

## San Diego County 2003 Beach Closure & Advisory Report



Crystal Pier, Pacific Beach. Photo: F. Poli

Beach water quality contamination events and days posted  
for beaches within San Diego County, California, USA.

Prepared by the County of San Diego  
Department of Environmental Health  
Land & Water Quality Division  
Recreational Water Program



# County of San Diego



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## Summary and Comparison to Previous Years

In 2003, San Diego County beaches had 1115 water quality closure and advisory days as a result of reported contamination events.<sup>1</sup> The county as a whole also experienced 32 days when all coastal waters were under a General Advisory due to urban runoff impacting beaches after rainfall. Of the 1115 days posted for the year, there were 493 water quality closure and advisory days posted between April 1 and October 31, 2003.

This report will present the causes of water quality contact advisories and closures, and the days posted for those events, for the entire county and by coastal jurisdiction. Except for closure events by themselves, comparisons to previous years will use the 493 water quality closure and advisory days posted between April 1 and October 31. Comparison to previous years are limited to the April 1 to October 31 time period due to changes since 2001 in beach water quality monitoring frequencies (*see next page*) during the winter months (November to March). These changes prevent accurate comparisons of beach advisory data (based upon monitoring exceedances) for an entire calendar year. Monitoring frequencies between April 1 and October 31 have remained relatively consistent since 2000, so yearly comparisons can be made during this time period.

The number of days posted under advisory due to monitoring exceedances and precautionary advisories have decreased significantly compared to a similar time period (April to October) in 2002. This was due to major reductions in the number of days posted under advisory at Mission Bay beaches and Shelter Island Shoreline Park in San Diego Bay. However, beaches at nine out of thirteen coastal jurisdictions showed a slight increase in the number of days posted compared to a similar time period in 2002.

For water quality closure events due to sewage releases, 2003 experienced a slight increase compared to 2002. This increase was primarily attributed to the number of water contact closures issued for south county beaches (Imperial Beach, Silver Strand, and Coronado) due to sewage contaminated flows in the Tijuana River. February through April 2003 had significantly more rain than the previous year, causing higher and continued flows from the Tijuana Estuary to enter ocean waters.

Several beach water quality studies and a health risk study were conducted in San Diego County in 2003. At south county beaches, two on-going research projects provide data to DEH to enhance the accuracy of notifications of contaminated waters. A County of San Diego grant to the Scripps Institution of Oceanography helped develop doplar radar, weather, and ocean current real-time data on the internet for ocean waters near Imperial Beach. This information allows DEH to make better informed decisions on when to issue water quality closures for south county beaches due to contaminated flows from the Tijuana Estuary. A second project in the south county uses a grant from the Regional Water Quality Control Board for satellite and aerial images of the ocean waters off Imperial Beach to verify the sources of contamination and track their movements in ocean waters.

The County of San Diego DEH obtained a U.S. EPA grant to verify the temporal and spatial extent of contamination of beaches next to lagoons following rain. Intensive sampling following two rain events was conducted at the shorelines adjacent to the San Elijo and Los Peñasquitos Lagoon outlets. The results verified the adequacy of the 72 hour General Advisory issued by DEH to avoid ocean water contact following rain. The study showed bacterial levels at the various distances away from the lagoon outlets dropped within State standards within three days.

Standards for bacterial indicators are developed by state or federal agencies based upon epidemiology studies that correlate water quality to illnesses reported by swimmers. Most of these studies have been conducted at east coast beaches, and only one in California. During the summer of 2003, a U.S. EPA coordinated epidemiology study with 7000 participants sought to document the human illness rate in relation to water quality in Mission Bay.

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<sup>1</sup> The 1115 closure and advisory day total does not include beaches posted under a chronic status due to on-going sources of contamination. Chronic locations include the Tijuana Slough Nat'l Wildlife Refuge Shoreline and Border Field State Park, and the Children's Pool in La Jolla. Although monitoring results at these beaches were occasionally within State standards, the presence of known sources of contamination, i.e., a sewage contaminated river and seals, respectively, require these areas to remain posted to protect public health.

