



EPA's BEACH Report: 2007 Swimming Season

May 2008

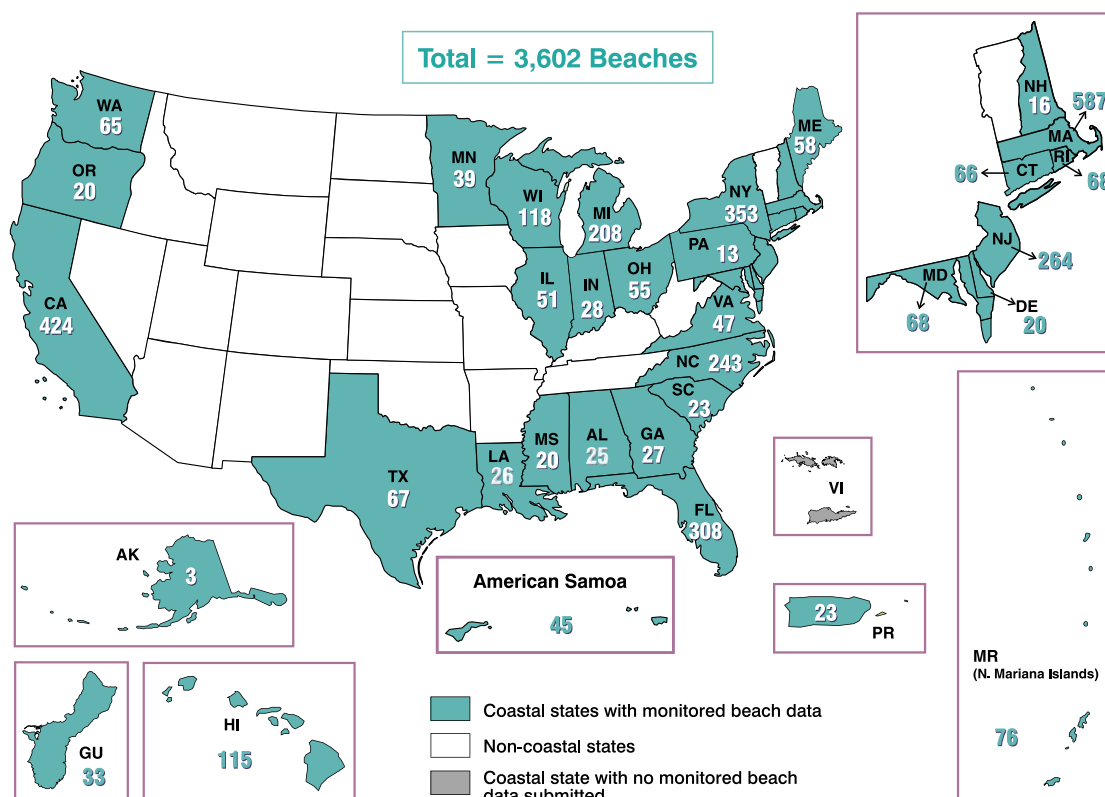
EPA 823-F-08-006

Introduction

To further its commitment to reducing the risk of exposure to disease-causing bacteria at recreational beaches, EPA is posting its latest data about beach closings and advisories for the 2007 swimming season. Congress passed the BEACH Act of 2000 (BEACH Act), requiring that coastal and Great Lakes states and territories report to EPA on beach monitoring and notification data for their coastal recreation waters. To help protect the public, the BEACH Act also requires EPA to maintain an electronic monitoring and notification database of that data.

The BEACH Act defines coastal recreation waters as the Great Lakes and coastal waters (including coastal estuaries) that states, territories, and authorized tribes officially recognize or designate for swimming, bathing, surfing, or similar activities in the water.

Figure 1. Coastal states with 2007 monitored beach data.



Results

When monitoring of water at swimming beaches shows that levels of certain indicator bacteria exceed standards, states or local agencies notify the public of potential health risks. These beach notification actions are usually either a beach advisory, warning people of possible risks of swimming, or closing a beach for public swimming. The data reported in this section consist primarily of actions issued as a result of local monitoring and localized precautionary advisories. Certain preemptive advisories that apply to large areas are not included in this presentation.

How many beaches had notification actions?

