NJDEP Water Monitoring & Standards
Marine Water Monitoring
Beach Monitoring

Background

NJ's beach monitoring is performed under the Cooperative Coastal Monitoring Program (CCMP), which has been administered by the New Jersey Department of Environmental Protection (NJDEP), with the participation of local environmental health agencies, since 1974. This beach monitoring program assesses nearshore coastal water quality and investigates sources of water pollution that enable local health agencies to respond to immediate public health concerns arising from contamination in coastal recreational areas. Under the CCMP, local health agencies monitor concentrations of enterococci bacteria in coastal waters. These bacteria are indicators of fecal contamination from various point and nonpoint sources.

Ten local health agencies participate in the CCMP: the county health departments of Atlantic, Cape May, Monmouth, Middlesex and Ocean Counties; and the municipal health agencies of Atlantic City, Long Beach Township, Long Branch, Middletown and the Monmouth County Regional Health Commission. The local health agencies collect samples each week and perform water analyses for enterococci bacteria concentrations at 188 ocean and 137 bay monitoring stations.

The NJDEP's Water Monitoring & Standards' Bureau of Marine Water Monitoring performs aerial surveillance of nearshore coastal waters six days each week during the summer beach season. This surveillance enables the routine evaluation of coastal water quality and the assessment of the nature and extent of public reports of ocean pollution.

The Bureau of Marine Water Monitoring, as part of the NY-NJ Harbor Estuary Program Floatables Action Plan, coordinates flight activities with the United States Army Corps of Engineers' efforts to capture floating solid waste and debris, also known as floatables, with water-skimming vessels. Sources of floatables that have affected the state's coastal shores include stormwater outfalls, combined sewer overflows, operational landfills, and illegal dump sites. NJDEP surveillance flights continue to record a decrease in the quantity of floatables in the coastal waterways compared to the years prior to 1990. The activities of the United States Army Corps of Engineers and the NJDEP's Clean Shores Program have contributed to this decrease.

Status & Trends

The accompanying charts show the numbers of beach closings from 1992 – 2006. Recreational beach water quality monitoring is performed routinely at 188 ocean and 137 bay monitoring stations. Note that in recent years, the total number of beaches closed has included a relatively large portion closed for precautionary reasons after the implementation of a rainfall policy for beaches affected by the Wreck Pond outfall in Spring Lake and Sea Girt. Closings include those required for consecutive high fecal coliform or enterococci concentrations and by health agency discretion due to public health concerns. Detailed beach closing information, including the specific beaches closed and reasons for the closings, can be found on the NJDEP beach web page (www.njbeaches.org). The large majority of the closings in the above-listed years were related to the presence of contaminated stormwater. Stormwater is frequently contaminated by pet waste or droppings of wild animals, such as geese. In 1990, floatable debris was responsible for a total of 10 separate beach closings. In the following 12 years, no closings had been due to floatables; however, in 2003, 13 separate closings were due to reported washups of trash and medical waste. Closings related to rough seas, beach maintenance projects, shark sitings, and fish and clam washups are not included in this information, nor are closings that are briefly in effect during the assessment of water conditions by local officials. Only those beach closings ordered by local health officials are included here.

