

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION II

**DATE:**

**SUBJECT:** New York Bight Monitoring Program Observations, 2003

**FROM:** Helen Grebe, Regional Coastal Monitoring Coordinator  
Monitoring Operations Section (DESA-MOS)

**TO:** Barbara A. Finazzo, Director  
Division of Environmental Science and Assessment (DESA)

**THRU:** Randy Braun, Chief  
Monitoring and Assessment Branch (DESA-MAB)

Attached for your information is the fourth update of the 2003 NY Bight Monitoring Program. This update covers the period from July 4 - July 25, 2003.

Attachment

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2MOS-MAB-DESA:HGrebe:hg:x6797:bldg209:finalized:7/25/03  
2MOS-MAB 2MOS-MAB 2MAB-DESA

Grebe Glogower Braun  
UPDATE OF NY BIGHT MONITORING PROGRAM FROM July 4- July 25, 2003

**NY Bight Sampling has been as follows:**

July 4	NY/NJ Harbor Complex	Overflight
July 5	NY/NJ Harbor Complex	Overflight
July 7	NY/NJ Harbor Complex	Overflight
	Perpendiculars	NYB20's, JC14, JC27, JC41, JC53
July 8	NY/NJ Harbor Complex	Overflight
	LI Beaches	Rockaway to Shinnecock Inlet
July 9	NY/NJ Harbor Complex	Overflight
	NJ Beaches	Sandy Hook to Cape May Point
July 10	NY/NJ Harbor Complex	Overflight
	NJDEP 200 station	Sandy Hook to Barnegat Bay
July 11	NY/NJ Harbor Complex	Cancelled due to inclement weather
July 12	NY/NJ Harbor Complex	Overflight
July 14	NY/NJ Harbor Complex	Overflight
	NJDEP 200 station	Barnegat Bay to Cape May
July 15	NY/NJ Harbor Complex	Overflight
	LI Beaches	Rockaway to Shinnecock Inlet
July 16	NY/NJ Harbor Complex	Overflight
	NJ Beaches	Sandy Hook to Cape May
July 17	NY/NJ Harbor Complex	Overflight
	DRBC	Delaware River
July 18	NY/NJ Harbor Complex	Overflight
July 19	NY/NJ Harbor Complex	Overflight
July 21	NY/NJ Harbor Complex	Overflight
	Perpendiculars	Cancelled due to small craft warnings
July 22	NY/NJ Harbor Complex	Overflight
	LI Beaches	Rockaway to Shinnecock Inlet
July 23	NY/NJ Harbor Complex	Cancelled due to technical difficulties
	NJ Beaches	Cancelled due to technical difficulties
July 24	NY/NJ Harbor Complex	Cancelled due to technical difficulties
	Perpendiculars	Cancelled due to technical difficulties
July 25	NY/NJ Harbor Complex	Cancelled due to technical difficulties
July 26	NY/NJ Harbor Complex	Cancelled due to technical difficulties

**Projected Activities for Next Week:**

July 28	NY/NJ Harbor Complex	Cancelled due to technical difficulties
July 29	NY/NJ Harbor Complex	Overflight
	LI Beaches	Rockaway to Shinnecock Inlet
July 30	NY/NJ Harbor Complex	Overflight
	NJ Beaches	Sandy Hook to Cape May Point
July 31	NY/NJ Harbor Complex	Overflight
	Perpendiculars	JC61, JC69, JC75, JC85, JC90
August 1	NY/NJ Harbor Complex	Overflight
	Perpendiculars	NYB20's, JC14, JC27, JC41, JC53
August 2	NY/NJ Harbor Complex	Overflight

## **Floatables**

The New York/New Jersey Harbor Complex was monitored for floatables a total of fifteen times from July 4 - July 25, 2003.

The harbor complex was clear of significant floatables on all days.

## **Bacteria**

Bacteriological samples were collected from Rockaway (LI01) to Shinnecock Inlet (LI28) on July 8, 15 and 22, and from Sandy Hook (JC01A) to Cape May Point (JC99) on July 9 and 16. The samples were tested for fecal coliform (FC) and enterococcus bacteria.

Along the Long Island beaches, the highest FC count, 20 FC/100ml, occurred at Rockaway Point and the highest enterococcus count, 8 enterococci/100ml, occurred at Far Rockaway, on July 8. On July 15, the highest FC count, 165 FC/100ml and the highest enterococcus count, 30 enterococci/100ml, occurred at Rockaway Point. On July 22, all FC counts were below 4 FC/100ml, and the highest enterococci count, 20 enterococci/100ml occurred at Moriches Inlet East and Shinnecock Inlet East.

