BEACH CLOSURE BLPORT 1996,1997,199 State Water Resources Control Board Division of Water Quality
January 2000

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#### **Overview**

When people across the country think of California, they think of Hollywood and San Francisco, the climate, and of course, the spectacular beaches. Going to the beach is not only important to our quality of life as residents of the State, it is the basis of a major tourist industry. California has more beach usage days than the rest of the United States combined, including Hawaii. But visiting the beach can be a problem if the water is polluted. To protect public heath, beaches are closed whenever contamination or pollution is bad enough to pose a significant risk to beach users.

Monitoring beaches and recreational waters is important for protecting the public from microbial contamination. However, posting or closing beaches can have other consequences. Closing a beach because of bacterial contamination can have major impacts on a basic reason that some of us live here or vacation here. Closing the beach will also affect the local hamburger stand, motel, and surf shop. The good news is that in 1999 the California Department of Health Services issued new regulations that will standardize the way counties monitor the quality of beaches and determine whether they should be posted or closed. This will lead to better protection for us all. The bad news is that this consistent approach will lead to more beach postings and closures, especially in Southern California.

Since 1994, the State Water Resources Control Board (SWRCB) has been collecting beach closure information from the coastal counties and publishing it in the Beach Closures Report. Section 115910 of the California Health and Safety Code requires each county health officer to submit to the SWRCB a survey documenting all beach postings and closures due to public health threats that occurred during the previous year. Because the Beach Closure Report was not published for the last two years, this report includes data for 1996, 1997, and 1998.

#### **Recent Initiatives**

The importance of clean beaches is increasing the need to reduce the number of sewage spills and to reduce pathogens in urban runoff. How will we decide which areas require the most attention? How will we know if our efforts are producing results? Is water quality at the beach improving? To answer these questions we need information that allows us to compare one beach to another and one year to another. The information collected through 1998 provides partial, but not complete, answers to these questions. For example, current data will let you know the number of beaches closed, but not how many miles were closed. Now, through the efforts of staff from southern California County Environmental Health Departments, the Southern California Coastal Water Research Project, and the SWRCB, a new standardized method of reporting this vital information has been developed.

The new method provides information on the extent of closures and postings in miles or yards rather than by beach name only. The reporting method was designed by the Beach Water Quality Workgroup, an ad hoc committee drawn from agencies responsible for the protection and reporting of beach water quality. The Workgroup includes staff from County Environmental Health Departments, environmental groups, sewage treatment plants that discharge to coastal waters, the Coastal Commission, California Department of Health Services, State and Regional Water Boards, and U.S. EPA Region IX.

The new reporting method includes a database that captures information on the sources and causes of the postings and closures and the number of days and length of beach affected. This database will make it possible to report beach postings and closures by beach-mile-days. The pilot database was sent to all coastal counties June 1, 1999. Information collected in the new database should better inform the public of conditions at their beaches and identify areas of frequent postings and closures.

#### How do we identify the sources of beach contamination?

Beaches are closed when certain kinds of bacteria are found in the water at levels that are considered a problem. These indicator bacteria imply the potential presence of microscopic disease-causing organisms originating from human and animal wastes. Indicator bacteria are carried to coastal waters in a variety of ways, including sewage spills, overflows from sewage-treatment plants and sanitary sewers, and from stormwater runoff from urban, suburban, and rural areas. An ideal indicator would show up only when disease causing agents were present at levels that could cause problems. Actual indicators are not this precise. Rather, these bacteria are produced by many types of animals and represent a range of potential risk of disease. For example, water birds can excrete indicator bacteria in amounts that would suggest a potential risk to human health. But the birds do not carry the same types of pathogens as do people. The risk of illness to people will be lower if the indicator bacteria are from birds than if the bacterial indicators are from people.

Beach closures can also be caused by other events such as a leaking sewage pipe or an oil spill. In addition, advisories often are issued when it rains, because rain water carries pollution to the beach.

#### Storm Water

Storm sewers are designed to carry rainwater from the streets to prevent flooding. Storm sewers also collect the water that runs off of when we over water the lawns and wash our cars. These drains carry the water that runs off parking lots, streets, and parks, as well as construction and industrial sites. Usually, storm sewers deliver this water untreated to the beach. Storm water and urban runoff contain oil and grease, heavy metals, pesticides, pollutants from car tires, brakes and exhaust, and wastes from pets and other animals. There may also be illegal connections to the storm drain systems, cross connections with the sanitary sewer, and instances of illegal dumping. In rural areas, runoff water may also contain wastes from farms, feedlots, and dairies.

Recent studies by the Southern California Coastal Water Research Project and the Santa Monica Bay Restoration Project have shown that discharges from the storm sewer system, both in dry weather and wet weather, are significant contributors to coastal pollution and often are the dominant sources affecting beaches. Discharges from urban storm sewer systems are regulated through NPDES permits issued by the Regional Water Quality Control Board. These NDPES permits require the owner/operator of the storm sewer system to identify the pollutants in the discharge and their sources. Control of the pollutants has been achieved mainly through public education and outreach. However, in some cities dry weather runoff is now diverted from the storm sewer to the sewage treatment plant.

Until we have confidence in our abilities to eliminate pollution from storm drains, swimmers should steer clear of flowing storm drains. An epidemiological study by the Santa Monica Bay Restoration Project, found that individuals who swam in front of flowing storm drains were 50 percent more likely to develop flu-like symptoms, including vomiting, fever, diarrhea, skin rashes and sinus or ear infections than those who swam at least 400 yards away from the same drains.

#### What is bacterial sampling?

Water samples are collected in the surf zone to determine if recreational waters contain indicator bacteria (total coliform, fecal coliform, and enteroccus bacteria). Generally, levels of indicator bacteria correlate with the incidence of illness. If indicator bacteria are above State standards, the beach is posted or closed to notify the public of the potential health risk. When further sampling confirms that bacteria levels have dropped below State standards, the beach is reopened.

#### What's the difference between a posting, closure, and advisory?

Closure: A beach closure occurs as a result of a sewage spill or repeated incidences of exceedances of bacteriological standards from an unknown source. A closure is a warning to the public that the water is unsafe for contact and that there is a high risk of getting ill if you swim in the water. Closure occurs when health risks are considered greater than those associated with posting. Closure is required by Health and Safety Code Section 115885(f) when untreated sewage is known to have reached recreational waters.

Posting: Posting with warning signs alerts the public of a possible risk of illness associated with water contact. Posting means that at least one bacterial standard has been exceeded but there is no known source of human sewage. The placement of signs may be temporary, as a result of monitoring that indicates a single microbiological indicator standard is exceeded, or more permanent, where monitoring indicates repeated contamination (e.g., from a storm drain), or where sources of contamination are identifiable and can be explained as not of human origin (e.g., storm drain water, or residential marine mammals or seabirds). Posting is required by Health and Safety Code Section 115915(a) for certain public beaches whenever standards for microbiological indicator organisms are exceeded.

<u>Rain Advisory</u>: Rain advisories are issued during rain storms. Rain advisories are issued by radio or newspaper to warn people to avoid areas where storm drains carry rain water to the beach.