The Mission Bay epidemiology study results will be compared to those of ten other epidemiology studies conducted this past summer at Great Lake and east coast beaches. These studies will update the scientific data the U.S. EPA uses in managing health risks in marine recreational waters. The study in Mission Bay also analyzed water samples for pathogens and tested alternative indicators in hopes of developing new water testing methodologies.

**\* Changes in shoreline sampling protocols and frequencies**

The City of San Diego stopped sampling at ten ocean shoreline stations in July 2000. DEH continued sampling at eight of these ten stations during AB 411 (Apr - Oct) season only; therefore these stations were not sampled between November and March in subsequent years.

The City of San Diego stopped sampling at twenty shoreline stations in Mission Bay in July 2001. DEH continued sampling at 17 of these 20 stations in Mission Bay during AB 411 season only; therefore these stations were not sampled between November and March in subsequent years.

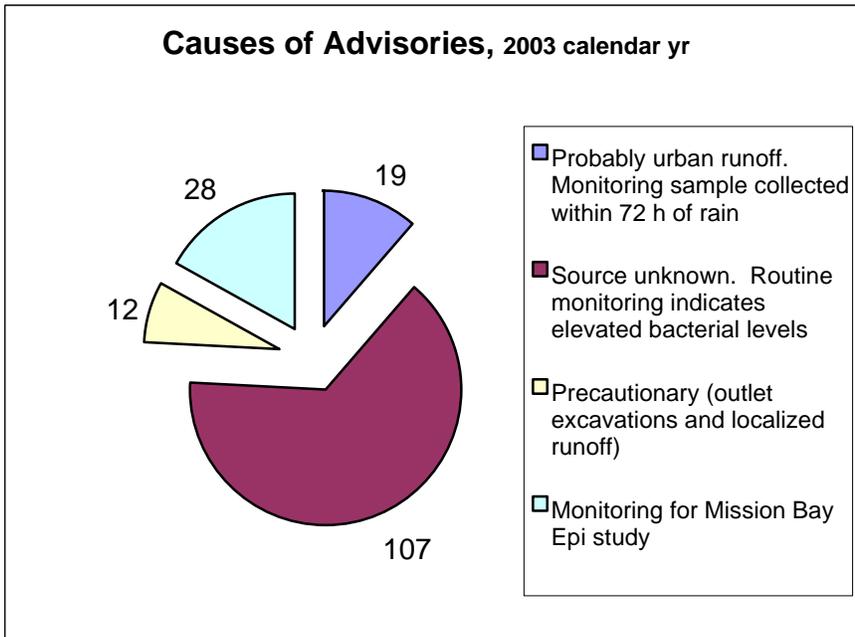
DEH sampling protocol was changed in April 2001. Routine sampling stations were moved to 25 yards downcoast from the mixing zone to conform to the State's and other agencies recommendations.



## Advisory/ Warning

An advisory or warning is the placement of signs at a beach that warns the public against water contact due to the increased risk of illness. An advisory is usually the consequence of bacteria levels in monitoring results exceeding State standards.

The source of bacteria is usually unknown, but may include fecal waste from domestic pets, wildlife, birds or humans, soils, and decaying plant matter. An advisory is also issued as a precaution when flow from a coastal outlet is restored to the ocean or another event (isolated rain, water line break, etc.) that may bring contaminated runoff to ocean or bay waters.



temporary sign

This graph does not include beaches posted under a chronic status.