Along the New Jersey coast, the highest FC count, 35 FC/100ml, occurred at Seaside Heights and the highest enterococcus count, 32 enterococci/100ml, occurred at Island Beach State Park on July 9. On July 16, the highest FC count, 8 FC/100ml and the highest enterococcus count, 47 enterococci/100ml, occurred at Cape May Point.

## **NJDEP NEPPS**

As part of our Performance Partnership Agreement with NJDEP, surface water samples were collected at 20 out of 41 stations from Sandy Hook to Barnegat on July 10. The remaining stations from Barnegat to Delaware Bay were sampled on July 14. The samples will be analyzed by NJDEP for chlorophyll, salinity, nitrate, nitrite, ortho-phosphate, ammonia, total nitrogen, and total suspended solids. Samples were also collected for temperature and dissolved oxygen analysis, which was completed in the field and by our Edison Laboratory respectively. These 41 stations are part of NJDEP's 200 Station Network.

## **Dissolved Oxygen**

Bottom water samples were collected for dissolved oxygen (DO) analysis at the Sandy Hook (NYB20), Long Branch (JC 14), Belmar (JC27), Bay Head (JC41) and at the Seaside Heights (JC53) perpendiculars on July 7.

Tables 1 and 2 present the bottom dissolved oxygen results for the perpendiculars sampled on July 7. The lowest DO value, 4.0 mg/l, occurred one nautical miles off Belmar. These values are very good for this time of year.

Table 1

Dissolved Oxygen Concentrations of Bottom Water Samples at the Sandy Hook Perpendiculars (mg/l)- July 7, 2003.

Location (Nautical Miles Offshore)	Station	DO (mg/l)
2	NYB20	6.0
4	NYB21	6.9
6	NYB22	8.1
7.4	NYB23	7.2
8.6	NYB24	7.4

Table 2

Dissolved Oxygen Concentrations of Bottom Water Samples at the Long Branch (JC14), Belmar (JC27), Bay Head (JC 41) and Seaside Heights (JC53) perpendiculars (mg/l) - July 7, 2003.

Location (Nautical Miles Offshore)	Long Branch JC 14	Belmar JC 27	Bay Head JC 41	Seaside Heights JC 53
1	5.7	4.0	5.6	6.1
3	7.7	6.4	5.9	6.8
5	8.0	7.1	5.9	6.2
7	7.1	7.7	7.1	6.6
9	8.5	8.0	7.0	6.3

### **Phytoplankton**

Phytoplankton samples were collected along the New Jersey coast, in Raritan Bay, Sandy Hook Bay, Barnegat Bay, Great Bay, and Delaware Bay, on July 9. 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**

The waters of both the Raritan and Sandy Hook Bays were generally clear with sparse

algal concentrations. The predominant species of both bays was *Gyrodinium undulans* Hulbert, a solitary, nontoxic dinoflagellate. No toxic species were detected.

### **New Jersey Coastal Area**

The coastal waters, near Long Branch and Manasquan were experiencing an extremely small bloom of *Cerataulina pelagica* (Cleve) Hendey. Concentrations were 480 cells/ml near Long Branch and 120 cells/ml near Manasquan. This species is a cylindrical, nontoxic species that can occur either solitarily or in chains. No toxic species were detected.

Waters near Ship Bottom were generally clear with sparse algal concentrations. No toxic species were detected.

Waters near Ocean City were generally clear with sparse algal concentrations. No toxic species were detected.

### **Barnegat Bay Area**

Waters throughout Barnegat Bay were generally clear. Algal concentrations were sparse. No toxic species were detected.

### **Great Bay**

These waters were generally clear with very sparse algal concentrations. No toxic species were detected.

### **Great Egg Harbor**

These waters were generally clear with very sparse algal concentrations. No toxic species were detected.

### **Delaware Bay/Capesheore Area**

These waters were generally clear with very sparse algal concentrations. No toxic species were detected.

## **Delaware River Basin Commission Sampling**

At the request of Ed Santoro, Monitoring Coordinator for the DRBC, surface water samples were collected at low slack tide at four sites along the Delaware River, on July 17. All samples were analyzed by a contract Laboratory for bacteria, algae, metals, dissolved oxygen and organic carbon. Additional sampling is scheduled for August 25 and will augment DRBC's longstanding water quality sampling program in the Delaware Estuary.