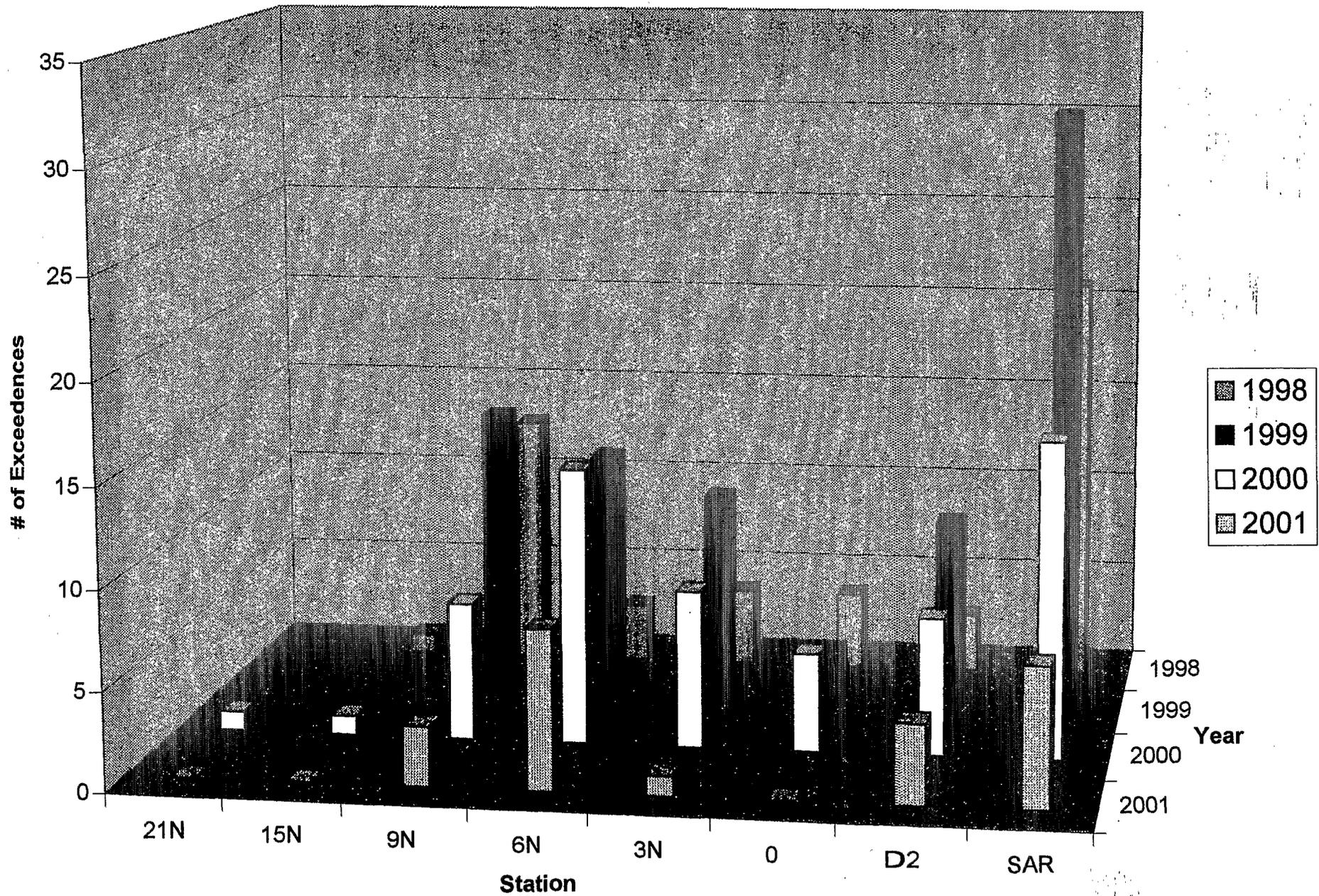


COUNTY SANITATION DISTRICTS
OF ORANGE COUNTY

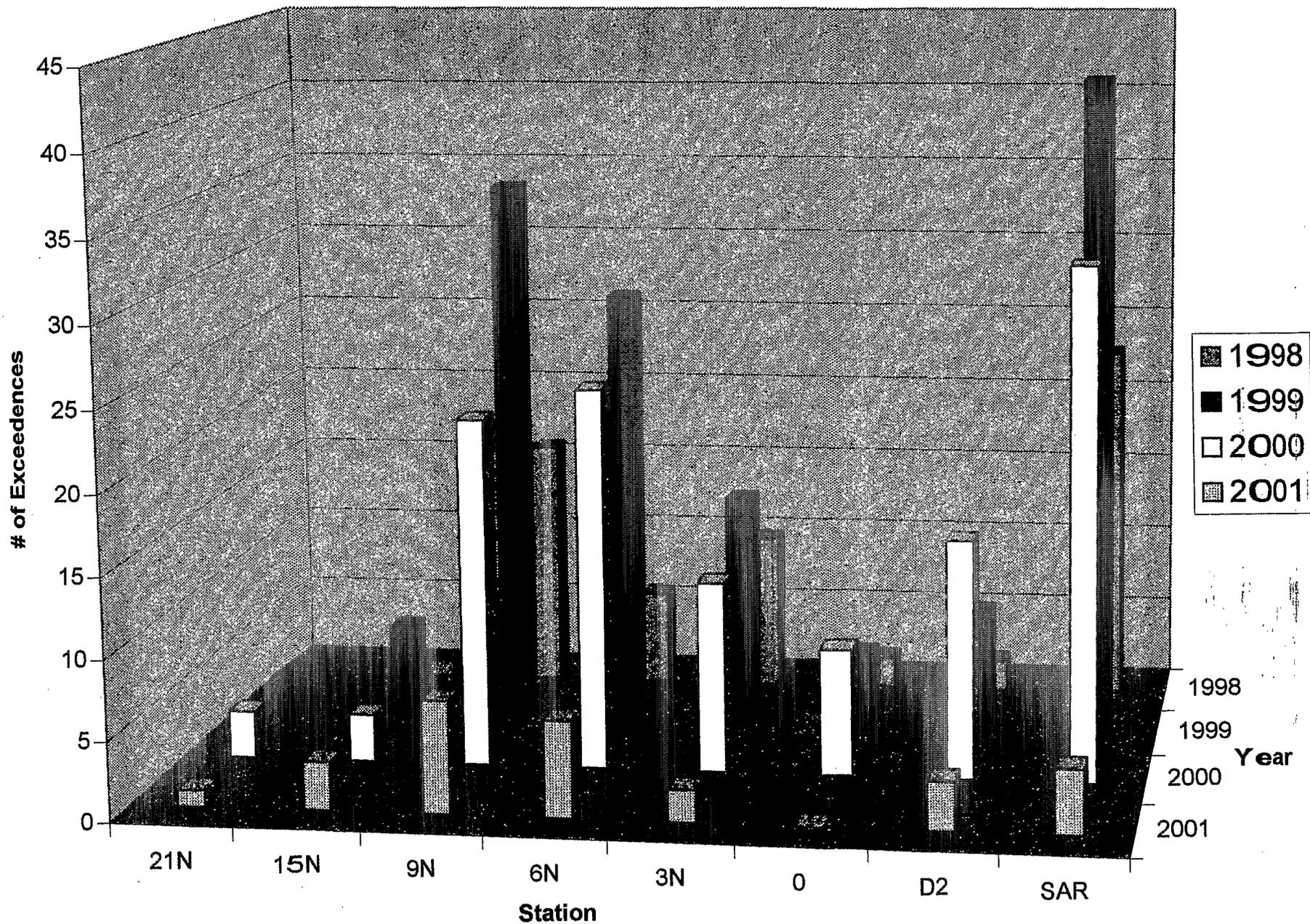
SURFZONE WATER QUALITY MONITORING STATIONS

Map MB

Fecal Coliform Exceedences (>400) by Year



Enterococci Exceedences (>104) by Year



Thousands of feet north of SAR

0 3 6 9 12 15

TC (Total coliform)		OK	
FC (Fecal coliform)		V	
Ent (Enterococcus)		V	
Posting		↔	(+/- 500')
			Scenario 1: Box 17

TC	OK	OK	
FC	V	V	
Ent	V	V	
Posting	← 2N	7N →	(1000' buffer at endpoints)
			Scenario 2: Box 22 (2), 24

TC		OK	
FC		V	
Ent		V	
Posting	(-1000' from 6N)	5N ←	12.5N → (+500' from 12N)
			Box 22(1)
			Scenario 3: Box 22(1), 24

TC	OK	OK	
FC	V	OK	
Ent	V	V	
Posting	↔ (+/- 500')	↔ (+/- 150')	
			Scenario 4: Box 23

Blank= no violations; OK=no single sample standard violation; V=violation of single sample standard

