

# National Overview

In 2008, the number of closing and advisory days at ocean, bay, and Great Lakes beaches reached 20,341 days nationwide, their fourth highest level since NRDC began tracking these events 19 years ago and the fourth consecutive year above 20,000.<sup>1</sup> The record high of 25,643 days was reached in 2006 when a dramatic increase in the amount of rain in some parts of the country contributed to the large increase in closing/advisory days.

**During 2008, there were 20,341 days of closings and advisories at U.S. ocean, bay, and Great Lakes beaches.**

While there was an overall 10 percent decrease nationally in the number of closing/advisory days in 2008 compared to 2007, differing weather patterns across the country resulted in some regions experiencing a decrease and others an increase. In the West, relatively dry conditions in California and Hawaii contributed to a 21 percent decrease. Similarly, drier conditions reaching from the DelMarVa peninsula to the southeastern states and the Gulf of Mexico contributed to decreases of 67 percent, 12 percent, and 39 percent, respectively. To the north, wetter than usual conditions lead to increases in closing/advisory days of 13 percent in the Great Lakes, 64 percent in New England, and 2 percent in the New York-New Jersey coastal area.

The percent of all samples exceeding national health standards remained generally unchanged at 7 percent in 2008, 2007, and 2006, and 8 percent in 2005 (these multi-year graphs include only those beaches with monitoring data reported in each of the four years). Regionally, the differences in percent exceedance during this four-year period differ from 0 to 4 percentage points from year to year. The waters along the Great Lakes coastline appear to be the dirtiest while the waters along the southeast and DelMarVa coasts are relatively cleaner.

Although it is tempting to make comparisons between year-to-year changes in water quality and year-to-year changes in closing/advisory days, there are confounding factors that make such a comparison cumbersome. For example, some states take the average of multiple samples at each monitoring station when making closing/advisory decisions; the average value may not exceed the standard even though one or more of the multiple samples did. In this case, no action would be taken. While this makes sense when making closing/advisory determinations, NRDC includes the results of every reported sample when calculating the percent of all samples that exceed the standard in a given year. Similarly, some localities will resample a beach after an exceedance before notifying the public. If the resample does not exceed the standard, the public is not notified.

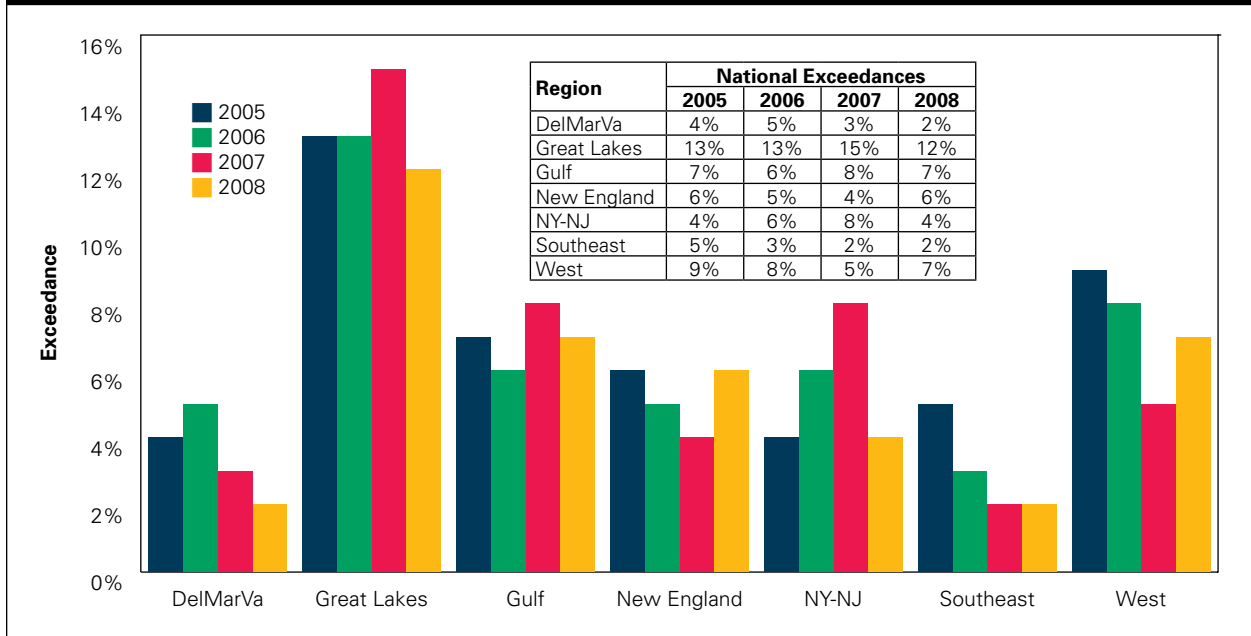
Furthermore, many states preemptively close a beach or issue an advisory in response to events such as heavy rainfall, known sewage leaks, chemical spills, high winds, etc. without waiting for the results of beachwater monitoring. The proportion of closing/advisory days due to preemptive actions varies greatly from year to year and from region to region. In 2008, the New York-New Jersey coastal region had the highest proportion (76 percent of all closing/advisory days), followed by the West (49 percent), New England (17 percent), the Great Lakes (16 percent), the Gulf Coast (7 percent), and the Southeast (1 percent). There were no preemptive closings or advisories in the DelMarVa Peninsula in 2008.

