

## NEW HAMPSHIRE 1st in Beachwater Quality

1% of samples exceeded national standards in 2010

Polluted urban and suburban runoff is a major threat to water quality at the nation’s coastal beaches. Runoff from storms and irrigation carries pollution from parking lots, yards, and streets directly to waterways. In some parts of the country, stormwater routinely causes overflows from sewage systems. Innovative solutions known as green infrastructure enable communities to naturally absorb or use runoff before it causes problems. The U.S. Environmental Protection Agency is modernizing its national rules for sources of runoff pollution and should develop strong, green infrastructure-based requirements.

New Hampshire has 16 public coastal and estuarine beaches lining 18 miles of Atlantic waters. The state’s beachwater quality monitoring program is administered by the New Hampshire Department of Environmental Services (DES).

This summer, the second phase of a coastal bacteria source identification project being conducted by DES and a local environmental firm is scheduled for completion.

This phase of the project will identify potential bacteria sources and mitigation processes that will inform the development of watershed-based plans for North Hampton State Beach watershed and Wallis Sands at Wallis Road Beach watershed. Water quality at the

northeast portion of North Hampton State beach is impacted by the Little River, while Parson’s Creek has the potential to impact the southern portion of the public beach area at Wallis Sands at Wallis Road Beach. The source identification report, when complete, will be made available to the public and to municipal officials as they develop watershed-based plans for these beaches. These plans will promote the use of green infrastructure, a stormwater management practice that prevents bacterial contamination of beachwater by capturing runoff and allowing it to infiltrate into the soil.<sup>1</sup> A source identification project is also being conducted in the North Hampton State Beach watershed to identify sources of enterococcus in the river.<sup>2</sup>

### KEY FINDINGS IN NEW HAMPSHIRE

#### Beachwater Contamination

(% of samples exceeding state standards in 2010)

- Foss Beach (5%) in Rockingham County
- State Beach (4%) in Rockingham County
- New Castle Town Beach (3%) in Rockingham County

#### Reported Sources of Beachwater Contamination

Statewide (number of closing/advisory days)

- 15 (94%) unknown sources
- 1 (6%) sewage sources

### Monitoring Results

In 2010, New Hampshire reported 17 coastal beaches in Rockingham County. Of these, 10 (59%) were monitored more than once a week, 6 (35%) once a week, and 1 (6%) every other week. For this section of the report, NRDC looked at the percent of monitoring samples that exceeded the state’s daily maximum bacterial standards (all reported samples were used to calculate the 2010 percent exceedance rates, including duplicate samples and samples taken outside the official beach season, if any). In 2010, 1% of all reported beach monitoring samples exceeded the state’s daily maximum bacterial standards. The beaches with the highest percent exceedance rates in 2010 were Foss Beach (5%), State Beach (4%), New Castle Town Beach (3%), and Wallis Sands Beach at Wallis Road (1%), all in Rockingham County.

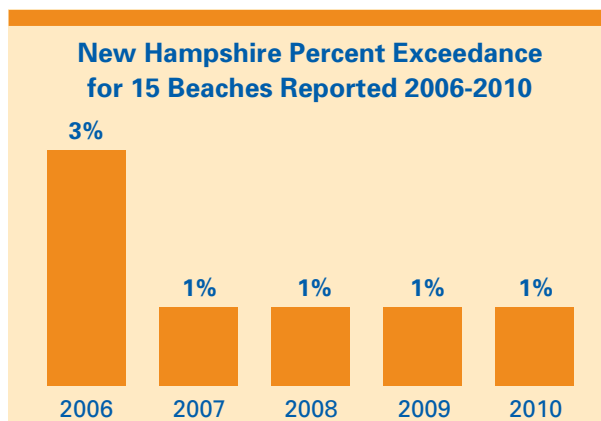
**Sampling Practices:** In 2010, the monitoring season ran from June 1 to September 1. The program continued to partner with a local Surfrider Foundation chapter that sampled three times in March and April at North Hampton State Beach<sup>2</sup> and North Beach<sup>3</sup> in North Hampton, and at Sawyer Beach,<sup>4</sup> Jenness Beach at Cable Road,<sup>5</sup> and Jenness Beach State Park in Rye.<sup>6</sup> Star Island, a conference center, cannot be sampled without a boat and was not sampled in 2010.<sup>1</sup>

DES determines sampling and notification practices, locations, standards, and protocols at all of its public coastal beaches. Samples are taken in knee-deep water. Sampling frequencies at beaches in New Hampshire are based on beach history, microbial pathogen sources, and beach use. The number of samples collected at each beach is determined by beach length, with two samples taken at beaches less than 100 feet in length and three samples taken at longer beaches.<sup>2</sup>

When a sample exceeds water quality standards, DES samples daily until standards are met. Samples may also be collected at known and suspected discharge sources at New Hampshire's beaches, and extra wet-weather sampling may be conducted at beaches when stormwater runoff is expected to impact beach water quality.<sup>2</sup> States that monitor more frequently after an exceedance is found or after rainfall events will tend to have higher percent exceedance rates and lower total closing/advisory days than they would if their sampling frequency did not increase after an exceedance was found.