For a location's recent trend in water quality based upon bacterial monitoring, go to [www.healthebay.org](http://www.healthebay.org), and look for the Beach Report Card

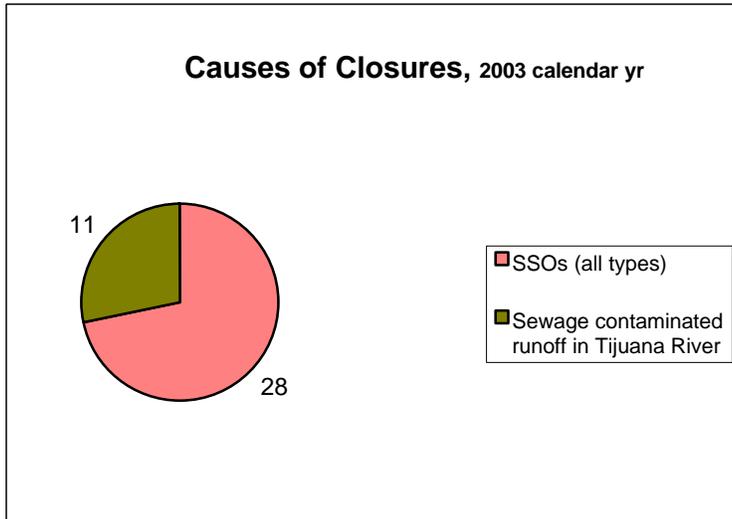
## Closure

A closure is the placement of signs at a beach that informs the public the area is closed to water contact due to a sewage spill or sewage contaminated runoff that may impact ocean or bay waters. Sewage contaminated water poses the greatest health risk to ocean users.

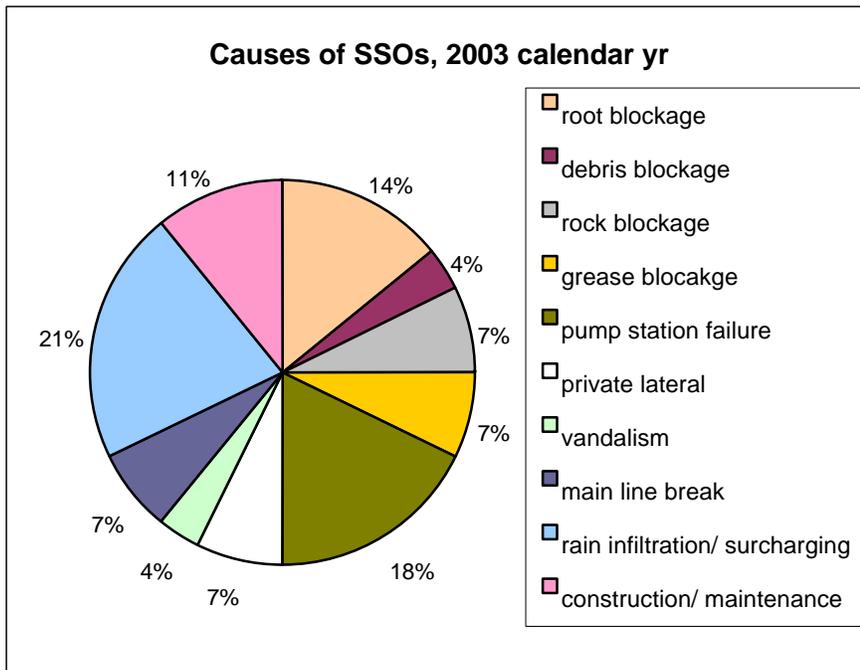


temporary sign

This graph does not include beaches posted under a chronic status.



SSO - sanitary sewer overflow. An unintentional release from the sewer conveyance system. This system is separate from the storm drain system which is designed to prevent flooding by stormwater.



**GENERAL ADVISORY** for coastal waters following rain / permanently posted storm drain outlets

Stormwater flows from rain or other water sources wash urban pollutants (pet wastes, fertilizers, auto fluids, etc.) into the storm drain system. This creates urban runoff flows from coastal storm drain, river, and lagoon outlets that contaminate ocean and bay waters. The Department of Environmental Health (DEH) issues a GENERAL ADVISORY to avoid contact with all ocean and bay waters for 72 hours after rainfall amounts greater than 0.2 inches.

