

UPDATE OF NY BIGHT MONITORING PROGRAM

August 4 - 10, 2001

NY Bight Sampling has been as follows:

August 4	NY/NJ Harbor Complex	Overflight
August 6	NY/NJ Harbor Complex	Overflight
August 7	NY/NJ Harbor Complex	Overflight
	Long Island Beaches	Rockaway to Shinnecock Inlet
August 8	NY/NJ Harbor Complex	Overflight
	New Jersey Beaches	Sandy Hook to Ventnor City
August 9	NY/NJ Harbor Complex	Overflight
	NJ Perpendiculars	JC61, JC69, JC75, JC85, JC90
August 10	NY/NJ Harbor Complex	Overflight
	NJ Perpendiculars	NYB20's, partial JC14, JC27, JC41, JC53

Projected Activities for Next Week:

August 11	NY/NJ Harbor Complex	Overflight
August 13	NY/NJ Harbor Complex	Overflight
	Delaware River Basin	Delaware River
	Commission	
August 14	NY/NJ Harbor Complex	Overflight
	Long Island Beaches	Rockaway to Shinnecock Inlet
August 15	NY/NJ Harbor Complex	Overflight
	New Jersey Beaches	Sandy Hook to Cape May
August 16	NY/NJ Harbor Complex	Overflight
	NJDEP 200	Sandy Hook to Barnegat
August 17	NY/NJ Harbor Complex	Overflight
	NJ Perpendiculars	JC61, JC69, JC75, JC85, JC90

Floatables

The New York/New Jersey Harbor Complex was monitored for floatables a total of six times from August 4 - 10, 2001. The Harbor Complex was clear of significant floatables on August 4, and August 7 -10, 2001.

On August 6, 2001, a 2000 foot slick, containing trash and debris, was found in the Upper New York Harbor. The slick was reported to the Army Corps of Engineers and cleanup was conducted as necessary.

Bacteria

Bacteriological samples were collected along the Long Island coast, from Rockaway Point (LIC01) to Shinnecock Inlet East (LIC28), on August 7. Samples were collected along the New Jersey Coast, from Sandy Hook (JC01A) to Ventnor City (JC77), on August 8. All samples were tested for fecal coliform (FC) and enterococcus bacteria.

Along the Long Island coast, the highest FC count, 35 FC/100ml, occurred at Rockaway Point (LIC01). Table 1 presents high enterococcus counts ranging from 35 - 75 enterococci/100ml. The highest enterococcus count, 75 enterococci/100ml, occurred at Shinnecock Inlet West (LIC27).

Along the New Jersey coast, the highest FC count, 2 FC/100ml, occurred at Sandy Hook (JC01A). Table 2 presents enterococcus counts ranging from 36 - 108 enterococci/100ml. The highest enterococcus count, 108 enterococci/100ml, occurred at Long Branch (JC14).

The EPA criteria for enterococcus, 35 enterococci/100ml, is based on a geometric mean of five samples collected over a 30 day period. The EPA single sample maximum criteria is 104 enterococci/100ml. NJDEP, and Suffolk and Nassau County Health Departments were notified of the unusually high bacteria counts.

Phytoplankton

Phytoplankton samples were collected along the New Jersey coast, in Raritan Bay, Sandy Hook Bay, Barnegat Bay, and Great Bay on August 8. Samples were given to the New Jersey Department of Environmental Protection, Bureau of Marine Water Monitoring's Leeds Point Laboratory for analysis. The results, reported by NJDEP are as follows:

Raritan/Sandy Hook Bay Area

A bloom of mixed diatoms occurred in Raritan Bay waters. Total diatom cell counts were 7860cells/ml. *Prorocentrum sp.* was present in low levels.

A mild bloom of mixed diatoms occurred in Sandy Hook Bay waters. The phytoplankton composition was similar to that of the Raritan Bay, but in lower concentrations. *Prorocentrum sp.* was present in low levels.

New Jersey Coastal Area

In the coastal waters near Long Branch a mix of diatoms, similar in composition to the waters of both the Raritan and Sandy Hook Bay waters, was present, but in lower concentrations.

Prorocentrum sp. was present in low levels.

The coastal waters, from near Manasquan to near Ship Bottom, were generally clear with algal concentrations sparse. No toxic species were detected.

Barnegat Bay Area

The waters in this area were generally clear with moderate algal concentrations. *Prorocentrum sp.* was present in low levels at the northernmost stations.

Great Bay

The waters of the Great Bay contained a significant amount of detritus with algal concentrations sparse. No toxic species were detected.

Dissolved Oxygen

On August 3 and 9, bottom water samples were collected at the Barnegat (JC61), Beach Haven (JC69), Atlantic City (JC75), Strathmere (JC85), and Hereford Inlet (JC90) perpendiculars.

Portions of the Sandy Hook (NYB20), Long Branch (JC14), Belmar (JC27), Bay Head (JC41) and Seaside Heights (JC53) perpendiculars were sampled on August 10. Results of dissolved oxygen analysis for August 10 will be included in next week's report.

Table 3 presents the bottom DO results for the perpendiculars sampled on August 3 & 9. The lowest DO value for August 3, 2.6 mg/l and the lowest DO value for August 9, 2.0 mg/l, occurred nine and three nautical miles off Beach Haven, respectively. These low DO values are most likely due to the high temperatures the area has been experiencing.

Table 1

Enterococcus counts over 35 enterococci/100ml along the Long Island Coast - August 7, 2001.

Long Island Station	Enterococci (per 100ml)
Atlantic Beach (LIC07)	38
Long Beach (LIC09)	46
Short Beach (LIC12)	43
Water Island (LIC20)	50
Bellport Beach (LIC21)	35
Moriches Inlet West (LIC23)	59
West Hampton Beach (LIC25)	36
Tiana Beach (LIC26)	63
Shinnecock Inlet West (LIC27)	75
Shinnecock Inlet East (LIC28)	35

Table 2

Enterococcus counts over 35 enterococci/100ml along the New Jersey Coast - August 8, 2001.

New Jersey Station	Enterococci (per 100ml)
Sandy Hook (JC05)	48
Long Branch (JC13)	53
Long Branch (JC14)	108
Bradley Beach (JC24)	49
Shark River Inlet (JC26)	78
South Manasquan Inlet (JC37)	51
Bay Head (JC41)	67
Lavallette (JC49)	80
Island Beach State Park (JC59)	36
Barnegat (JC61)	48
Ship Bottom (JC65)	57

Table 3

Dissolved Oxygen Concentrations of Bottom Water Samples at the Barnegat (JC61), Beach Haven (JC69), Atlantic City (JC75), Strathmere (JC85), and Hereford Inlet (JC90) perpendiculars (mg/l) - August 3 & 9, 2001.

Location (Nautical Miles Offshore)	Barnegat JC 61		Beach Haven JC 69		Atlantic City JC 75		Strathmere JC 85		Hereford Inlet JC 90	
	8/3	8/9	8/3	8/9	8/3	8/9	8/3	8/9	8/3	8/9
1	6.5	5.8	4.2	2.4	5.7	3.0	5.8	3.6	6.8	4.2
3	3.8	3.3	4.2	2.0	5.9	4.0	5.5	4.0	5.8	3.0
5	3.4	2.1	4.1	2.3	5.3	3.1	3.9	4.7	6.8	5.1
7	3.1	3.2	3.4	2.3	4.0	3.3	3.4	6.0	6.5	5.0
9	3.8	6.7	2.6	3.0	3.4	3.5	3.2	4.9	5.9	6.4