Beach officials in all states continue to use traditional methods approved by the EPA that usually require 24 hours to quantify bacterial indicator levels in beachwater samples. One state, New Hampshire, is preparing to use rapid test methods. The State Microbiology Laboratory currently has all necessary equipment to initiate this process; when preparations are complete, bacteria levels in beachwater samples in New Hampshire will be quantified using a rapid test method alongside approved analysis methods.<sup>2</sup> In Pennsylvania, a rapid method of determining bacterial levels, qPCR, is used in the event of a preemptive advisory issued by the Presque Isle Beach manager to confirm within four hours that *E. coli* concentrations warrant issuing an advisory.<sup>3</sup> Advisories or restrictions based on monitoring data in Pennsylvania, however, are determined solely by using the standard culture-based method, not by qPCR analysis. Puerto Rico and a number of states, including Alabama, California, Florida, Michigan, Ohio, South Carolina, and Rhode Island have participated or will participate in EPA's National Epidemiological and Environmental Assessment of Recreational (NEEAR) Water Studies. These studies are being conducted to help gain a better understanding between bacterial indicators, swimming at the beach, and peoples' health. Beachgoers are interviewed and water samples are collected and analyzed for bacteria

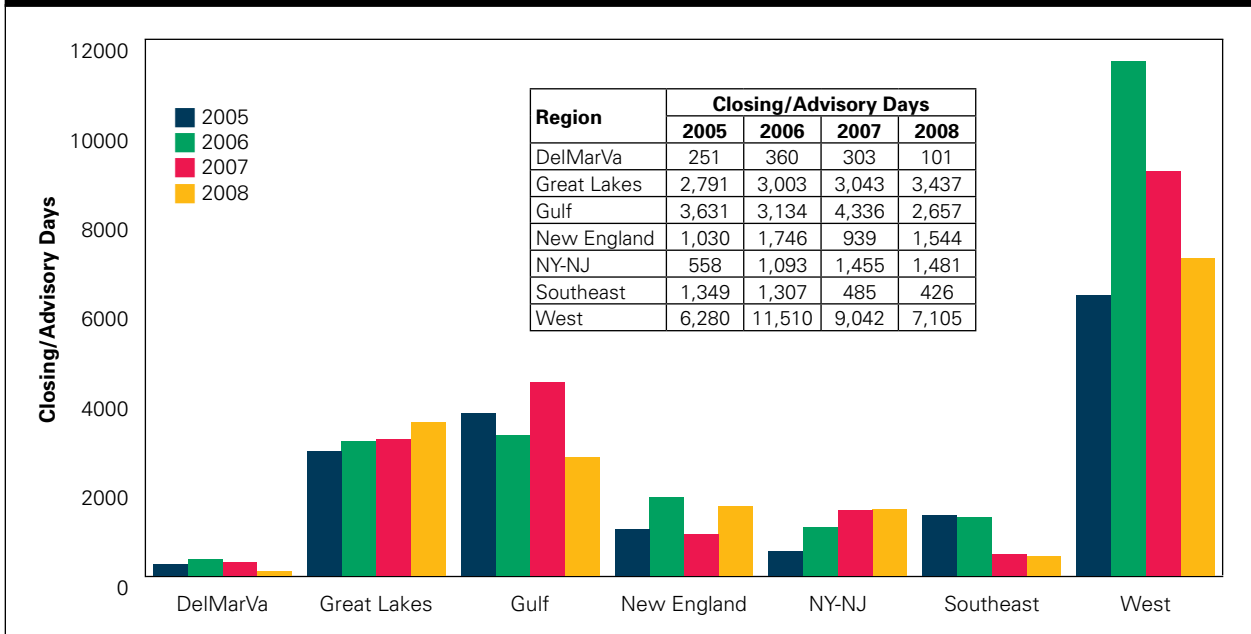
using several analysis methods including rapid test methods. Several states have conducted studies of rapid test methods in addition to the NEEAR studies. California has invested an estimated \$3 million in rapid test method investigations, and other states that have conducted or participated in rapid test method research outside of the NEEAR studies include Indiana, Minnesota, Wisconsin, and New Jersey.

Beachwater quality generally depends on many complex factors, but for some beaches, predictions of beachwater quality based on a few physical measurements of daily conditions can be fairly accurately calculated. Some states have taken advantage of this and have created computer beachwater quality models that rely on data from physical measurements such