A General Advisory is listed on the DEH phone message (619) 338-2073, internet ([www.earth911.org](http://www.earth911.org) "Beach Water Quality"), and San Diego Union Tribune weather page. Due to logistical constraints (53 miles of recreational beaches), additional temporary warning signs are NOT posted during General Advisories.

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During dry weather, the DEH advises avoiding contact with runoff from storm drain, river, and lagoon outlets as well as ocean or bay waters within 75 feet of an outlet.

The following coastal outlets can have urban runoff flows during dry weather. These locations are posted with permanent DEH metal storm drain outlet warning signs:

Oceanside

San Luis Rey River outlet  
Wisconsin Street

Carlsbad

Buena Vista Lagoon outlet  
Carlsbad Village Drive  
Tamarack (Agua Hedionda Lagoon outlet)  
South Carlsbad State Beach at Batiquitos Lagoon outlet

Encinitas

Moonlight Beach at Cottonwood Creek outlet  
Cardiff State Beach at San Elijo Lagoon outlet

Solana Beach

Fletcher Cove  
Seascape Beach Park

Del Mar

San Dieguito River Beach  
15th Street

City of San Diego

Torrey Pines State Beach at Los Peñasquitos Lagoon outlet  
Avenida De La Playa  
South Casa Beach  
Coast Blvd/ n Nicholson Pt  
P.B. Point  
Grand Ave  
Dog Beach at San Diego River outlet



permanent sign

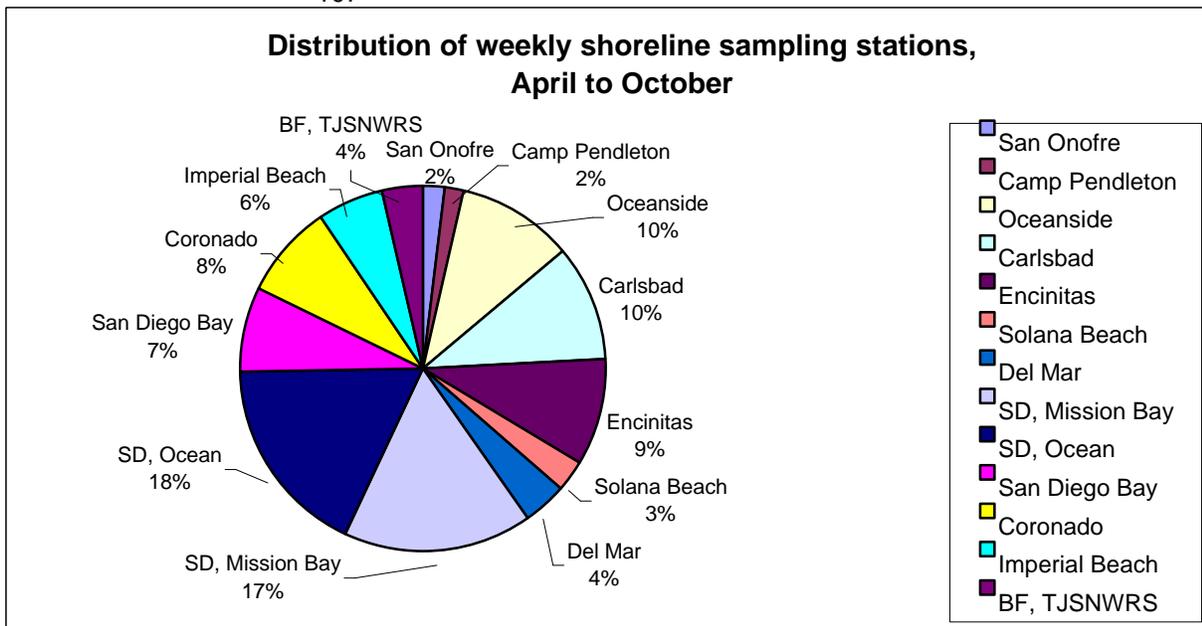
For a map of sampling locations at San Diego County beaches, go to [www.earth911.org](http://www.earth911.org) ,enter zip code 92112 and select 'Beach Water Quality'