Figure 1 shows the suggested protocol for posting and closure based on the results of a monitoring sample or a reported sewage spill. This suggested flow diagram was prepared by the Monitoring and Reporting Subcommittee of the Beach Water Quality Workgroup. The suggested decision diagram shows the process by which the County Health staff can determine whether a beach should be posted or closed. The decision on posting or closure is defined by law for beaches near storm drains; however, there is discretion as to whether to post or to close beaches in areas away from the influence of storm drains. The key to the discretionary area is how certain the county staff are that high levels of bacterial indicators will be repeated at a beach (resulting in a beach closure) or that the high bacterial levels will not be repeated (area posted).

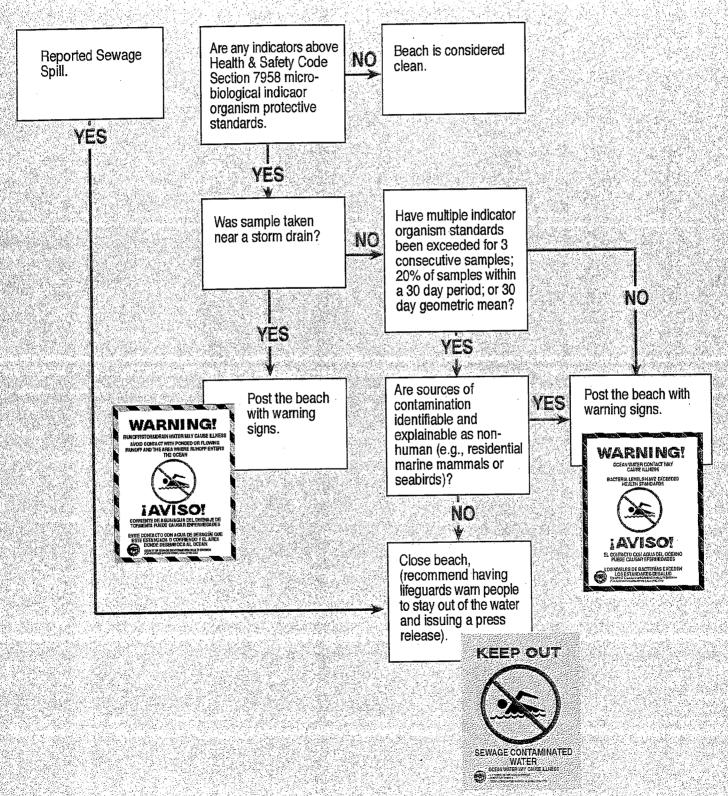
#### New legislation - AB411

Organizations involved in beach monitoring use different indicators to assess beach quality, and even those that measure the same indicators often use different sampling or analysis methodologies. These inconsistencies prompted the passage of Assembly Bill 411, sponsored by Assemblyman Howard Wayne, requiring the State Department of Health Services to adopt procedures that increase consistency for collecting data on beach water quality, and for posting and closing beaches.

Beginning in 1999, the new law requires bacterial testing (for total coliform, fecal coliform, and enterococci bacteria) from April 1 to October 31 of waters of beaches which have more than 50,000 visitors annually and are near storm drains which flow in the summer. If any one of these indicator organisms exceeds the standard, the county health officer is required to post that beach. The law also requires the establishment of a 24-hour telephone hotline to let beachgoers know, day by day, which beaches are polluted. Ten coastal counties and one city (Long Beach) have reported that they have beaches meeting the criteria: Sonoma, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, Orange, Los Angeles, and San Diego.

Before AB411 county health officers had discretion to post or close any beach that violated total coliform standards. The new regulations require posting whenever any one of the bacterial standards is violated in areas near storm drains but leaves the decision of beach closure to the local health officer.

# Suggested Flow Diagram for Beach Postings and Closures for Routine Water Quality Monitoring and Reported Sewage Spills



It is likely that many beaches that fall under the AB 411 regulation will frequently violate at least one of the standards, particularly those in proximity to storm drains. These violations will increase the number of postings and closures, regardless of whether there have been changes in water quality from previous years. Nevertheless, information collected with implementation of AB411 will create a new baseline to which the number of beach closures must by compared in the future.

#### Beach Closures and Postings for 1996, 1997, and 1998

Table 1 lists the number of posting/closures days for 1996, 1997, and 1998 for each coastal county, organized from north to south. Table 2 lists the number of incidences of beach postings and closures. The Appendix contains a summary table for 1998 data only and information on individual beach closures submitted by each coastal county to the State Water Board in a standard format.

Table 1. Number of Days Beaches were Posted/Closed

Table 1. Number of Days Beaches were Fosted/Crosed					
County	Number of days posted/closed				
	1998	1997	1996		
Del Norte	-				
Humboldt	_	-	-		
Mendocino	_	-	-		
Sonoma	-		-		
Marin			- 100		
San Francisco	140	101	190		
Contra Costa			·		
Alameda			1144		
San Mateo	689	278	1144		
Santa Cruz	31		3		
Monterey	19	2	40		
San Luis Obispo	84.	393	40		
Santa Barbara	689	307	86		
Ventura	75	1	3		
Los Angeles	239	. 9	10		
Orange	1,272	598	277		
San Diego	808	696	1365		
·					
TOTAL	4046	2385	3118		

<sup>&</sup>quot;-" means no closures were reported

The generally higher number of closures in southern California in 1998 can be explained by the heavy rains of the 1998 El Nino year and extended closures due to urban runoff. The change in closures due to urban runoff reflect a change in the posting philosophy that accompanied the findings of the Santa Monica Bay Epidemiological Study, which showed that swimming near storm drains increased the risk of illness. Counties began long term closures in 1996 and have steadily increased the number of long term postings. Additionally, more vigilant monitoring programs of some counties have also increased the number of closure and posting incidences.

In 1998, 41% of the days with closures resulted from releases of sewage, either directly or as the result of heavy rains that caused overflows of sewer systems. Fifty-six percent of days when beaches were closed/posted was due to bacterial levels exceeding water quality standards.

Table 2. Number of Incidences of Closure/Posting

County	Number of closure/postings				
	1998	1997	1996		
Del Norte	-	_			
Humboldt	-	-	-		
Mendocino		-	• -		
Sonoma	-	_			
Marin	-		-		
San Francisco	28	23	30		
Contra Costa		-	-		
Alameda	_		-		
San Mateo	66	40	48		
Santa Cruz	7	-	1		
Monterey	2	1	-		
San Luis Obispo	3	5	2		
Santa Barbara	25	. 5	5		
Ventura	10	1	1		
Los Angeles	32	4	4		
Orange	40	20	22		
San Diego	77	55	74		
TOTAL	290	154	187		

<sup>&</sup>quot;-" means no closures were reported

In some counties, the low incidences of closures reflects a lack of regular monitoring. This is typically the case for those counties north of San Francisco. The beaches of San Mateo County were hit hard with rains in 1998 resulting in increased numbers of closures. In general, central California beaches suffered from the El Nino year. Santa Barbara County introduced a more stringent monitoring program which doubled the number of days beaches were posted/closed. Los Angeles County beaches suffered more closures in 1998 due to high rains, a change in the way the county reported the number of postings/closures and by the addition of the monitoring from City of Long Beach, which up to then had been excluded from Los Angeles County report. Orange County more than doubled the number of days beaches were posted or closed between 1997 and 1998 due to heavy rains and an increased number of long-term postings.

In general, comparisons of closure totals among counties are difficult to interpret. One reason for this is the local method for naming a beach. A named beach in one county may be only a few hundred yards long, whereas a beach in a different county could be five miles long. Some agencies do not report individual beach names in their reports to the SWRCB. Therefore, identifying a closure incident does not reveal the length of coastline affected. The SWRCB's Beach Closure Report does not divide closure/posting events by individual beach names but rather treats closure/posting events as affecting a

stretch of coastline. Some counties routinely post storm drains but do not include these data in their yearly report.