For further information please contact:
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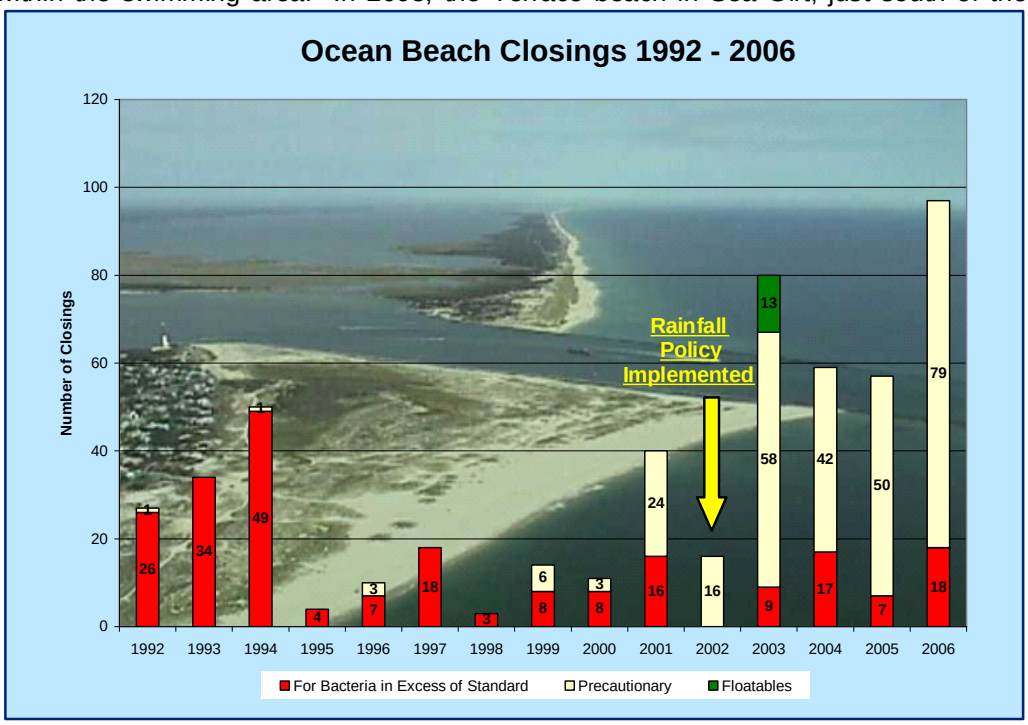
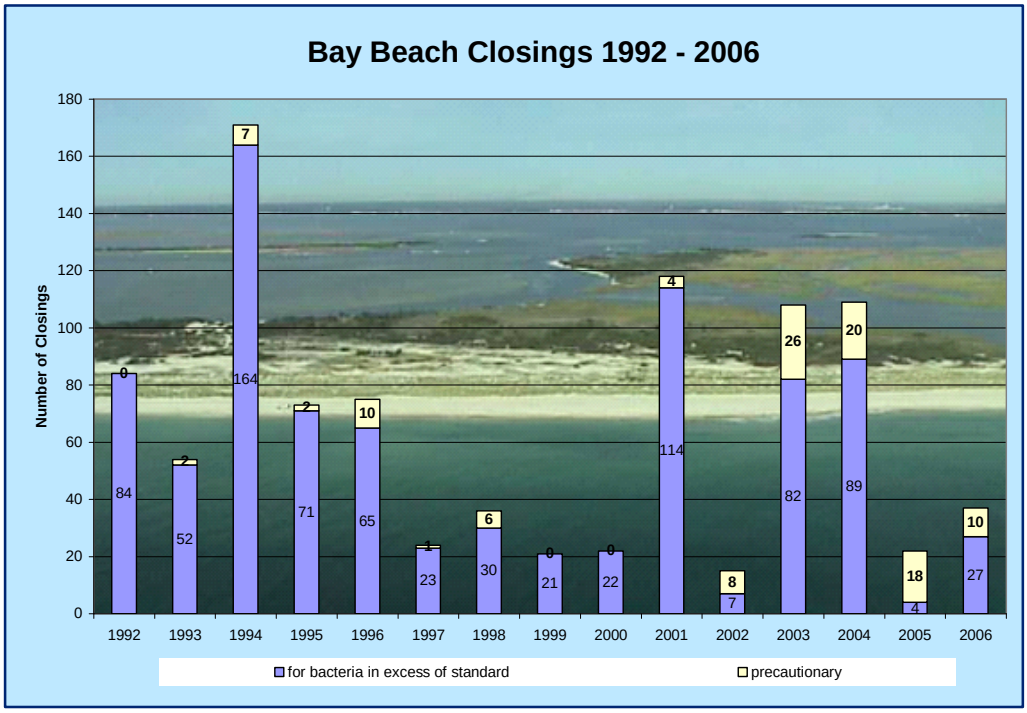
Beach Monitoring

Outlook & Implications

The majority of New Jersey's beaches have never experienced a closure. However, when ocean and bay beach closings do occur they are directly related to rainfall and contaminated stormwater being released to the environment through storm drains near ocean and bay bathing beaches. Ocean beach closings in the late 1980s were as high as 803, however; improvements and upgrades to coastal sewage treatment plants and tighter controls on waste handling, including procedures mandated by New Jersey's 1989 Comprehensive Regulated Medical Waste Management Act, have substantially reduced these problems. As the first chart shows, ocean beach closings due to bacteria exceeding the standard have remained relatively stable since the mid-1990s. There are two other types of ocean beach closings used by NJ: precautionary and floatables. Although there were a few precautionary ocean beach closings during the 1990's, these types of closings increased in 2002, when a precautionary beach closing plan was implemented in Spring Lake.

One area of the state that has experienced closures is in Monmouth County. The ocean beaches of Spring Lake are particularly affected by rainfall's impact on the Wreck Pond discharge. The volume of flow through the Wreck Pond watershed causes significant flows to the ocean and, with those flows, a large amount of bacteria-laden sediment. The precautionary plan requires that the two beaches north of the Wreck Pond outfall, Brown Avenue and York Avenue, close for a specified time period following a rain event. In addition, lifeguards (or staff as designated by Spring Lake) will prohibit swimming near any parts of these beaches where the stormwater plume is observed to be mixing within the swimming area. In 2005, the Terrace beach in Sea Girt, just south of the Wreck Pond outfall, was added to the precautionary beach closing plan.

Sources of pollution to the pond include stormwater discharges directly to Wreck pond, a large migratory and non-migratory bird population, pet waste and lawn fertilization - all of which contribute to the eutrophication of the pond and to the elevated levels of fecal coliform bacteria discharged to the ocean during rain events. Analyzed sediment from the pond has been found to contain high concentrations of fecal coliform bacteria. NJDEP's Water Monitoring and Standards program and the Division of Watershed Management are currently working with local stakeholders to address the elevated bacteria levels in the pond. In early 2006, NJDEP completed a 300 foot extension of the Wreck Pond outfall into the ocean.

In other parts of the state, bay beach closings are directly related to the presence of contaminated stormwater following rain. Bay beach closings may also be either related to bacteria in excess of the standard or precautionary. As the second chart details, bay beach closings have fluctuated from year to year, since the early 1990's, depending upon the amount of rainfall received during the summer season.

New stormwater rules now in place in New Jersey are expected to reduce the impacts of stormwater on coastal regions as well as elsewhere in the state. Two sets of new stormwater rules were adopted in February 2004. The first set of rules is intended to address and reduce pollutants associated with existing stormwater runoff. The second set of regulations sets forth the required components of regional and municipal stormwater management plans, and established the stormwater management design and performance standards for new development.