## Description of San Diego County beaches

<u>San Onofre</u>	State Beach that includes San Mateo Creek outlet, Old Man's and Trail Six
<u>Camp Pendleton</u>	USMC beaches that include San Onofre Creek outlet and Camp Del Mar
<u>Oceanside</u>	From Harbor Beach south to St. Malo. Includes Buccaneer Beach
<u>Carlsbad</u>	Includes Buena Vista Lagoon outlet, municipal beach, and Carlsbad State beaches
<u>Encinitas</u>	From Leucadia south through Cardiff State Beach. Includes Moonlight Beach.
<u>Solana Beach</u>	Includes Tide Beach Park, Fletcher Cove, and Seascape Beach Park
<u>Del Mar</u>	From San Dieguito River Beach south through Anderson Canyon
<u>San Diego, Mission Bay</u>	Includes 18 swimming, sailing and PWC areas
<u>San Diego, ocean beaches</u>	Torrey Pines State Beach, La Jolla, Pacific, Mission and Ocean beaches and Sunset Cliffs Park
<u>San Diego Bay</u>	Includes eight locations on San Diego Bay
<u>Coronado</u>	Includes Coronado municipal beach and Silver Strand State Beach
<u>Imperial Beach</u>	From Camp Surf south through End of Seacoast Drive
<u>BF, TJSNWRs</u>	Border Field State Park and Tijuana Slough National Wildlife Refuge Shoreline

### Number of weekly sampling stations between April 1 and October 31 each year

San Onofre	2
Camp Pendleton	2
Oceanside	11
Carlsbad	11
Encinitas	10
Solana Beach	3
Del Mar	4
SD, Mission Bay	18
SD, ocean	19
San Diego Bay	8
Coronado	9 <i>includes four stations sampled 2x week</i>
Imperial Beach	6
BF, TJSNWRs	4
	107



This chart shows all the weekly sampling at San Diego County beaches. Sampling is conducted by the following agencies: County of San Diego Department of Environmental Health (DEH), City of Oceanside, Encina Wastewater Authority, San Elijo Water Reclamation Facility, City of San Diego, City of Coronado, and the San Onofre Nuclear Generating Station.

For a location's recent trend in water quality based upon bacterial monitoring, go to [www.healthebay.org](http://www.healthebay.org), and look for the Beach Report Card

## Yearly comparisons between April 1 and October 31

By coastal jurisdiction

	Closure and Advisory events			2003 Epi study in Mission Bay	Days posted			
	2001	2002	2003		2000	2001	2002	2003
San Onofre	4	2	2	28e /70d	0	13	4	11
Camp Pendleton	0	0	1		1	0	0	4
Oceanside	8	8	13		36	19	26	40
Carlsbad	5	4	2		6	14	10	6
Encinitas	10	3	9		76	28	15	29
Solana Beach	2	1	2		2	5	2	7
Del Mar	0	4	3		20	0	12	17
Mission Bay, SD	64	44	36		592	349	285	136
ocean beaches, SD	20	26	29		266	201	93	141
San Diego Bay	28	20	14		85	171	333	55
Coronado	5	2	3		15	9	4	15
Imperial Beach	8	4	7		11	22	10	25
BF, TJSNWRS	5	4	2		46	12	10	7
	159	122	123			1156	843	804