#### Appendix

Summary Table and Individual County Reports of Beach Closure
1998

TABLE 1. CALIFORNIA BEACH CLOSURES DURING 1998\*

COUNTY (NORTH TO SOUTH)	NUMBER OF CLOSURES/ POSTINGS	NUMBER OF DAYS CLOSED/ POSTED	REASON(S)
Del Norte	0		
Humboldt	0		
Mendocino	0		
Sonoma	0		
Marin	0		
San Francisco	28	140	Rain/combined sewer overflow (CSO).
Contra Costa	0		
Alameda	0		
San Mateo	66	689	Heavy rains resulted in flooding, high bacterial counts, sewage spills.
Santa Cruz	7	31	Sewage (4 permanent and 1 seasonal posting not counted).
Monterey	2	19	Sewage, high bacterial counts.
San Luis Obispo	3	84	Elevated levels of bacteria, sewage spill, (1 permanent posting, 365 days not counted).
Santa Barbara	25	689	High bacterial counts.
Ventura	10	75	3 incidence, (3 days) were result of elevated levels of bacteria, the remaining 7 incidences (72 days) were the result of sewage spills which each affected multiple beaches.
Los Angeles	32	239	All but 1 reported incident and 1 day result from sewer spills, many of which resulted from the heavy rains of the El Niño year.
Orange	40	1,272	Sewage, violation of bacterial standards (number of days includes 1 permanent [365 days], 1 long term [312 days], 5 closures > 45 days); also 10 rain advisories not counted.
San Diego	77	808	Sewage, flow of untreated sewage from Mexico. Total days includes 1 permanent posting (365 days); 13 rain advisories not counted.

<sup>\*</sup> For the number and names of beaches affected, please refer to individual county tables.

(A Report to the State Water Resources Control Board)

COUNTY:

Del Norte

CONTACT: Steve Landes Leon Perreault PHONE: (707) 464-3191

ADDRESS:

880 Northcrest

Crescent City, CA 95531

DATE

POSTED/CLOSED

REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)

NO BEACH CLOSURES

(A Report to the State Water Resources Control Board)

COUNTY:

Sonoma

CONTACT: Bob Herr, R.E.H.S.

PHONE: (707) 525-6544

ADDRESS:

Div. Of Environmental Health

1030 Center Dr., Suite A Santa Rosa, CA 95403

DATE

POSTED/CLOSED

OPENED

BEACH AREA

POSTED/CLOSED

REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)

NO BEACH CLOSURES

(A Report to the State Water Resources Control Board)

COUNTY:

San Francisco

CONTACT: Lorraine Anderson PHONE: (415) 252-3945

ADDRESS:

Environmental Health Management

1390 Market Street, Rm. 210 San Francisco, CA 94102

DATE POSTED/CLOSED	OPENED	BEACH AREA POSTED/CLOSED *	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
DATE POSTED/CLOSED  01/12/98 01/12/98 01/12/98 01/18/98 01/18/98 01/18/98 01/18/98 01/18/98 01/29/98 01/29/98 01/29/98 01/29/98 02/02/98 02/02/98 02/07/98 02/07/98 02/19/98	01/16/98 01/16/98 01/16/98 01/21/98 01/21/98 01/21/98 01/21/98 01/30/98 01/30/98 02/10/98 02/10/98 02/11/98 02/11/98 02/11/98 02/11/98 02/25/98 02/25/98	Baker Beach Ocean Beach Candlestick Point Ocean Beach Crissey Field Aquatic Park Candlestick Park Ocean Beach Crissey Field Aquatic Park Ocean Beach Crissey Field Aquatic Park Candlestick Point Ocean Beach Crissey Field Baker Beach China Beach China Beach Ocean Beach	POSTING/CLOSURE
02/19/98 02/19/98 02/21/98 05/06/98 05/06/98 10/24/98 10/24/98 11/30/98 12/01/98 12/01/98	02/26/98 02/25/98 02/25/98 05/08/98 05/07/98 10/25/98 10/25/98 12/02/98 12/02/98 12/08/98 12/05/98	Crissey Field Aquatic Park China Beach Ocean Beach Candlestick Point Ocean Beach Crissey Field Aquatic Park Ocean Beach Crissey Field Candlestick Point	Rain/CSO
12101170			•

<sup>\*</sup> ALL DATES ARE FOR POSTING OF WARNING SIGNS ONLY, THERE WERE NO BEACHES CLOSED IN 1998.

(A Report to the State Water Resources Control Board)

COUNTY:

Contra Costa

CONTACT: Constance Stauros

PHONE: (925) 646-5225

ADDRESS:

Environmental Health

2120 Diamond Boulevard, Suite 200

Concord, CA 94520

DATE

POSTED/CLOSED

BEACH AREA

REASON FOR POSTING/CLOSURE

NO BEACH CLOSURES

(A Report to the State Water Resources Control Board)

COUNTY:

Alameda

CONTACT: George Young

PHONE: (510) 567-6772

ADDRESS: 1131 Harbor Bay Pky.

Alameda, CA 94502

DATE

POSTED/CLOSED

BEACH AREA POSTED/CLOSED

REASON FOR POSTING/CLOSURE

NO BEACH CLOSURES

(A Report to the State Water Resources Control Board)

COUNTY:

San Mateo

CONTACT: Steve Hartsell

PHONE:

ADDRESS:

455 County Center, 4<sup>th</sup> Floor Redwood City, CA 94063

			REASON FOR
POSTED/CL	DATE OSED OPENED	BEACH AREA <u>POSTED/CLOSED</u> <u>PACIFICA</u>	POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
01/12/98 01/18/98 02/03/98 02/07/98 02/09/98	01/19/98 01/25/98 02/13/98 02/14/98 02/16/98	Linda Mar	900g sewage 15,000g sewage weather (state parks) 1,750g sewage 150,000g sewage
02/03/98 02/03/98 02/03/98 06/19/98 02/03/98	02/13/98 02/13/98 02/13/98 06/26/98 02/13/98	Sharp Park Manor Rockaway	weather weather 1,100g sewage weather
		HALF MOON BAY	
02/03/98 02/20/98 05/06/98 04/30/98 02/03/98 02/03/98 02/03/98 02/03/98	02/13/98 02/26/98 05/13/98 06/26/98 02/13/98 02/13/98 02/13/98 02/13/98	Fitzgerald Marine Reserve  West Point Ave. Surfer's Beach (Pillar Point) Roosevelt Beach (HMB) Francis Beach Poplar Beach	weather high bacteria counts Sewage gallons? high bacteria counts weather weather weather weather weather
		<u>SAN GREGORIO</u>	•
02/03/98 02/03/98 02/20/98	02/13/98 02/13/98 03/05/98	San Gregorio State Beach Pomponio State Beach	weather weather high bacteria counts
		<u>PESCADERO</u>	
02/03/98	02/13/98 03/05/98	Pescadero State Beach Bean Hollow State Beach	Weather high bacteria counts Weather
02/03/98	02/13/98	Bean Hollow State Deach	

COUNTY:

San Mateo (continued)