**Figure 1. Regional Differences in Percent Exceedance of National Standards, 2005–2008**



**Figure 2. Regional Differences in Closing/Advisory Days, 2005–2008**

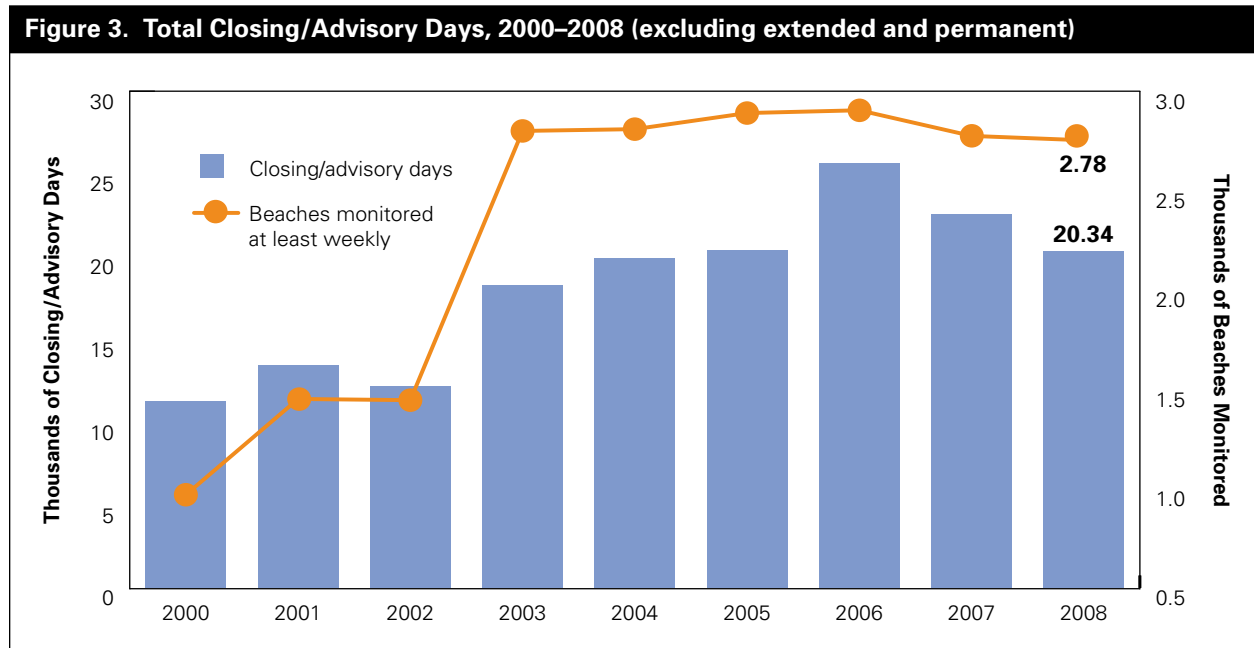


as rainfall levels, wind speed and direction, tides, wave heights, and currents. These models prepare rapid predictions of beach-water quality and allow for beaches to be closed or placed under advisory the day that bacterial levels are expected to be high, rather than 24 hours after high levels of bacteria are present. States using computer models to inform closing and advisory decisions for at least some of their beaches in 2008 were California, Illinois, Indiana, New York, Ohio, Pennsylvania, and Wisconsin. Other states, including Maryland, Rhode Island, Michigan, Oregon, and New Hampshire are gathering data necessary for and investigating the use of beachwater quality computer models for at least some of their beaches.

Because the water quality at many beaches is adversely impacted by stormwater runoff, another less sophisticated means of protecting public health is to preemptively close beaches or issue advisories when indicator bacteria levels are expected to be high after rainfall events. In 2008, nine states reported preemptive rainfall closures or advisories at specific beaches: California, Connecticut, Hawaii, Indiana, Massachusetts, New Jersey, New York, South Carolina, and Wisconsin. Many states report that they have developed standards for issuing preemptive rainfall advisories based on rainfall intensity or some other rain-related factor for at least some of their beaches. States with quantitative rainfall standards include California, Connecticut, Delaware, Florida, Hawaii, Maine, Massachusetts, Michigan, New Jersey, New York, Pennsylvania, Rhode Island, and South Carolina. Rainfall standards are under development in New Hampshire. Some states, including California, Minnesota, Mississippi, Rhode Island, and Washington, issue standing advisories warning the public to avoid beachwater contact after heavy rainfall or when storm drains are running. These standing advisories are not reported in the closing and advisory data that the states send the EPA. In North Carolina, standing rainfall advisories take the form of permanent signs posted on either side of storm drain outfalls stating that swimming between the signs is not recommended when there is water flowing through the drain.

## MAJOR FINDINGS

This section provides a national perspective on the major findings of NRDC’s *Testing the Waters* report regarding 2008 beachwater quality, closings and advisories, and the sources of pollution that caused them. For more information on state programs and specific beaches, see individual state summaries in Chapter 5.



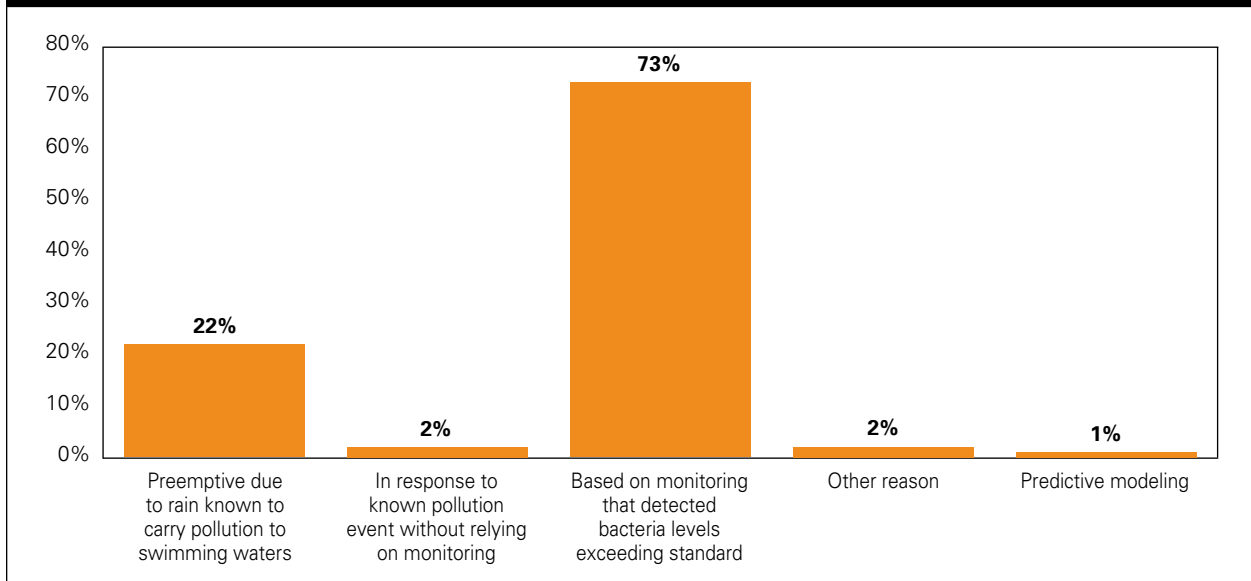
**Note:** Because of inconsistencies in monitoring and closing/advisory practices among states and the different levels of data submission over time, it is difficult to make comparisons between states or to assess trends based on the closing/advisory data.