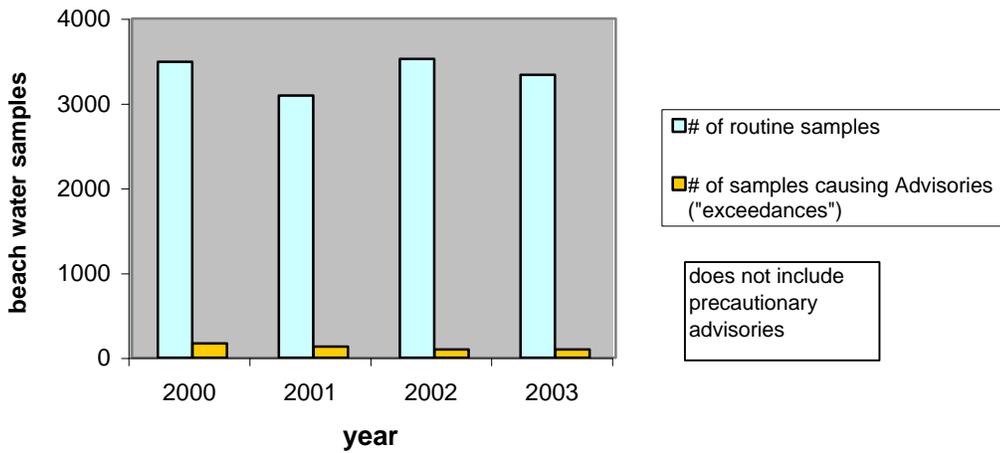
totals per year for April to October

By County as a whole

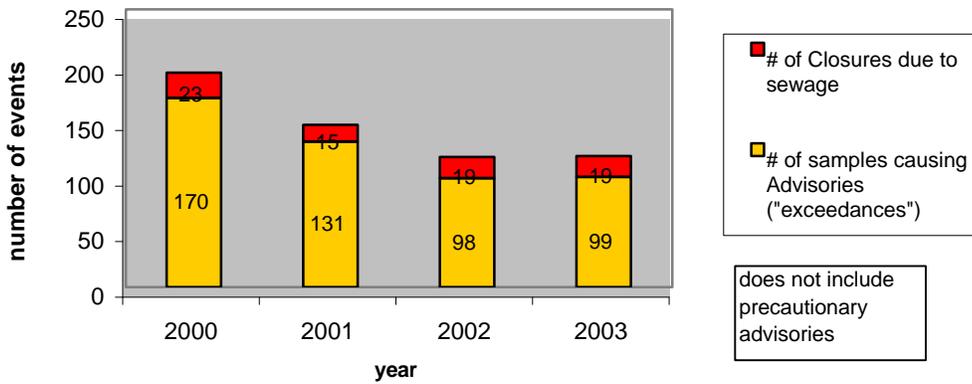
	2000	2001	2002	2003
Number of events (Closures and Advisories)	206	159	122	123
Number of days posted (Closures and Advisories)	1156	843	804	493
# of routine samples	3491	3092	3522	3334
# of samples causing Advisories	170	131	98	99
# of Closures due to sewage	23	15	19	19

These tables do not include beaches posted under a chronic status.

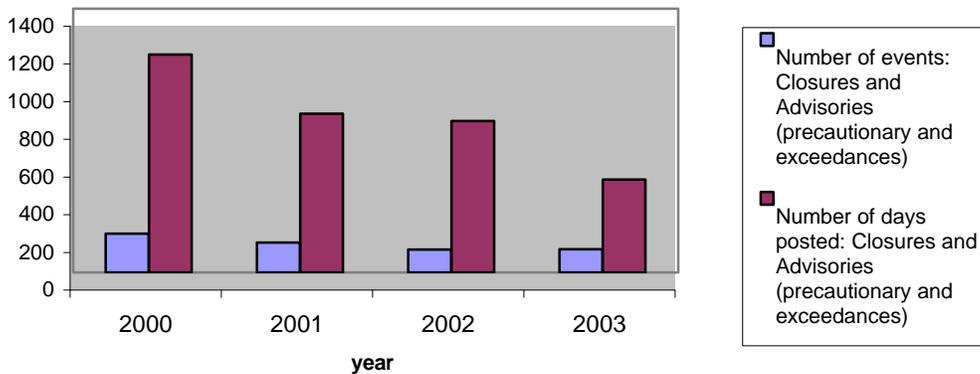
**Comparison of routine samples vs. exceedances at San Diego County beaches between April and October**