I <u>POSTED/CLO</u>	DATE SED OPENED	BEACH AREA <u>POSTED/CLOSED</u> <u>BRISBANE</u>	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
02/04/98	02/13/98	3-Com Park	Weather
02/04/98	02/13/98	Sierra Point	Weather
02/04/98	02/13/98	Brisbane Marina	Weather
		<u>SOUTH SAN FRANCISCO</u>	
02/04/98	02/13/98	Oyster Point	Weather
02/04/98	02/13/98	Point San Bruno	Weather
02/04/98	02/15/70	BURLINGAME	•
		<u> </u>	
02/04/98	02/20/98	Bayfront	Weather
te.		SAN MATEO (City)	
02/04/98	02/20/98	Marina Lagoon (Lakeshore)	Weather
05/08/98	05/21/98		High bacteria counts
05/08/98	06/05/98		High bacteria counts
05/25/98	06/12/98	•	High bacteria counts
06/26/98	07/22/98		High bacteria counts
08/07/98	08/14/98		High bacteria counts
09/11/98	09/18/98		High bacteria counts
09/18/98	09/25/98		High bacteria counts
10/02/98	10/09/98		High bacteria counts
10/16/98	10/30/98		High bacteria counts
12/04/98	12/11/98		High bacteria counts
02/04/98	02/20/98	Marina Lagoon (Aquatic	weather
05/08/98	05/21/98	Park)	High bacteria counts
06/05/98	06/12/98		High bacteria counts
08/21/98	09/04/98	•	High bacteria counts
09/18/98	09/25/98		High bacteria counts
10/02/98	10/09/98	•	High bacteria counts
10/16/98	10/23/98		High bacteria counts
10/30/98	11/06/98		High bacteria counts
11/20/98	11/27/98	•	High bacteria counts
12/04/98	12/11/98		High bacteria counts

COUNTY:

San Mateo (continued)

POSTED/CL	DATE OSED OPENED	BEACH AREA <u>POSTED/CLOSED</u> <u>SAN MATEO (City)</u> (continued)	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
12/18/98 02/04/98 02/04/98	12/25/98 02/13/98 02/13/98	Surfer's Cove Coyote Point	High bacteria counts Weather Weather
		<u>FOSTER CITY</u>	
02/04/98 02/04/98 02/04/98 08/20/98 09/16/98 10/02/98	02/13/98 02/13/98 02/13/98 08/27/98 09/24/98 10/06/98	Gull Park Marlin Park	Weather Weather Weather High bacteria counts High bacteria counts High bacteria counts
		<u>REDWOOD CITY</u>	
02/04/98	03/06/98	Whipple Ave.	Weather
	•	REDWOOD SHORES	
02/04/98 07/06/98 07/15/98 08/20/98 09/03/98 02/04/98	02/13/98 07/09/98 07/22/98 08/27/98 09/18/98 02/19/98	Marlin Park  Marine World Parkway	Weather Sewage overflow High bacteria counts High bacteria counts High bacteria counts Weather

(A Report to the State Water Resources Control Board)

COUNTY:

Santa Cruz

CONTACT: Steven M. Peters

PHONE: (831) 454-2022

REASON FOR

ADDRESS:

Environmental Health Service

701 Ocean Street, Room 312 Santa Cruz, CA 95060

POSTED/CLC	DATE OSED OPENED	BEACH AREA POSTED/CLOSED	POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
02/02/98	02/09/98	Davenport Beach	Rain water infiltration to sewage lagoon.
02/05/98	02/12/98	Pelton Avenue Beach	17,000 gallons raw sewage to ocean.
03/09/98	03/16/98	Pelton Avenue Beach	1,000 gallons raw sewage (no water body affected).
05/19/98	05/20/98	Seabright Beach	Raw sewage from broken sewer line to storm drain.
06/14/98	06/17/98	Capitola Beach	Mainline overflow to Soquel Creek.
08/07/98	08/12/98	Corcoran Lagoon	4,600 gallons raw sewage into lagoon.
10/30/98	10/31/98	Capitola Beach	Raw sewage spill to storm drain at beach.

(A Report to the State Water Resources Control Board)

COUNTY:

Monterey

CONTACT: Richard LeWarne

PHONE: (831) 755-4544

ADDRESS:

1270 Natividad Road

Salinas, CA 93906

POSTED/CI	DATE LOSED OPENED	BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
02/02/98	02/14/98	Stillwater Cove Pebble Beach	Unknown-Major untreated sewage.
11/04/98	11/11/98	Stillwater Cove Pebble Beach	Routine sample results for coliform bacteria above action levels.

(A Report to the State Water Resources Control Board)

COUNTY:

San Luis Obispo

CONTACT: Curtis Batson

PHONE: (805) 781-5544

ADDRESS:

P.O. Box 1489

San Luis Obispo, CA 93406

POSTED/CLC	DATE DSED OPENED	BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
POSTED CONTINUO	DUSLY	Guadalupe Beach	Oil diluent spill – historical advisory-avoid eating fish from that area.
01/12/98	03/31/98	Avila Beach	Elevated bacteria levels due to storm runoff.
07/04/98	07/07/98	Avila Beach/Olde Port Beach	Sewage spill-200,000 gallons.
08/04/98	08/07/98	Avila Beach/Olde Port Beach	Sewage spill-35,000 gallons.

(A Report to the State Water Resources Control Board)

COUNTY:

Santa Barbara

CONTACT: Gerry Winant

PHONE: (805) 681-4935

REASON FOR

ADDRESS:

Environmental Health Services

225 Camino del Remedio Santa Barbara, CA 93110

POSTED/CLO	DATE OSED OPENE	BEACH AREA  POSTED/CLOSED	POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
POSTED/CLG 03/09/98 06/08/98 06/08/98 07/27/98 12/28/98 02/02/98 02/17/98 01/27/98 01/12/98 01/12/98 06/08/98 11/30/98 02/02/98 02/02/98 02/02/98 02/02/98 02/02/98 02/02/98 02/02/98 02/02/98 02/02/98 08/17/98 08/31/98		TO STATE OF OCED	
11/02/98 11/23/98 11/30/98 01/05/98 08/03/98	12/31/98 12/31/98 12/07/98 01/12/98 12/31/98	Jalama Beach Ocean Beach Arroyo Quernada Beach Arroyo Quernada Beach	High bacteriological counts High bacteriological counts High bacteriological counts High bacteriological counts

(A Report to the State Water Resources Control Board)

COUNTY:

Ventura

CONTACT: Elizabeth Huff

PHONE: (805) 654-2814

ADDRESS:

Ventura County Environmental Health Division

800 South Victoria Avenue, Ventura, CA 93009-1730

POSTED/CLO	DATE OSED OPENED	BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
01/10/98	01/14/98	San Buenaventura State Beach-1/4 mile each side of San Jon Drain	Sewage discharge-1,200 gallons.
02/04/98	02/18/98	Bates Road Rincon Point Rincon Del Mar Punta Gorda La Conchita Mussel Shoal Oil Piers Seacliff Rincon Beach Hobson County Park Santa Clara River Mouth McGrath State Beach Mandalay State Beach Oxnard State Beach	Flooding.
		Hollywood Beach	
02/04/98	02/27/98	Faria County Park Solimar Emma Wood State Beach Seaside Wilderness Park Ventura River Mouth Surfer's Point at Seaside Park San Buenaventura State Beach Marina Park Marina Cove Beach Ventura Harbor	Sewage discharge-1,750,000 gallons.