For the 2007 swimming season, all thirty coastal states and four of five territories reported notification actions to EPA. In 2007, of the 3,602 coastal beaches that were monitored, 1,167 (32 percent) had at least one advisory or closing during the 2007 season (Figure 2). This is the same percentage as reported in the 2006 swimming season.

How many notification actions were reported and how long were they?

Most (94 percent) beach notification actions reported during the 2007 swimming season were a week or less (Figure 3). Of the 6,274 notification actions reported, 50 percent (3,146 actions) were only one or two days long. This represents an improvement over 2006 when only 47 percent of the actions were just one or two days long.

What percentage of days were beaches under a notification action?

EPA calculates beach-days to get a better sense of the extent of beach notification action information. We do this by adding up the number of days all beaches are open (based on the length of the local beach season) and multiplying by the number of beaches. For 2007, EPA determined there were a total of 663,164 beach-days associated with the swimming seasons of 3,602 monitored beaches. Notification actions were reported on 31,031 days (Figure 4), meaning that beaches were under an advisory or closed about 5 percent of the time, similar to the previous two years.

Figure 2: No. of beaches with notification actions from 2005 to 2007.

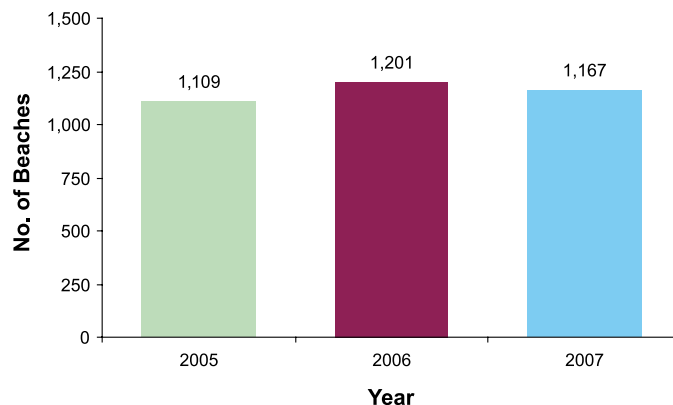


Figure 3: Duration of beach notification actions from 2005 to 2007.

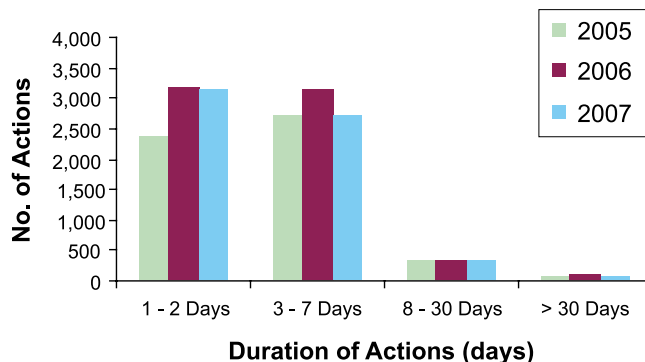
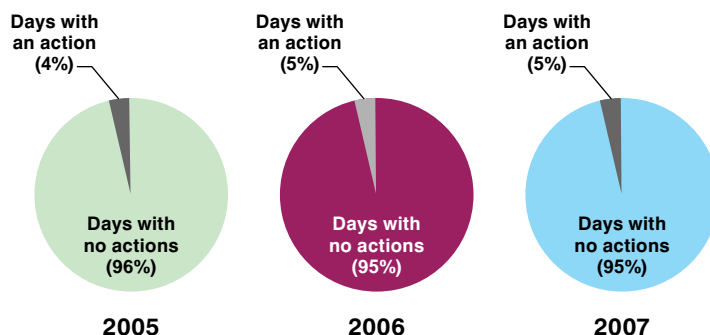


Figure 4: Percentage of beach days under notification actions from 2005 to 2007.



State Reporting Data

Data trends over the longer term are difficult to establish due to the new reporting requirements that began in 2003. The data from 2003 to 2007 cannot easily be compared to data gathered from 1997 to 2002. From 1997-2002 beach monitoring data was collected and submitted to EPA on a voluntary basis and included coastal, Great Lakes, and some inland waters. Beginning with the 2003 season, states are required to submit data to EPA under the BEACH Act for beaches which are in coastal and Great Lakes waters (Table 1). EPA is working to complete the data sets.