8-136

Orange Co HCA data 2001

STATION	Location Description		1/3/2001	1/9/2001	1/17/2001	1/23/2001	1/30/2001	2/6/2001	2/14/2001	2/21/2001	2/27/2001	3/6/2001	3/13/2001
CNBSA	Santa Ana Delhi C	TC	12997	>24192	24192	>24192	>24192	11199	>24192	9000	16000	>16000	12997
		FC	384	24192	187	408	336	110	5172	134	5172	19863	187
		log	5.95064255	10.093777	5.2311086	6.0112672	5.81711	4.70048	8.551015	4.89784	8.551015	9.89661398	5.231109
		mean	6.62078136					7.31939					6.084148
		geomean	750.531301*					1509.29*					438.846*
		ave	5101.4					6090.2					585.4

Rec1
Rec2

Rec1 6/6 30 day periods exceed Rec1 objective
Rec1 exceedances denoted by *.

Rec2 3/6 30 day periods exceed Rec2 objective

3/19/2001	3/26/2001	4/2/2001	4/9/2001	4/16/2001	4/23/2001	4/30/2001	5/9/2001	5/14/2001	5/21/2001	5/31/2001	6/4/2001	6/11/2001	6/18/2001
15600	3200	>5000	TNTC	11200	Cw/C	>17400	2800	1800	440	>200	>2600	>900	>19400
400	400	340	1600	450	550	3200	150	140	880	170	130	280	500
5.991465	5.991465	5.828946	7.377759	6.109248	6.309918	8.070906	5.010635	4.941642	6.779922	5.135798	4.867534	5.63479	6.214608
				6.08847					5.72653				
				440.7465*					306.9026*				
				898					392				

6/25/2001	7/2/2001	7/9/2001	7/16/2001	7/23/2001	7/30/2001	8/6/2001	8/13/2001	8/20/2001	8/27/2001	9/4/2001	9/10/2001	9/17/2001	9/24/2001
>560	>4000	TNTC	>30000	>8800	>14400	>4800	2400	>10600	>20600	>13600	>14200	5600	TNTC
220	1000	6600	1300	1400	800	440	760	3200	2200	1000	3800	400	3000
5.393628	6.907755	8.794825	7.17012	7.244228	6.684612	6.086775	6.633318	8.070906	7.696213	6.907755	8.242756	5.991465	8.006368
7.102111					7.034365					7.183367			
1214.528					1134.974					1317.337			
2104					1480					1814			

Orange County HCA data 2002

STATION	Location Description	1/2/2002	1/7/2002	1/14/2002	1/22/2002	1/28/2002	2/4/2002	2/11/2002	2/19/2002	2/25/2002	3/4/2002	3/11/2002	
CNBSA	Santa Ana Delhi C	TC	18400	TNTC	5200	>3800		TNTC	8400	Cw/C	TNTC	>11000	15000
		FC	210.00	650.00	260.00	180.00	15400.00	810.00	760.00	850.00	2000.00	130.00	390.00

	log	5.34710753	6.4769724	5.5606816	5.1929569	9.64212	6.69703	6.633318	6.745236	7.600902	4.86753445	5.966147
	mean	6.44396823					6.50881					7.161071
Rec1	geomean	628.897466 *					671.024 *					1288.29 *
Rec2	ave	3340.00					910.00					4538.00

Fecal coli form:

Rec1 log mean less than 200 & not more than 10% exceed 400
 so 5/5 30 day periods in 2002 from Jan-June 2002
 exceed Rec1 objective (Exceedances ^{for Rec1} denoted by *).

Rec2 average less than 2000 & not more than
 10% exceed ~~4000~~ 4000
 so 2/5 30 day periods in 2002 from Jan-June
 2002 exceed Rec 2 objective.

3/18/2002	3/25/2002	4/1/2002	4/8/2002	4/18/2002	4/22/2002	4/29/2002	5/6/2002	5/13/2002	5/20/2002	5/28/2002	6/3/2002	6/10/2002	6/17/2002
TNTC	>29200	TNTC	TNTC	6200	23000	13400	6800	>5800	TNTC	TNTC	>3000	3400	2000
18800.00	200.00	1100.00	2200.00	280.00	630.00	470.00	520.00	930.00	520.00	400.00	1000.00	560.00	340.00

9.841612 5.298317 7.003065 7.696213 5.63479 6.44572 6.152733 6.253829 6.835185 6.253829 5.991465 6.907755 6.327937 5.828946

6.264451

Rec1

~~525.553~~*

Rec2

566.00

6.261986

~~524.2592~~*

564.00