COUNTY:

Ventura (continued)

POSTED/CLC	DATE DSED OPENED	BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
02/04/98	02/20/98	Channel Islands Harbor Silver Strand Beach La Janella Park Port Hueneme Harbor Port Hueneme Beach Park Ormond Beach (Arnold Road) Point Mugu State Beach Thornhill Broome Beach Sycamore Cove Yerba Buena Beach South Coast	Sewage discharge-86 million gallons.
		Stair Cases Leo Carillo State Beach	
05/05/98	05/12/98	Emma Wood State Beach Seaside Wilderness Park Ventura River Mouth Surfer's Point at Seaside Park Ventura Pier	Sewage discharge-22,500 gallons.
06/23/98	06/26/98	Mandalay Bay Channel Islands Harbor Edison Canal	Sewage discharge-8,000 gallons.
07/08/98	07/13/98	Ventura Harbor Ventura Keys Ventura Marina Marine Park Marina Cove Beach Surfer's Knoll	Sewage discharge-14,000 gallons.
11/17/98	11/18/98	Channel Islands Beach Park	Failure to meet bacterial standards.
12/01/98	12/02/98	Channel Islands Beach Park	Failure to meet bacterial standards.
12/08/98	12/09/98	Channel Islands Beach Park	Failure to meet bacterial standards.

(A Report to the State Water Resources Control Board)

COUNTY:

Los Angeles

CONTACT: Richard Kebabjian

PHONE: (323) 881-4160

REASON FOR

ADDRESS:

2525 Corporate Place, Room 150

Monterey Park, CA 91754

DA POSTED/CLOS	ATE SED OPENED	BEACH AREA POSTED/CLOSED	POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
01/27/98	01/29/98	Topaz Way, Redondo Beach to the Torrance, Palos Verdes Estates border (approximately 2 <sup>1</sup> / <sub>4</sub> miles)	A clogged sewer line caused 3,000 gallons of raw sewage to discharge from a manhole into the Paseo de la Playa outfall and into the ocean.
02/03/98	02/12/98	Marina del Rey entrance channel, south to Sandpiper St., Los Angeles (approximately 1 ¼ miles). Closure extended to Venice Blvd., to Imperial Hwy on 2/6/98 (approximately 3 ½ miles)	Heavy rains caused 9,000 gallons of raw sewage to discharge from a manhole into Ballona Creek and into the ocean. Additional 90,000 gallons of raw sewage entered Ballona Creek on 2/6/98 due to heavy rains.
02/05/98	02/28/98	Los Angeles County/Ventura County bonder to Pt. Dume (approximately 9 miles)	Main sewer line break at the Hill Canyon sewage treatment plant in Thousand Oaks, Ventura County. Approximately 50 million gallons of raw sewage entered the ocean at Pt. Mugu Lagoon.
02/06/98	02/28/98	Surfview Dr., Los Angeles to Temescal Cyn. Rd., Los Angeles (approximately 1 <sup>3</sup> / <sub>4</sub> miles)	Heavy rains caused 2,000 gallons of raw sewage to discharge from a manhole into Sunset storm drain and discharge into the ocean.
02/12/98	02/28/98	Surfview Dr., Los Angeles to Chautauqua Cyn. Blvd., Los Angeles (approximately 3 miles). This is an expansion of the 2/6/98 closure of Surfview Dr. to Temescal Cyn. Rd.	Landslide caused temporary sewer line to rupture. Approximately 7,500 gallons of raw sewage entered Pulga Cyn. storm drain and discharged to the ocean.

COUNTY:

Los Angeles (continued)

DAT		BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
02/14/98	02/20/98	Venice Blvd., Los Angeles, south to Imperial Hwy, Los Angeles (approximately 3 ½ miles)	Heavy rains caused 243,000 gallons of raw sewage to discharge into Ballona Creek and discharge into the ocean.
02/15/98	02/28/98	Surfview Dr., Los Angeles to Chautauqua Cyn. Rd., Los Angeles (approximately 3 miles). Note: Already closed due to sewage spill on 2/12/98	Failure of a by-pass pump caused 7,000 gallons of raw sewage to enter the Sunset storm drain and discharge into the ocean.
02/23/98	02/28/98	Wilshire Blvd., Los Angeles to Rosecrans Ave., El Segunda (approximately 10 miles)	Heavy rains caused 2 million gallons of raw sewage to overflow from manholes into Ballona Creek and discharge into the ocean.
02/24/98	02/28/98	Topanga Cyn. Rd., Los Angeles Unincorporated to Malaga Cove, Torrance (approximately 18 miles)	Heavy rains caused an additional 3.5 million gallons of raw sewage to overflow from manholes into Ballona Creek and discharge into the ocean. Additional sewage spill at Sunset storm drain. Area already closed 2/12/98.
02/24/98	02/28/98	Ventura/Los Angeles County border to Topanga Cyn. Rd., Los Angeles Unincorporated (approximately 17 miles)	Heavy rains and surf caused damage to private sewage disposal systems along the Malibu coastline.
03/12/98	03/16/98	Sunset Blvd. to Chautauqua Canyon, Los Angeles, (approximately 2 ½ miles)	A landslide caused a sewer line break which resulted in sewage entering Pulga Cyn. storm drain and discharing into the ocean.

COUNTY: Los Angeles (continued)

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DAT POSTED/CLOS		BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
03/25/98	03/30/98	Sunset Blvd. to Temescal Canyon Rd., Los Angeles (approximately 1 3/4 miles)	Heavy rains caused raw sewage to overflow out of a manhole and flow into the Sunset storm drain and into the ocean.
03/25/98	03/31/98	Venice Blvd. to Imperial Hwy., Los Angeles (approximately 3 ½ miles)	Heavy rains caused raw sewage to discharge out of a manhole and flow into Ballona Creek and into the ocean.
09/06/98	09/07/98	Marina del Rey entrance channel, south to Vista del Mar, Los Angeles (approximately 2 miles)	Elevated bacteria counts in Ballona Creek, of unknown origin, caused high counts on the shoreline south of the creek.
11/27/98	11/30/98	Sunset Blvd. to Temescal Cyn. Rd., Los Angeles (approximately 1 mile)	Sewer line break caused raw sewage to flow into Pulga storm drain and into the ocean.
		CITY OF LONG BEACH	
01/16/93 02/15/93 04/01/93	01/29/98 03/04/93 04/06/93	Beach/bay Beach/bay Beach only	Heavy rains. Heavy rains-sewage overflow. Possible sewage-precautionary.
04/01/93	04/06/93	Beach only	Sewage spill into SD-1.
04/02/93	06/12/93	Beach/bay/marinas	Heavy rains.
06/07/93	06/17/93	16 <sup>th</sup> Place to 1 <sup>st</sup> Place	Heavy rains.
08/13/93	08/16/93	Beach only	Sewage-35,000 gallons in LA
10/15/93	10/16/93	Colorado Lagoon only	River. Expected 1" rain-precaution of flood.
12/08/94	12/10/94	Beach only	Sewage line break-Willmington - approximately 250,000-400,000 gallons.