## Advisories

Total closing/advisory days for 6 events lasting six consecutive weeks or less increased 33% to 16 days in 2010, from 12 days in 2009. For prior years, there were 13 days in 2008, 2 days in 2007, 23 days in 2006, and 1 day in 2005. There were no extended or permanent events in 2010. Extended events are those in effect more than six weeks but not more than 13 consecutive weeks; permanent events are in effect for more than 13 consecutive weeks. For the 6 events lasting six consecutive weeks or less, 94% (15) of closing/advisory days were due to monitoring that revealed elevated bacteria levels, and 6% (1) were preemptive (i.e., ordered without waiting for monitoring results) due to known sewage spills.



**Standards and Procedures:** New Hampshire's policy is to issue advisories and not closings at its beaches, but towns can issue closings at beaches within their jurisdiction. New Hampshire applies an enterococcus single-sample maximum of 104 cfu/100 ml. If two or more samples collected at a beach exceed the standard, or if one sample exceeds 174 cfu/100 ml, a beach advisory is issued.<sup>2</sup> There is no protocol for foregoing or delaying an advisory when these conditions are met. The state standard for the geometric mean of at least three samples collected over a 60-day period is 35 cfu/100 ml,<sup>7</sup> but the geometric mean standard is not used to issue beach advisories.

The potential for issuing preemptive rain advisories at beaches in Rye and North Hampton is currently being studied, but to date preemptive rain advisories have not been issued at beaches in New Hampshire.

A preemptive advisory would be issued if a public beach area was threatened by a suspected sewage spill or leak. The public is encouraged to report if illness occurs after recreating at New Hampshire's public beaches and illness complaints could potentially initiate further investigation of beachwater quality.<sup>1</sup>

New Hampshire 2010 Monitoring Results and Closing or Advisory Days					
Beach	Tier	Assigned Monitoring Frequency	Total Samples	% of Samples Exceeding State Standards	Closing or Advisory Days
<b>Rockingham County</b>					
Bass Beach	1	2/wk	76	0%	0
Foss Beach	2	1/wk	41	5%	4
Hampton Beach State Park	1	2/wk	150	0%	0
Hampton Harbor Beach	2	1/wk	31	0%	0
Jenness Beach at Cable Road	1	2/wk	82	0%	1

Beach	Tier	Assigned Monitoring Frequency	Total Samples	% of Samples Exceeding State Standards	Closing or Advisory Days
<b>Rockingham County</b>					
Jenness Beach State Park	1	2/wk	86	0%	0
New Castle Town Beach	1	2/wk	91	3%	5
North Beach	2	1/wk	68	0%	0
Northside Park	2	1/wk	36	0%	0
Sawyer Beach	1	2/wk	76	0%	0
Seabrook Harbor Beach	1	2/wk	72	0%	0
Seabrook Town Beach	1	2/wk	72	0%	0
Star Island Beach	3	2/mo	0	NA	0
State Beach	1	2/wk	89	4%	4
Sun Valley Beach	2	1/wk	35	0%	0
Wallis Sands Beach at Wallis Road	1	2/wk	97	1%	2
Wallis Sands State Park	2	1/wk	36	0%	0

## NOTES

- 1 Jody Connor, Water Division, New Hampshire Department of Environmental Services. June 2011.
- 2 New Hampshire Department of Environmental Services. North Hampton State Beach Water Quality Report, Summer 2010. January 2011.
- 3 New Hampshire Department of Environmental Services. North Beach Water Quality Report, Summer 2010. February 2011.
- 4 New Hampshire Department of Environmental Services. Sawyer Beach Water Quality Report, Summer 2010. February 2011.
- 5 New Hampshire Department of Environmental Services. Jenness Beach at Cable Road Water Quality Report, Summer 2010. February 2011.
- 6 New Hampshire Department of Environmental Services. Jenness Beach State Park Water Quality Report, Summer 2010. February 2011.
- 7 New Hampshire Department of Environmental Services, Beach Inspection Program. Accessed at <http://des.nh.gov/organization/divisions/water/wmb/beaches/samples.htm>. May 2011.

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*Testing the Waters 2011 reflects data as of June 27, 2011.*