### Beach Closings/Advisories and Pollution Sources

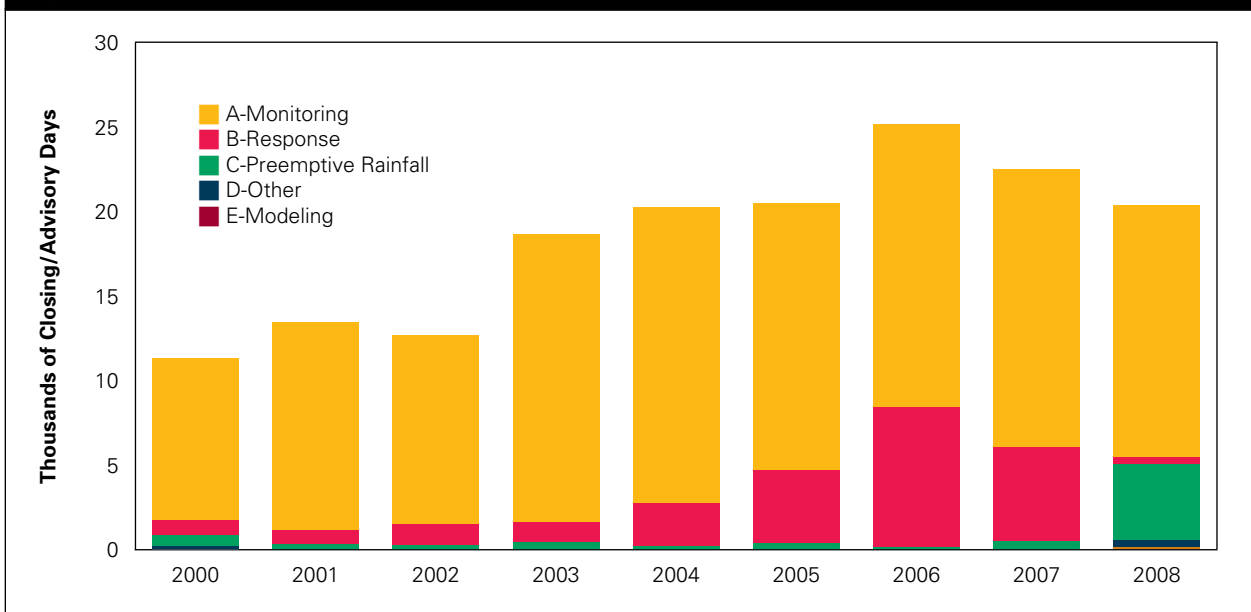
During 2008, U.S. ocean, bay, and Great Lakes beaches had 20,341 days of closings and advisories, 45 extended closings and advisories (7 to 13 consecutive weeks), and 59 permanent closings and advisories (more than 13 consecutive weeks). Including the days represented by extended closings and advisories, raises the total to 23,166 beach closing and advisory days.

The number of beach closing and advisory days decreased 10 percent (2,242 days) in 2008 from the previous year (see Figure 1). The major factors leading to the decrease in 2008 appear to be decreased rainfall in many areas of the country,

**Figure 4. Reported Reasons for Closings/Advisories in 2008**



**Figure 5. Reported Reasons for Closings/Advisories, 2000–2008**

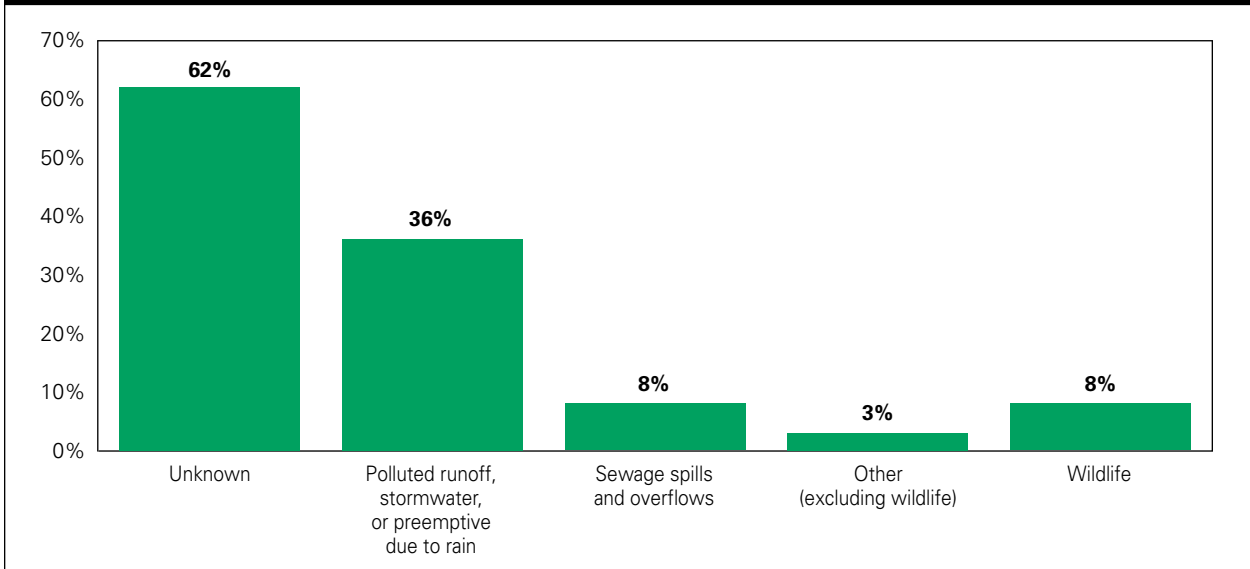


**Key:** (A) Based on monitoring that detected bacteria levels exceeding standards. (B) In response to known pollution event without relying on monitoring. (C) Preemptive due to rain known to carry pollution to swimming waters. (D) Other reason. (E) Real-time, predictive computer modeling.