COUNTY:

Los Angeles (continued)

DATI POSTED/CLOSE		BEACH AREA <u>POSTED/CLOSED</u> <u>CITY OF LONG BEACH</u> (continued)	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
01/05/95	.02/03/95	Beach/bay	Record heavy rains.
04/25/95	04/27/95	Beach/Alamitos Bay	Sewage leak: Naples Canal.
08/27/96	08/29/96	Colorado Lagoon only	Unknown substance in water.
10/12/97	10/19/97	B-7 to B-9	Rains.
02/24/98	02/27/98	Beach/bay/Colorado Lagoon and marine stadium (10 <sup>th</sup> Place to 1 <sup>st</sup> Place remains closed)	Heavy rains-sewage overflow numerous locations in LA.
03/09/98	03/10/98	Alamitos Bay from 2 <sup>nd</sup> St. Bridge to 60 <sup>th</sup> Place	Approximately 500 gallons sewage.
03/25/98	03/31/98	Beach/bay/Colorado Lagoon and marine stadium Beach only opened	Rains, approximately ½ million gallons sewage.
05/13/98	05/19/98	Beach/bay/Colorado Lagoon and marine stadium	Heavy rains-sewage overflow- Eagle Rock & 36 <sup>th</sup> -100,000 gallons.
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(A Report to the State Water Resources Control Board)

COUNTY:

Orange

CONTACT: Monica Mazur

PHONE: (714) 667-3751

ADDRESS:

Environmental Health Division

2009 E. Edinger Avenue Santa Ana, CA 92705

DAT POSTED/CLOS		BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
01/01/97	12/31/98	Rhine Chanel and 33 <sup>rd</sup> St. Chanel, Newport Bay, Newport Beach	~/Ocean Water Contact Sports Standard violation.
01/01/98	11/09/98	43 <sup>rd</sup> Street Beach, Newport Bay, Newport Beach	~/Ocean Water Contact Sports Standard violation.
12/06/97	02/15/98	North Doheny Beach south to Poche Beach (Camino Capistrano), Dana Point	South East Regional Reclamation Authority-storm water surcharge from treatment plant into San Juan Creek. 100,000-300,000 gallons, sewage.
01/10/98	01/14/98	San Clemente Pier to 2,000 feet south of pier, San Clemente	City of San Clemente-storm runoff caused erosion of open trench causing sewer line to break. 3,000-4,000 gallons, sewage.
01/30/98	02/02/98	1,000 feet north and 1,000 feet south of Avenida Calafia storm drain, San Clemente	City of SanClemente-line blockage. 7,500 gallons, sewage.
02/03/98	02/9/98	1,000 feet north and 1,000 feet south of Palisades Dr., Capistrano Beach	Capistrano Beach Water District- storm water surcharge of sewage lines. 6,750 gallons, sewage.
02/06/98	02/12/98	Crystal Cove State Park – Reef Point to Abalone Point, Laguna Beach	El Morro Mobile Home Park-lines washed out in Creek. $\geq 1,000$ gallons, sewage.
02/09/98	02/18/98	Peter's Landing, Sunset Aquatic Park, Portafino Cove and Mothers Beach area, Huntington Harbour, Huntington Beach	City of Garden Grove-line break. 50,000 gallons, sewage.

COUNTY:

DAT POSTED/CLOSI		BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
02/11/98	02/15/98	Lido Isle Bridge to Via Genoa (Via Lido Soud), Newport Bay, Newport Beach	City of Newport Beach-line break. 700 gallons, sewage.
02/15/98	02/23/98	1,000 feet north and 1,000 feet south of Capistrano Beach Park, Capistrano Beach, Dana Point	Capistrano Beach Water District- storm water surcharge of sewage lines. <sup>1</sup> 4,500 gallons (2/14/98) <sup>2</sup> 500 gallons (2/22/98), sewage.
02/14/98	02/20/98	Salt Creek Beach-500 feet north and 500 feet south of Salt Creek, Dana Point	Moulton Niguel Water District- pump station failure. 500 gallons, sewage.
02/16/98	02/20/98	Aliso Beach-Dumond Street to 1,000 Steps Beach, Laguna Beach	Trabuco Canyon Water District-pump station failure (480,000 gallons, 2/16/98, sewage). South Coast Water District-line break (11,286 gallons, 2/17/98, sludge).
02/16/98	02/23/98	Dana Point Harbor breakwater to end of Doheny campground, Doheny Beach, Dana Point	Moulton Niguel Water District- line break. 3,600 gallons (2/16/98). 1,200 gallons (2/18/98) undisinfected secondary effluent.
02/22/98	03/06/98	Reef Point to Abalone Point, Crystal Cove State Beach, Laguna Beach	El Morro Mobile Home Park-line washed out in creek. >1,000 gallons, sewage.
02/22/98	03/06/98	250 feet north and 250 feet south of Aliso Creek, Aliso Beach, Laguna Beach	El Toro Water District-line blockage. 2,500 gallons, sewage.
02/24/98	04/03/98	Dana Point Harbor breakwater (Doheny Beach) to San Clemente Pier, Dana Point and San Clemente	Moulton Niguel Water District- line washed out in creek. >3 million gallons, sewage.

COUNTY:

DATI POSTED/CLOSE		BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
02/24/98	03/07/98	Aster Street (Main Beach) to Center Street (Arch Cove), Laguna Beach	City of Laguna Beach-line break due to landslide. 200,000 gallons, sewage.
02/25/98	02/26/98	50 yards north and 50 yards south Esplanada, San Clemente	City of San Clemente-line break. 50,000 gallons, disinfected tertiary.
03/04/98	03/06/98	Little Corona, Newport Beach	Private Property-line break due to landslide. 500 gallons, sewage.
03/05/98	03/14/98	Brookhurst Street south to 51st St., Huntington Beach/Newport Beach	East Valley Water District-(San Bernardino) line washout. ~21 million gallons, sewage.
03/25/98	04/02/98	Lifeguard headquarters south to T Street bridge, San Clemente	City of San Clemente-storm water surcharge of sewage lines. Unknown, sewage.
03/25/98	04/02/98	3,000 feet north and 3,000 feet south of Avenida de Riviera Underpass, San Clemente	City of San Clemente-storm water surcharge of sewage lines. 1,200 gallons, sewage.
04/04/98	06/10/98	Dana Point Harbor breakwater to Poche Beach (Camino Capistrano), Dana Point to Capistrano Beach	Moulton Niguel Water District- bypass pump failure. 75,000 gallons, sewage.
04/08/98	04/09/98	100 feet north and 100 feet south of T Street bridge, San Clemente.	City of San Clemente-plug in broken line failed. 4,500 gallons, disinfected tertiary.
04/20/98	04/22/98	50 feet north and 50 feet south of Bluebird Canyon storm drain, Laguna Beach	Laguna Beach Water District- dewatered stagnant, odorous water line. 2,000 gallons, stagnant domestic water line.
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COUNTY:

DA´ POSTED/CLOS		BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
05/11/98	05/13/98	250 feet north and 250 feet south of Aliso Creek, Aliso Beach, Laguna Beach	Moulton Niguel Water District- line break. 40,000 gallons, domestic water from sewer line.
05/19/98	05/28/98	San Gabriel River to Seal Beach Pier, Seal Beach	Los Angeles County Sanitation District-line blockage (later report from LACSD, sewage did not enter channel. Closure remained, elevated bacteria counts due to run off). 10,000 gallons, sewage.
06/02/98	06/04/98	100 feet north and 100 feet south of Cleo Street, Laguna Beach	City of Laguna Beach-line break. ~100 gallons, sewage.
06/03/98	06/06/98	500 feet north and 500 feet south of Aliso Creek, Aliso Beach, Laguna Beach	South Coast Water District-drain failure at treatment plant. ~1,000 gallons, sewage.
06/05/98	06/10/98	South Lido Isle from Via Firenza to Via Genoa, Newport Bay, Newport Beach	City of Newport Beach-line break. ~1,000 gallons, sewage.
06/11/98	06/26/98	Dana Point Harbor breakwater to end of campground, Doheny State Park Beach, Dana Point	Trabuco Canyon Water District- fire hydrant water surcharge of pump station. 24,000 gallons, sewage.
06/13/98	06/18/98	Shaw and Divers Cove, Laguna Beach	City of Laguna Beach-line break. 1,000 gallons, sewage.
07/21/98	07/28/98	West end of Newport Bay from east end of Lido Isle to 43 <sup>rd</sup> St. Beach, Newport Beach	Southern California Gas Company contractor broke 24" OCSD force main. 120,000 gallons, sewage.