Table 1. Data collected on beaches, advisories, and closings.

	Voluntary Survey						Required Reporting				
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Number of monitored beaches	1,021	1,403	1,891	2,354	2,445	2,823	1,857*	3,574**	4,067	3,771	3,602***
Number of beaches affected by advisories or closings	230	353	459	633	672	709	395*	942**	1,109	1,201	1,167***
Percentage of beaches affected by advisories or closings	23	25	24	27	27	25	21*	26**	27	32	32***
Percentage of beach days affected by advisories or closings	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4%**	4%	5%	5%***

*Incomplete data from 11 states.

**Incomplete data from 4 territories.

***Incomplete data from the U.S. Virgin Islands.

Uniform Water Quality Standards

The BEACH Act of 2000 required coastal states and states bordering the Great Lakes to adopt EPA's most current recommended bacteria criteria to better protect beach bathers from harmful pathogens. On November 8, 2004, EPA finalized more protective bacteria standards for *E. coli* and enterococci for coastal and Great Lakes recreational waters for those states that had not yet complied with the BEACH Act of 2000. Twenty-one states and territories were affected by this rule; the other 14 had standards in place that were as protective of human health as EPA's most current bacteria criteria.

Funding to State Programs

For the past eight years, EPA has made available nearly \$71 million in grants to 35 coastal and Great Lakes states and territories. The funds are designed to help improve water monitoring and public information programs to alert beachgoers about the health of their beaches.

Beach water monitoring helps to ensure that the public receives information on how to protect their health when visiting beaches; results are used to issue warnings and closures if bacteria levels are at unsafe levels and to help identify actions needed to reduce pollution.

Great Lakes Beach Sanitary Survey Tool

The Great Lakes Beach Sanitary Survey Tool is now available. The Tool helps beach managers in the Great Lakes identify sources of bacterial contamination at their beaches so that these sources can be corrected or cleaned up, and so that beach closing days can be reduced or eliminated. EPA developed a draft Beach Sanitary Survey Tool in 2006, and in the summer of 2007, the Beach Sanitary Survey Tool was tested at 61 beaches in the Great Lakes. The state and local governments testing the tool provided comments to EPA, who incorporated comments from the field testing into the Tool. Although the Beach Sanitary Survey Tool was developed for the Great Lakes, the concept is applicable in any beach environment (marine water, inland water).

The Great Lakes Beach Sanitary Survey Tool includes two types of beach sanitary surveys—the Routine On-site Sanitary Survey and the Annual Sanitary Survey—to assist with short- and long-term beach assessments, respectively. The Routine On-site Sanitary Survey is performed at the same time that water quality samples are taken, and documents the methods used to collect data during the Routine On-site Sanitary Survey. The Annual Sanitary Survey records information about factors in the surrounding watershed that might affect water quality at the beach. Both surveys include forms to help document the information collected during the survey, and thus create for the first time a consistent and comparable data structure to diagnose the sources of fecal contamination that can impair public health protection at beaches.

You can find the Tool on EPA's web site, at www.epa.gov/waterscience/beaches/sanitarysurvey/.

EPA's Efforts to Develop New or Revised Water Quality Criteria for Recreational Waters

EPA is continuing its work to develop new or revised water quality criteria for recreational waters. In August 2007, EPA published the Critical Path Science Plan that describes the high priority research and science that EPA intends to conduct between 2007 and the end of 2010 to establish the scientific foundation for the development of new or revised recreational water quality criteria recommendations. The CPSP also describes studies for which EPA is providing financial and/or technical support. The specific near-term critical research and science needs described in the Science Plan were informed by the individual input of the 43 international and U.S. experts who attended a scientific workshop held by EPA in March 2007 at the Airlie Center in Warrenton, Virginia. The Report of the Experts Scientific Workshop on Critical Research Needs for the Development of New or Revised Recreational Water Quality Criteria is available online at www.epa.gov/waterscience.

Planned Improvements

EPA continues to improve monitoring and notification for the Beach Program. EPA is compiling improved monitoring practices and examining the use of rapid test methods in epidemiology studies to determine how these methods could be best integrated into the Program.

For More Information

For general information about beaches visit:

<http://www.epa.gov/beaches/>

For information about a specific beach:

<http://www.epa.gov/waterscience/beacon/>