

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE:

SUBJECT: New York Bight Monitoring Program Observations, 2004

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
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Attached for your information is the ninth and final update of the 2004 NY Bight Monitoring Program. This update covers the period from August 28 - September 9, 2004.

Attachment

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2MOS-MAB-DESA:HGrebe:hg:x6797:bldg209:finalized:9/15/04

2MOS-MAB 2MOS-MAB 2MAB-DESA

Grebe

Glogower

Braun

UPDATE OF NY BIGHT MONITORING PROGRAM FROM August 28 - September 9, 2004

NY Bight Sampling has been as follows:

Temporary flight restrictions around Manhattan were in effect during the Republican National Convention. Flight restrictions prohibited us from conducting the floatables run from August 30 through September 2.

August 28	NY/NJ Harbor Complex	Overflight
August 30	Perpendiculars	Canceled due to fog
August 31	Long Island Beaches	Canceled due to fog
September 1	New Jersey Beaches	Long Branch to Cape May Point
September 2	Perpendiculars	JC61, 69, 75, 85, 90
September 3	NY/NJ Harbor Complex	Overflight
	Perpendiculars	JC14, 27, 41, 53
September 4	NY/NJ Harbor Complex	Overflight
September 6	NY/NJ Harbor Complex	Overflight
September 7	NY/NJ Harbor Complex	Overflight
	NJDEP Nutrient Run	Canceled due to rough seas
September 8	NY/NJ Harbor Complex	Canceled due to rain
	NJDEP Nutrient Run	Canceled due to rain
September 9	NY/NJ Harbor Complex	Canceled due to weather

Floatables

The New York/New Jersey Harbor Complex was monitored for floatables on August 28, September 3, 4, 6, and 7. The Harbor Complex was clear of significant debris on all five days.

Bacteria

On September 1, bacteriological samples were taken along the New Jersey coast from Long Branch (JC13) to Cape May Point (JC99). All samples were analyzed for enterococcus bacteria.

The highest enterococcus count, 29 enterococci/100ml, occurred at Belmar (JC27).

Phytoplankton

Phytoplankton samples were collected along the New Jersey coast, in Barnegat Bay, Great Bay, and Delaware Bay on September 1. 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:

New Jersey Coastal Area

The ocean waters off both Ship Bottom and Cape May were generally clear with sparse algal concentrations. No toxic species were detected.

The ocean waters off Manasquan were experiencing a mild bloom of *Chaetoceros decipiens*. No toxic species were detected.

Barnegat Bay Area

The waters of Barnegat Bay from Toms River to Little Egg Inlet were generally clear with sparse algal concentrations. No toxic species were detected.

Great Bay

A mild bloom of *Skeletonema costatum* was occurring in the waters of Great Bay. No toxic species were detected.

Great Egg Harbor

The waters of the Great Egg Harbor were generally clear with sparse algal concentrations. No toxic species were detected.

Delaware Bay/Capeshore Area

A diverse assemblage of phytoplankton was present in low concentrations in the waters of the

Delaware Bay Capeshore near Dias Creek. No toxic species were detected.

The waters near the mouth of the Bay were generally clear with sparse algal concentrations. No toxic species were detected.

Dissolved Oxygen

Bottom water samples were collected for dissolved oxygen (DO) analysis at the Sandy Hook (NYB20), Long Branch (JC14), Belmar (JC27), Bay Head (JC41) and Seaside Heights (JC53) perpendiculars on September 3 and at the Barnegat (JC61), Beach Haven (JC69), Atlantic City (JC75), Strathmere (JC85) and Hereford (JC90) perpendiculars on August 27 and September 2. The data for August 27 were not available for the previous report.

Tables 1 and 2 present the bottom dissolved oxygen (DO) results for the perpendiculars sampled on September 3. The lowest DO value, 1.2 mg/l, occurred three nautical miles off Belmar (JC27G). Other low DO values, 1.6 mg/l, occurred one nautical mile off Belmar (JC27E) and one nautical mile off Seaside Heights (JC53E). According to dissolved oxygen guidelines, these values are considered to be lethal in a relatively short time. These low DO concentrations occurred in isolated areas, no fish kills or adverse effects have been reported. Following the sampling, events favoring re-aeration such as substantial winds and storm activity occurred. Typically in mid-September, the thermocline breaks down causing water column mixing and an end to any low DO pockets.

Table 3 presents the bottom DO results for the perpendiculars sampled on August 27 and September 2. The lowest DO concentration, 4.0 mg/l, occurred nine nautical miles off Beach Haven (JC69M), on August 27.

These values are typical for this time of year.

Table 1

Dissolved Oxygen Concentrations of Bottom Water Samples at the Sandy Hook Perpendiculars (mg/l)- September 3, 2004.

Location (Nautical Miles Offshore)	Station	DO (mg/l)
2	NYB20	5.0
4	NYB21	6.5
6	NYB22	7.2
7.4	NYB23	5.9
8.6	NYB24	6.0

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) - September 3, 2004.

Location (Nautical Miles Offshore)	Long Branch JC 14	Belmar JC 27	Bay Head JC 41	Seaside Heights JC 53
1	3.2	1.6	6.2	1.6
3	6.1	1.2	2.9	5.1
5	6.1	3.1	5.6	7.0
7	6.6	---	9.5	6.7
9	5.4	5.3	8.1	6.5

“- - - “ = sample result rejected

Table 3

Dissolved Oxygen Concentrations of Bottom Water Samples at the Barnegat (JC61), Beach Haven (JC69), Atlantic City (JC75), Strathmere (JC85) and Hereford (JC90) perpendiculars - August 27 and September 2, 2004.

Location (Nautical Mile Offshore)	Barnegat JC 61		Beach Haven JC 69		Atlantic City JC 75		Strathmere JC 85		Hereford JC 90	
	8/27	9/2	8/27	9/2	8/27	9/2	8/27	9/2	8/27	9/2
1	7.1	8.3	7.6	7.4	6.7	7.7	7.1	9.2	6.4	8.3
3	7.8	9.8	4.2	8.2	7.9	5.4	7.4	9.3	8.0	5.2
5	6.9	8.9	6.3	7.8	7.9	---	5.3	4.8	7.5	6.7
7	7.6	8.9	4.8	7.0	5.6	5.7	6.3	6.0	7.5	5.9
9	7.2	9.0	4.0	5.0	5.4	7.6	7.0	5.7	7.1	7.9

“- - - “ = sample result rejected