COUNTY:

DA' POSTED/CLOS		BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
08/28/98	11/23/98	Balboa Bay Club beach, Newport Bay, Newport Beach	~/Ocean Water Contact Sports Standard violation.
09/02/98	12/31/98	North end of Newport Dunes, Newport Bay, Newport Beach	~/Ocean Water Contact Sports Standard violation.
10/11/98	10/14/98	300 feet south and 300 feet north of Seal Beach Pier, Seal Beach	City of Seal Beach-line break. ~100 gallons, sewage.
11/09/98	12/31/98	North side of K-O docks in East Basin, Dana Point Harbor, Dana Point	~/Ocean Water Contact Sports Standard violation.
11/23/98	11/28/98	Dana Point Harbor breakwater to the end of the campground, Doheny Park State Beach, Dana Point	Moulton Niguel Water District-contractor broke 36" line. 2,000 gallons, sewage.
12/24/98	12/27/98	Projection of lifeguard headquarters south to Hotel Laguna, Laguna Main Beach, Laguna Beach	City of Laguna Beach-line blockage, 200 gallons, sewage.
12/30/98	12/31/98	1,000 feet north and 1,000 feet south of Avenida de Riviera tunnel, San Clemente	City of San Clemente-pump station failure. 3,750 gallons, sewage.

(A Report to the State Water Resources Control Board)

COUNTY: ADDRESS:

San Diego

CONTACT:

PHONE:

DATI POSTED/CLOSE		BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
01/04/98	01/08/98	Mission Bay-Visitor Information Center, San Diego	Roots/grease, sewer line. 730 gallons.
01/10/98	01/13/98	Carnation Ave. to Border, Imperial Beach	Tijuana River contamination.
01/15/98	01/16/98	San Diego Bay-Glorietta Bay, Coronado	Cross-connection, sewer line. 6,000 gallons.
02/03/98	02/12/98	San Onofre State Beach (Trestles), San Clemente	Surcharge/infiltration, sewer line. 19,500 gallons.
02/14/98	02/17/98	Santa Margarita River, Camp Pendleton	Construction, sewer line. 15,000 gallons.
02/24/98	03/02/98	Santa Margarita River, Camp Pendleton	Infiltration, sewer line. 200,000 gallons.
02/24/98	02/27/98	Buccaneer Beach-Loma Alta Lagoon, Oceanside	Infiltration, sewer line. 7,500 gallons, 2/26, 3,000 gallons.
02/24/98	03/09/98	Batiquitos Lagoon-Outlet, Carlsbad	Line break, sewer line. 7,000,000 gallons.
02/17/98	02/20/98	Moonlight Beach, Encinitas	Pump state failure, sewer line. 85,000 gallons.
02/09/98	02/12/98	San Elijo Lagoon outlet, Encinitas	Debris/urban runoff, sewer line, 500 gallons.
02/12/98	02/13/98	Torrey Pines State Beach-Los Penasquitos Lagoon, La Jolla	Debris/urban runoff, sewer line. 1,200 gallons.
02/18/98	02/27/98	Torrey Pines State Beach-Los Penasquitos Lagoon, La Jolla	Line break, debris, sewer line. 120,150 gallons.

COUNTY:

DATED/CLOSE 02/10/98		BEACH AREA  POSTED/CLOSED  Tourmaline Surf Park, Pacific  Beach	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS) Flood damage/rocks, sewer line. 23,500 gallons, 2/17 27,000 gallons.
02/10/98	02/13/98	San Diego River to Ocean Beach Pier, Ocean Beach	2 surcharging manholes, sewer line. 30,350 gallons.
02/09/98	03/09/98	Mission Bay, Crown Pt to Tecolote Creek, San Diego	Surcharge, sewer line. 24,955 gallons. 2/16 250 gallons, 2/16 43,300 gallons, 2/17 36,000 gallons, 2/18 12,050 gallons, 2/20 10,500.
02/06/98	02/28/98	San Diego Bay @ 32 <sup>nd</sup> Street, La Mesa	Surcharge/infiltration, sewer line. 100,000 gallons. 2/9 9,125 gallons, 2/9 135,000, 2/14 20,000, 2/17 15,000 gallons, 2/124 2,160 gallons.
02/09/98	02/12/98	Silver Strand & Coronado, Coronado	Contamination/stormdrains, Tijuana River.
02/03/98	02/27/98	Carnation Ave to Border, Imperial Beach	Tijuana River contamination.
03/10/98	03/18/98	San Diego River Outlet, Ocean Beach	Flood damage, sewer line. 122,360 gallons. 3/13 6,300 gallons.
03/13/98	03/18/98	Tourmaline Surf Park, Pacific Beach	Flood damage, sewer line. 4,838 gallons. 3/13 6,300 gallons.
03/15/98	03/18/98	32 <sup>nd</sup> Street, San Diego Bay, San Diego	Vandalism, sewer line. 19,150 gallons.
03/27/98	04/03/98	Cardiff State Beach, Encinitas	Grease, sewer line. 3,150 gallons.
03/27/98	03/31/98	San Diego River Outlet, Ocean Beach	Grease, sewer line. 16,500 gallons.
03/27/98	03/31/98	Carnation Ave to U.S./Mexico Border, Imperial Beach	Tijuana River contamination.
04/01/98	04/07/98	Tourmaline Surf Park, Pacific Beach	Line break, sewer line. 16,600 gallons.

COUNTY: San Diego (continued)

DA' <u>POSTED/CLOS</u> 04/29/98		BEACH AREA <u>POSTED/CLOSED</u> Tourmaline Surf Park, Pacific  Beach	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS) Debris, sewer line, 2,265 gallons.
04/01/98	04/05/98	San Diego River Outlet, Ocean Beach	Continuation of March Spill.
04/15/98	04/24/98	San Diego River Outlet, Ocean Beach	Debris, sewer line. 3,850 gallons.
04/16/98	04/20/98	Mission Bay, DeAnza Cove to Visitor Center, San Diego	Flood damage, sewer line. 40,800 gallons.
04/01/98	04/07/98	Carnation Ave to U.S./Mexico Border, Imperial Beach	Tijuana River contamination.
04/12/98	04/15/98	Carnation Ave to U.S./Mexico Board, Imperial Beach	Tijuana River contamination.
05/13/98	05/20/98	Cardiff State Beach, Encinitas	Grease, sewer line. 31,500 gallons.
05/28/98	06/01/98	Cardiff State Beach, Encinitas	Grease, sewer line. 8,400 gallons.
05/05/98	05/11/98	San Dieguito River Outlet, Del Mar	Lake Hodges Sewage Spill, sewer line. 2,160,000 gallons.
05/13/98	05/17/98	Torrey Pines State Beach, La Jolla	Debris, sewer line. 2,600 gallons.
05/07/98	05/14/98	La Jolla Shores – Ave de la Playa, La Jolla	Urban runoff, stormdrain.
05/15/98	05/17/98	Mission Bay – Visitor Information Center, San Diego	Roots, sewer line. 11,250 gallons. 5/16 14,400 gallons.
05/13/98	05/15/98	Imperial Beach and Silver Strand State Beach. Coronado	Tijuana River contamination.
05/01/98	05/11/98	Carnation Ave to U.S./Mexico Border, Imperial Beach	Tijuana River contamination.
05/13/98	05/19/98	Carnation Ave to U.S./Mexico Border, Imperial Beach	Tijuana River contamination.