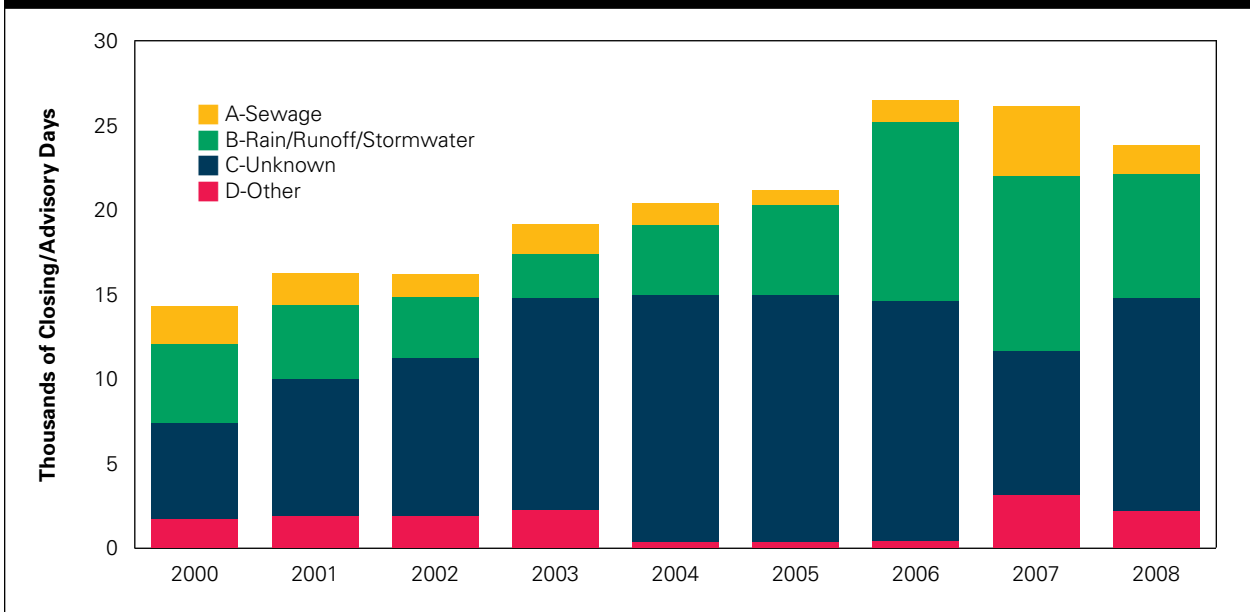
including the coastal areas of Hawaii, the southeast, Gulf of Mexico, and southern California. In addition, reductions in state funding led to decreased monitoring (and therefore monitoring-related beach advisories) in southern California. Nationwide, the number of beaches monitored at least once per week was 2,753 in 2008, down slightly from 2,775 in 2007.

The continued high number of closings/advisories is an indication that regular monitoring continues to reveal serious water pollution at our nation’s coastal, bay, and Great Lakes beaches. Figure 2 (page vii) shows that 14,889 (73 percent)

**Figure 6. Sources of Pollution That Caused Closings/Advisories, 2008**



**Figure 7. Sources of Pollution That Caused Closings/Advisories, 2000–2008**



**Note:** Total days shown are greater than annual totals because more than one pollution source may have contributed to each closing/advisory. **Key:** (A) Sewage spills and overflows. (B) Polluted runoff, stormwater, or preemptive due to rain. (C) Unknown. (D) Other reasons (including those with no source information provided)..

of the 2008 beach closings and advisories were issued because water quality monitoring revealed bacteria levels exceeding health and safety standards (up from 71 percent in 2007 and 68 percent in 2006).

Major reasons why officials closed beaches or issued advisories in 2008 were as follows. (see Figure 4):

- 73 percent (14,889) were based on monitoring that detected bacteria levels exceeding beachwater quality standards (an increase from 71 percent in 2007 and 68 percent in 2006);
- 22 percent (4,516) were precautionary, due to rainfall known to carry pollution to swimming waters (a decrease from 25 percent in 2007 and 33 percent in 2006, two relatively wet years);
- 2 percent (430) were in response to known pollution events, such as sewage treatment plant failures or breaks in sewage pipes. In other words, localities did not wait for monitoring results to decide whether to close beaches or issue advisories (down from 3 percent in both 2007 and 2006);
- 2 percent (395) were due to other causes, such as dredging and algal blooms (unchanged from 2007 levels); and
- 1 percent (111) were preemptive due to real-time computer modeling that use readily measurable physical parameters such as wind speed and wave heights to predict indicator bacterial levels. This is the first time NRDC is able to report this reason for beach closings and advisories.

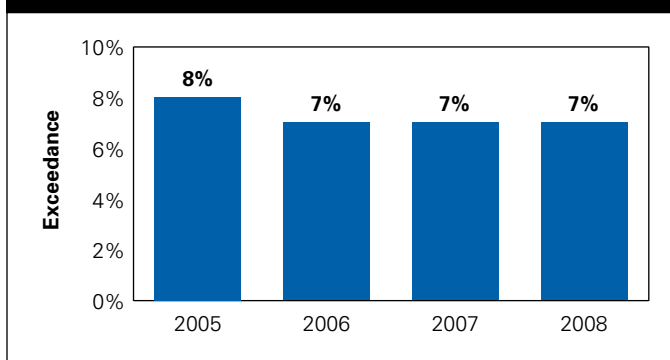
The major pollution sources listed as responsible for 2008 beach closings and advisories are highlighted below. The following total is greater than 20,341 days and 100 percent because more than one source contributed to some beach closings and advisories (see Figure 4):

- Unknown sources of pollution caused 12,631 closing/advisory days (62 percent of this year's total), compared to the 8,524 days in 2007 (33 percent of that year's total). Sewage or stormwater discharges usually cause elevated bacteria levels, but efforts to determine the causes of increased bacteria levels have not kept pace with new or more frequent monitoring practices.
- Polluted runoff and stormwater caused or contributed to 7,324 closing/advisory days (36 percent of this year's total), compared to 10,394 days in 2007 (40 percent of that year's total).
- Sewage spills and overflows caused or contributed to 1,710 closing/advisory days (8 percent of this year's total), compared to the 4,097 days in 2007 (16 percent of that year's total) (includes combined sewer overflows, sanitary sewer overflows, breaks or blockages in sewer lines, and faulty septic systems).
- Elevated bacteria levels from miscellaneous sources, such as boat discharges or wildlife, accounted for 2,137 closing/advisory days (11 percent of this year's total), compared to the 3,087 days in 2007 (12 percent of that year's total); in 2008, the vast majority (1,588 days) were attributed to wildlife sources.

### Beachwater Quality

For the fourth consecutive year, NRDC used the percentage of all beachwater samples collected in 2008 that exceeded the BEACH Act required daily maximum standards to compare water quality at beaches ringing our nation from the Pacific Northwest to Southern California, from New England to the Florida Keys, and all along the U.S. Great Lakes shoreline. For marine waters, the standard is 104 enterococcus colony-forming units per 100 milliliters (ml) and for the freshwater, the standard is 235 E. coli colony-forming units per 100 ml.