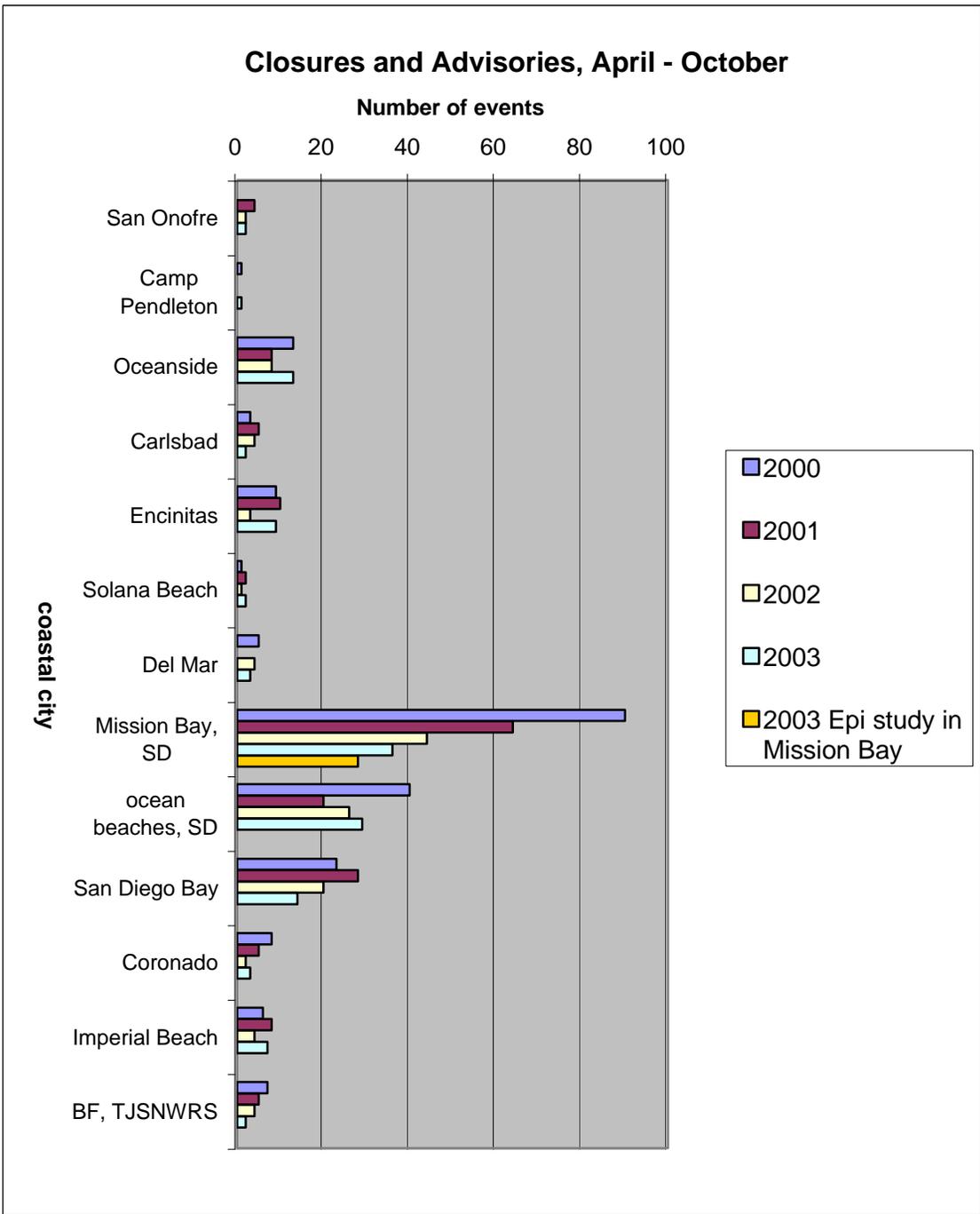
**Water Quality Closures and Advisories between April and October**