COUNTY:

DA POSTED/CLOS		BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
06/01/98	06/04/98	San Luis Rey River, Oceanside	Vandalism, sewer line. 18,000 gallons.
06/10/98	06/11/98	Carlsbad City Beach, Carlsbad	Derbris, sewer line. 1,500 gallons.
06/10/98	06/11/98	La Jolla Shores – Ave de la Playa, La Jolla	Urban runoff, stormdrain. Elevated bacteria levels.
06/22/98	06/25/98	WindanSea, La Jolla	Roots, sewer line, 3,500 gallons.
06/16/98	06/18/98	San Diego River Outlet, Ocean Beach	Grease, sewer line. 1,800 gallons.
06/08/98	06/10/98	San Diego Bay – Kellogg Beach, Pt. Loma	Line break, sewer line, 3,000 gallons.
06/12/98	06/15/98	San Diego Bay – Kellogg Beach, Pt. Loma	Line break, sewer line, 2,000 gallons.
06/18/98	06/23/98	San Diego Bay – Shelter Island, Pt. Loma	Line blockage, sewer line. 4,020 gallons.
07/21/98	07/23/98	Mission Bay – Bonita Cove, San Diego	Pump station failure, sewer line. 32,200 gallons.
07/01/98	07/02/98	San Diego Bay – Kellogg Beach, Pt. Loma	Roots, sewer line. 2,480 gallons.
07/16/98	07/19/98	Carnation Ave to U.S./Mexico Border, Imperial Beach	Tijuana River contamination.
07/19/98	07/22/98	Cortez Ave to U.S./ Mexico Border, Imperial Beach	Tijuana River.  Tijuana River contamination.
07/22/98	07/29/98	Carnation Ave to U.S./Mexico Border, Imperial Beach	i ijuana Kivei contammation.

COUNTY:

			REASON FOR
DA POSTED/CLOS		BEACH AREA POSTED/CLOSED	POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
07/22/98	07/25/98	San Elijo Lagoon – Cardiff State Beach, Encinitas	Lagoon opening. Escondido Creek.
08/17/98	08/19/99	Torrey Pines State Beach, La Jolla	Tidal flushing. Los Penasquitos Lagoon.
08/12/98	08/19/98	Main gate at Silver Strand State Beach, Coronado	Tijuana River contamination.
08/11/98	08/19/98	Carnation Ave to U.S./Mexico Border, Imperial Beach	Tijuana River contamination.
08/29/98	09/01/98	Carnation Ave to U.S./Mexico Border, Imperial Beach	Tijuana River contamination.
09/05/98	09/09/98	N. Carlsbad State Beach, Carlsbad	Corrosion, sewer line. 50,000 gallons.
09/14/98	09/17/98	Cardiff State Beach – San Elijo Lagoon, Solana Beach	Crack in line, by-pass line. 800,000 gallons.
09/30/98	10/02/98	Cardiff State Beach – San Elijo Lagoon, Solana Beach	Tidal flushing, San Elijo Lagoon.
09/30/98	10/02/98	La Jolla Shores – Ave de la Playa, La Jolla	Elevated bacteria levels, stormdrain.
09/04/98	09/06/98	WindanSea Beach, La Jolla	Pump station failure, sewer pump station. 3,000 gallons.
09/30/98	10/03/98	WindanSea Beach – Fernglen Ave, La Jolla	Contractor, sewer line. 12,000 gallons.
09/28/98	09/30/98	San Diego Bay – Chollas Creek, San Diego	Unknown, sewer line, 925 gallons.

COUNTY:

DA' POSTED/CLOS		BEACH AREA POSTED/CLOSED	REASON FOR POSTING/CLOSURE AMOUNT SPILLED (GALLONS)
09/01/98	09/05/98	Carnation Ave to U.S./Mexico Border, Imperial Beach	Tijuana River contamination.
09/06/98	09/30/98	Carnation Ave to U.S./Mexico Border, Imperial Beach	Tijuana River contamination.
10/05/98	10/09/98	San Diego River, Ocean Beach	Debris, sewer line. 15,800 gallons. 10/6 100 gallons.
10/01/98	10/02/98	San Diego Bay – Glorietta Bay, Coronado	Crack in line, sewer line. 2,500 gallons.
10/01/98	11/01/98	Carnation Ave to U.S./Mexico Border, Imperial Beach	Tijuana River contamination.
11/05/98	11/07/98	Torrey Pines State Beach, La Jolla	Tidal flushing, Los Penasquitos Lagoon.
11/05/98	11/07/98	Mission Bay – Visitor Information Center, San Diego	Debris, sewer line. 200 gallons.
11/01/98	11/20/98	Carnation Ave to U.S./Mexico Border, Imperial Beach	Tijuana River contamination.
12/05/98	12/09/98	WindanSea, La Jolla	Power outage, sewer line. 2,500 gallons.
12/07/98	12/09/98	Torrey Pines State Beach, La Jolla	Roots, sewer line. 355,920 gallons.
12/12/98	12/15/98	San Diego Bay – Scott Street, Pt. Loma	Contractor, sewer line. 18,700 gallons.
12/21/98	12/23/98	San Diego River – Dog Beach, Ocean Beach	Grease/debris, sewer line. 6,640 gallons.
01/01/98	12/31/98	Loma Alta Lagoon	Permanent posting.

#### 1998 RAIN ADVISORIES – ORANGE COUNTY

- 1. January 5, 1998 January 17, 1998
- 2. January 29, 1998 February 12, 1998
- 3. February 17, 1998 February 28, 1998
- 4. March 14, 1998 March 18, 1998
- 5. March 25, 1998 April 1, 1998
- 6. April 3, 1998 April 15, 1998
- 7. May 5, 1998 May 17, 1998
- 8. September 4, 1998 September 8, 1998
- 9. November 8, 1998 November 13, 1998
- 10. December 19, 1998 December 24, 1998

#### 1998 RAIN ADVISORIES - SAN DIEGO COUNTY

- 1. January 4, 1998 January 7, 1998
- 2. January 20, 1998 January 23, 1998
- 3. January 29, 1998 February 1, 1998
- 4. February 3, 1998 February 6, 1998
- 5. February 9, 1998 February 12, 1998
- 6. February 24, 1998 February 27, 1998
- 7. March 27, 1998 March 30, 1998
- 8. March 31, 1998 April 3, 1998
- 9. April 13, 1998 April 19, 1998
- 10. May 6, 1998 May 9, 1998
- 11. May 13, 1998 May 16, 1998
- 12. November 8, 1998 November 11, 1998
- 13. November 29, 1998 December 9, 1998