**Figure 8. Percent Exceedance for All Coastal and Great Lakes States Combined, 2005–2008 (based on 2,608 beaches reported in each of the four years)**



## Testing the Waters 2009

For the 2008 beach season, the NRDC dataset includes monitoring results for 132,465 samples, up from 131,977 in 2007, 106,417 in 2006, and 115,419 in 2005 at 3,601 beaches and beach segments (an increase from 3,516 in 2007, 3,500 in 2006, and 3,274 in 2005); most state and local officials divide longer beaches into manageable monitoring segments. The percent of all samples exceeding national health standards remained generally unchanged at 7 percent in 2006 through 2008 and 8 percent in 2005. (Note: to make this four-year comparison, NRDC includes only the 2,608 beaches reported in each of these four years.)

In 2008, beaches in Louisiana, Ohio, and Indiana were highest in percent of samples exceeding national standards. It is important to note that a poorly ranking state, while a clear indication of dirty coastal recreational waters, is not necessarily an indication of a bad actor. For example, four of the five worst-ranked states always close a beach or issue an advisory when a sample exceeds the standard; they do not wait for the results of a resample, or check other conditions first as some other states do. (Only a handful of states generally resample before issuing an advisory: Connecticut, New Jersey, and Washington.) Three of the four best-ranked states have among the highest percent of Tier 1 beaches that are monitored more frequently than once a week (Tier 1 beaches are popular and/or have known pollution sources in the vicinity of the beach).

**Table 1. Rank of States by Monitored Beachwater Quality in 2008 (Percent Beachwater Samples Exceeding the National Daily Standard)**

Rank	State	Percent Exceedance	Total Samples	All Reported Beaches	Tier 1 Beaches	Percent of Tier 1 Beaches Monitored More Than Once a Week	Resample or Other Info Needed Before Action
30	LA	29%	691	29	7	0%	sometimes*
29	OH	19%	2,429	45	6	100%	no
28	IN	18%	1,671	28	7	71%	no
27	IL	15%	4,140	67	48	96%	no
26	WI	14%	4,366	193	102	29%	no
25	RI	14%	2,842	234	20	70%	almost never
24	MS	14%	1,235	22	16	0%	no
23	PA	9%	1,534	12	9	89%	no
22	CA	8%	26,542	647	266	9%	no
21	NY	8%	8,667	365	86	9%	sometimes
20	AL	8%	964	97	9	89%	no
19	SC	8%	2,576	64	7	0%	sometimes
18	TX	6%	13,625	169	60	0%	no
17	MI	6%	5,008	922	201	3%	no
16	ME	6%	1,309	60	57	5%	sometimes
15	MA	6%	7,599	605	12	100%	no
14	MN	5%	1,177	89	18	44%	no
13	OR	5%	1,481	59	59	0%	almost never
12	CT	4%	1,933	66	54	0%	yes
11	WA	4%	2,767	746	118	0%	usually
10	NJ	3%	4,050	268	218	0%	yes
9	FL	3%	16,024	634	553	0%	sometimes
8	MD	2%	3,329	71	26	23%	sometimes
7	GA	2%	977	41	17	0%	no

Testing the Waters 2009

Rank	State	Percent Exceedance	Total Samples	All Reported Beaches	Tier 1 Beaches	Percent of Tier 1 Beaches Monitored More Than Once a Week	Resample or Other Info Needed Before Action
6	HI	2%	6,253	444	42	90%	no
5	NC	2%	6,162	240	111	0%	no
4	AK	2%	105	18	2	0%	sometimes
3	VA	1%	876	47	47	0%	no
2	NH	1%	1,603	16	7	100%	no
1	DE	1%	530	24	16	0%	no

\*No resamples were taken to confirm exceedances in 2008.

For the third consecutive year, NRDC highlighted beaches exceeding the national daily standard more than 25 percent of the time. In 2008, this list included 124 beaches in the following 20 states: Alabama, California, Florida, Illinois, Indiana, Louisiana, Massachusetts, Maine, Michigan, Minnesota, Mississippi, North Carolina, New Jersey, New York, Ohio, Oregon, Rhode Island, Texas, Virginia, and Wisconsin (see Table 2). Those violations are pretty good indications that the beachwater was contaminated with human or animal waste, and that beachgoers were either swimming in that waste or banned from doing so due to the health risks. Twenty-four beach areas in the following eight states made this list in each of the last four years (2005 through 2008): California, Florida, Illinois, New Jersey, Ohio, Texas, Virginia, and Wisconsin (see Table 3).

**Table 2. Beaches with More Than 25 Percent of Samples Exceeding Daily National Standards in 2008 (limited to beaches with at least 10 total samples reported for the year)**

State	County	Beach	Tier	Monitoring Frequency	2008 Total Samples	Percent Exceedance
FL	Dixie	Shired Island	1	1/wk	29	90%
MA	Essex	Kings At Stacy Brook	2	1/wk	25	72%
IN	Lake	Jeorse Park Beach I	2	5/wk	73	67%
MA	Barnstable	Cockle Cove Creek-Parking Lot	2	1/wk	13	62%
FL	Taylor	Dekle Beach	1	1/wk	21	62%
CA	Los Angeles	Avalon Beach-North of GP Pier	1	1/wk	42	62%
IL	Lake	North Point Marina North Beach	1	Daily	126	61%
FL	Franklin	Alligator Point	1	1/wk	48	56%
OH	Ashtabula	Lakeshore Park	2	4/wk	55	53%
IN	Lake	Jeorse Park Beach II	2	5/wk	75	53%
WI	Douglas	Wisconsin Point Beach 2	3	1/wk	25	52%
MI	Wayne	Crescent Sail Yacht Club	1	2/wk	31	52%
CA	Orange	Newport Bay-Vaugh's Launch	1	1/wk	10	50%
LA	Cameron	Hackberry Beach	no data	2/mo	26	50%
LA	Cameron	Holly Beach 5	3	2/mo	30	50%
LA	St Mary	Cypremort Point State Park	1	1/wk	30	50%
IN	Lake	Buffington Harbor Beach	2	5/wk	72	50%
CA	Orange	Doheny State Beach-Surfzone at Outfall	1	2/wk	59	49%
WI	Milwaukee	South Shore Beach	1	Daily	55	49%
CA	Orange	Doheny State Beach-250' S of San Juan Creek	1	2/wk	40	48%