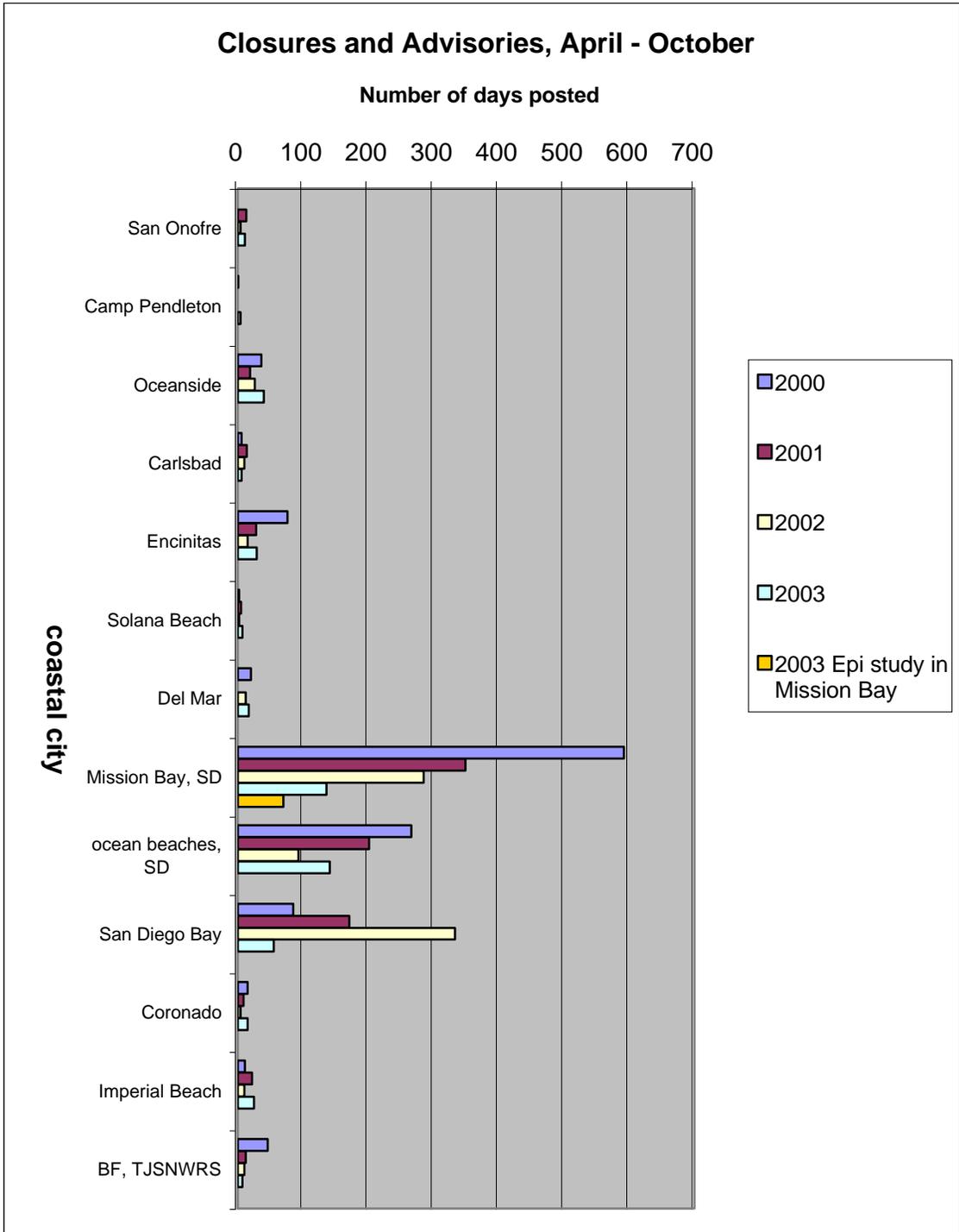
**Closures and Advisories for San Diego County beaches, April to October**



These graphs do not include beaches posted under a chronic status.



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