Testing the Waters 2009

State	County	Beach	Tier	Monitoring Frequency	2008 Total Samples	Percent Exceedance
OH	Cuyahoga	Euclid State Park	1	Daily	109	47%
CA	Los Angeles	Cabrillo Beach	1	Daily	203	46%
LA	Cameron	Little Florida	no data	2/mo	29	45%
LA	Cameron	Holly Beach 6	3	2/mo	31	45%
LA	Cameron	Long Beach	no data	2/mo	31	45%
OH	Cuyahoga	Villa Angela State Park	1	Daily	109	45%
MA	Norfolk	Rhoda	2	1/wk	18	44%
LA	Cameron	Holly Beach 4	3	2/mo	32	44%
WI	Manitowoc	Fischer Park Beaches	3	1/wk	36	44%
LA	Cameron	Holly Beach 3	3	2/mo	30	43%
FL	Franklin	Carrabelle Beach	1	1/wk	47	43%
FL	Wakulla	Shell Point Beach	1	1/wk	47	43%
CA	Los Angeles	Malibu Beach-Paradise Cove	1	1/wk	57	42%
ME	Knox	Laite Beach	1	1/wk	19	42%
NY	Niagara	Krull Park	2	1/wk	24	42%
LA	Cameron	Constance Beach	no data	2/mo	31	42%
CA	Orange	Doheny State Beach-North Beach	1	2/wk	41	41%
FL	Taylor	Keaton Beach	1	1/wk	22	41%
LA	Cameron	Gulf Breeze	no data	2/mo	32	41%
WI	Manitowoc	Neshotah Beach	2	2/wk	39	41%
OH	Erie	Bay View West	3	3/wk	41	41%
NY	Suffolk	Tanner Park	1	1/wk	44	41%
CA	Orange	Doheny State Beach-North of San Juan Creek	1	2/wk	57	40%
FL	Taylor	Hagen's Cove	1	1/wk	20	40%
MA	Essex	Kings At Kimball	2	1/wk	25	40%
WI	Kenosha	Eichelman Beach	2	2/wk	43	40%
MS	Harrison	Gulfport Central Beach	1	1/wk	84	40%
CA	San Diego	Tijuana Slough National Wildlife Refuge-Tijuana Rivermouth	1	1/wk	47	38%
MA	Essex	Kings (DCR-DUPR)	2	1/wk	16	38%
NJ	Ocean	Beachwood Beach West (Beachwood)	1	1/wk	29	38%
CA	Sonoma	Campbell Cove State Beach	1	1/wk	43	37%
NY	Wayne	Pultneyville Mariners Beach	3	1/wk	19	37%
MI	Wayne	Pier Park	1	2/wk	35	37%
RI	Washington	Saunderstown Yacht Club	2	4/yr	38	37%
FL	Wakulla	Mash Island	1	1/wk	46	37%
CA	Orange	Poche County Beach	1	2/wk	58	36%
WI	Manitowoc	Red Arrow Park Beach Manitowoc	2	2/wk	36	36%
WI	Kenosha	Alford Park Beach	3	1/wk	23	35%
WI	Kenosha	Pennoyer Park Beach	3	1/wk	23	35%

Testing the Waters 2009

State	County	Beach	Tier	Monitoring Frequency	2008 Total Samples	Percent Exceedance
WI	Manitowoc	Memorial Drive Wayside Beach South	2	2/wk	34	35%
RI	Newport	Atlantic Beach Club	1	3/wk	108	35%
LA	Cameron	Martin Beach	no data	2/mo	32	34%
WI	Ozaukee	Harrington State Park Beach North	1	4/wk	65	34%
NY	Erie	Woodlawn Beach-Woodlawn Beach State Park	1	1/wk	88	34%
OH	Cuyahoga	Edgewater State Park	1	Daily	108	34%
WI	Sheboygan	Kohler Andrae State Park North Picnic Beach	1	4/wk	54	33%
IL	Cook	Winnetka Elder Park Beach	1	Daily	67	33%
CA	Orange	Riveria Beach	no data	2/wk	61	33%
CA	San Francisco	Candlestick Point-Windsurfer Circle	1	1/wk	78	32%
WI	Manitowoc	Hika Park Bay	3	1/wk	22	32%
NJ	Ocean	Maxon (Pt Pleasant)	1	1/wk	25	32%
VA	King George	Fairview Beach	1	1/wk	25	32%
AL	Baldwin	Mary Ann Nelson Beach	3	2/mo	28	32%
NY	Chautauqua	Sunset Bay Beach Club	3	1/wk	28	32%
LA	Cameron	Holly Beach 2	3	2/mo	31	32%
LA	Cameron	Holly Beach 1	3	2/mo	31	32%
ME	Waldo	Ducktrap River	1	2/wk	31	32%
NY	Chautauqua	Lake Erie State Park Beach	1	2/wk	41	32%
WI	Ozaukee	County Road D Boat Launch Beach	1	4/wk	62	32%
WI	Ozaukee	Harrington State Park Beach South	1	4/wk	63	32%
IL	Cook	Evanstonsouth Beach	1	Daily	151	32%
RI	Newport	Easton's Beach	1	2/wk	290	32%
CA	Orange	Capistrano Beach	1	2/wk	58	31%
NJ	Ocean	River (Pt Pleasant)	1	1/wk	26	31%
LA	Cameron	Rutherford Beach	no data	2/mo	29	31%
OH	Lorain	Lakeview Beach	2	4/wk	55	31%
IL	Cook	Northwestern University Beach	1	5/wk	58	31%
MN	St Louis	Park Point Southworth Marsh Beach	1	2/wk	61	31%
WI	Ozaukee	Cedar Beach Rd Beach	1	4/wk	64	31%
CA	San Francisco	Candlestick Point-Sunnydale Cove	1	1/wk	75	31%
CA	Orange	Doheny State Beach-3000' South Outfall	1	2/wk	59	31%
CA	Los Angeles	Avalon Beach-South of Gp Pier	1	1/wk	33	30%
MI	Arenac	Singing Bridge Beach	1	1/wk	10	30%
WI	Manitowoc	Memorial Drive Wayside Beach North	2	2/wk	37	30%
OH	Erie	Edison Creek	3	3/wk	40	30%
RI	Washington	Camp Grosvenor	1	3/wk	43	30%
FL	Escambia	Bayou Chico	1	1/wk	53	30%
OH	Lorain	Century Beach	2	4/wk	96	30%

Testing the Waters 2009

State	County	Beach	Tier	Monitoring Frequency	2008 Total Samples	Percent Exceedance
MI	Macomb	St. Clair Shores Memorial Park Beach	1	2/wk	144	30%
TX	Nueces	Ropes Park	1	1/wk	210	30%
NY	Monroe	Ontario Beach	1	2/wk	246	30%
CA	Los Angeles	Santa Monica State Beach-Santa Monica Canyon	1	1/wk	236	30%
CA	Los Angeles	Avalon Beach-Bet. BBC and TC	1	1/wk	34	29%
MA	Barnstable	Town Landing - Snail Road	2	1/wk	17	29%
WI	Kenosha	Southport Park Beach	3	1/wk	21	29%
NY	Suffolk	Minasseroke Beach	1	2/wk	34	29%
NY	Erie	Evans Town Park	2	2/wk	38	29%
WI	Milwaukee	Mckinley Beach	1	Daily	45	29%
MA	Barnstable	593 Commercial Street	2	1/wk	18	28%
MA	Barnstable	Kendal Lane	2	1/wk	18	28%
NC	Currituck	Park On Woodhouse Dr. Grandy, NC	3	2/mo	18	28%
OH	Ottawa	Camp Perry	2	4/wk	53	28%
RI	Newport	Marine Avenue Beach	3	1/wk	53	28%
RI	Washington	Scarborough State Beach North	1	2/wk	209	28%
CA	Orange	Newport Bay-Newport Blvd Bridge	1	1/wk	40	28%
FL	Taylor	Cedar Island	1	1/wk	22	27%
NJ	Ocean	Money Island (Dover)	1	1/wk	26	27%
NJ	Ocean	Windward Beach (Brick)	1	1/wk	26	27%
OH	Erie	Huron River West	3	3/wk	41	27%
AL	Mobile	Dog River, Alba Club	2	1/wk	39	26%
NY	Erie	Lake Erie Beach	1	2/wk	39	26%
OR	Curry	Harris Beach State Park	1	1/wk	97	26%
IL	Lake	Waukegan South Beach	1	Daily	102	26%

**Table 3. Repeat Offenders: Beaches with More Than 25 Percent of Samples Exceeding Daily National Standards Each Year, 2005–2008 (alphabetical by state, county, and beach)**

State	County	Beach	Tier	Monitoring Frequency	Potential pollution sources (reported by EPA)
CA	Los Angeles	Avalon Beach-near Busy B Cafe	1	1/wk	Unknown
CA	Los Angeles	Avalon Beach-north of GP Pier	1	1/wk	Unknown
CA	Los Angeles	Avalon Beach-south of GP Pier	1	1/wk	Unknown
CA	Los Angeles	Cabrillo Beach	1	Daily	Unknown
CA	Los Angeles	Santa Monica State Beach-Santa Monica Canyon	1	1/wk	Unknown
CA	Orange	Doheny State Beach-250' S of San Juan Creek	1	2/wk	Unknown
CA	Orange	Doheny State Beach-3000' South Outfall	1	2/wk	Unknown

## Testing the Waters 2009

State	County	Beach	Tier	Monitoring Frequency	Potential pollution sources (reported by EPA)
CA	Orange	Doheny State Beach-North of San Juan Creek	1	2/wk	Unknown
CA	Orange	Doheny State Beach-Surfzone at Outfall	1	2/wk	Unknown
CA	Orange	Newport Bay-Newport Blvd Bridge	1	1/wk	Unknown
CA	Orange	Newport Bay-Ski Zone	1	1/wk	Unknown
FL	Dixie	Shired Island	1	1/wk	Unknown
FL	Taylor	Cedar Island	1	1/wk	Boats, Runoff, Wildlife, Stormwater, Septic systems, Other, Unknown
FL	Taylor	Dekle Beach	1	1/wk	Boats, Runoff, Wildlife, Stormwater, Septic systems, Other, Unknown
FL	Taylor	Keaton Beach	1	1/wk	Boats, Runoff, Wildlife, Stormwater, Other, Unknown
IL	Lake	North Point Marina North Beach	1	Daily	Unknown
NJ	Ocean	Beachwood Beach West	1	1/wk	None Listed
OH	Cuyahoga	Villa Angela St. Pk.	1	Daily	None Listed
OH	Ottawa	Camp Perry	2	4/wk	None Listed
TX	Nueces	Ropes Park	1	1/wk	None Listed
VA	King George	Fairview Beach	1	1/wk	Unknown
WI	Kenosha	Eichelman	2	2/wk	Unknown
WI	Milwaukee	South Shore	1	Daily	Unknown
WI	Sheboygan	Kohler Andrae North Picnic	1	4/wk	Unknown

### Notes

1 NRDC report closing/advisory days for events lasting six consecutive weeks or less. Extended events (7 to 13 consecutive weeks) and permanent events (greater than 13 consecutive weeks) are reported separately.

2 Jody Connor, New Hampshire, personal communication, June 2009.

3 Doug Range, Erie County Department of Health, personal communication, June 2009.