

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE:

SUBJECT: New York Bight Monitoring Program Observations, 2002

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, Acting Chief
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Attached for your information is the tenth update of the 2002 NY Bight Monitoring Program. This update covers the period from July 27 - Aug. 2, 2002.

Attachment

cc: Jane Kenny, 2RA, via LAN
William Muszynski, 2DRA, via LAN
Richard Caspe, DECA, via LAN
Walter Mugdam, DEPP, via LAN
Bonnie Bellow, 2CD, via LAN
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2MOS-MAB-DESA:HGrebe:hg:x6797:bldg209:finalized:8/2/02

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

Grebe Glogower Braun

UPDATE OF NY BIGHT MONITORING PROGRAM FROM July 27 - Aug. 2, 2002

NY Bight Sampling has been as follows:

July 27	NY/NJ Harbor Complex	Overflight
July 29	NY/NJ Harbor Complex	Overflight
	Perpendiculars	JC61's, JC69, JC75, JC85, JC90
July 30	NY/NJ Harbor Complex	Overflight
	Long Island Beaches	Rockaway to Shinnecock Inlet
July 31	NY/NJ Harbor Complex	Overflight
	New Jersey Beaches	Sandy Hook to Cape May
Aug 1	NY/NJ Harbor Complex	Overflight
	Perpendiculars	NYB20's, JC14, 27, 41, 53
Aug 2	NY/NJ Harbor Complex	Overflight
	Perpendiculars	Postponed - fog

Projected:

Aug 3	NY/NJ Harbor Complex	Overflight
Aug 5	NY/NJ Harbor Complex	Overflight
	Delaware River Basin	Delaware River
	Commission	
Aug 6	NY/NJ Harbor Complex	Overflight
	Long Island Beaches	Rockaway to Shinnecock Inlet
Aug 7	NY/NJ Harbor Complex	Overflight
	New Jersey Beaches	Sandy Hook to Cape May
Aug 8	NY/NJ Harbor Complex	Overflight
	NJDEP 200 Stations	Sandy Hook to Barnegat
Aug 9	NY/NJ Harbor Complex	Overflight
	Perpendiculars	JC61's, JC69, JC75, JC85, JC90

Floatables

The New York/New Jersey Harbor Complex was monitored for floatables a total of six times from July 27 to Aug 2, 2002. A half mile oil slick was observed in Jamaica Bay on July 31, this was reported to the Coast Guard for cleanup. The Harbor Complex was clear of significant floatables on all days.

On August 1, New Jersey Department of Environmental Protection received a report of a red liquid in the water off of Mantoloking and Brick Beach. Our helicopter crew also observed red water in the area and were able to collect a sample from the helicopter. The red water was identified as a concentration of ctenophores (comb jellies) just off the beach. Comb jellies are gelatinous and are often mistaken for jellyfish but they do not have stinging cells. They were approximately the size and shape of an egg, and covered an area approximately 50 feet by 20 feet.

Bacteria

Bacteriological samples were collected along the Long Island coast, from Rockaway (LIC01) to Shinnecock Inlet (LIC28), on July 30 and along the New Jersey coast from Sandy Hook (JC01) to Cape May (JC99) on July 31. Samples were collected from Mantoloking (JC44) to Cape May on July 25. The July 25 results were not available for last week's report. The samples were tested for fecal coliform (FC) and enterococcus bacteria.

Along the Long Island coast, the highest FC count, 1 FC/100ml, occurred at Far Rockaway (LIC05) and Robert Moses State Park (LIC17). The highest enterococcus count, 68 enterococci/100ml, occurred at Smith Point County Park (LIC22). The majority of the remaining results was zero.

On July 25, along the New Jersey coast, the highest FC count, 10 FC/100ml, occurred at Brigantine (JC73). The highest enterococcus count, 78 enterococci/100ml, occurred at Mantoloking (JC44).

On July 31, along the New Jersey coast, the highest FC count, 3 FC/100ml, occurred at Long Branch (JC13). The highest enterococcus count, 12 enterococci/100ml, occurred at Two Mile Beach (JC95). The majority of the remaining results was zero.

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 31. 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 was observed in the waters of the Raritan/Sandy Hook Bay area. Species present include *Skeletonema costatum*, *cylindrotheca sp.*, *nitzschia sp.*, and

Leptocylindrus sp. No toxic species were detected.

New Jersey Coastal Area

A bloom of mixed diatoms was observed in the northern coastal waters near Long Branch. The phytoplankton composition is similar to that found in the Raritan/Sandy Hook Bay area. No toxic species were detected.

The coastal waters from Manasquan to Cape May were generally clear with sparse algal concentrations. No toxic species were detected.

Barnegat Bay Area

In the northern portion of Barnegat Bay, there is a bloom of the small plankton species *Nannochloris*. There was a significant amount of detritus. No toxic species were detected.

Manahawkun Bay contains a large amount of macroalgae detritus, with sparse phytoplankton concentrations. No toxic species were detected.

Algal concentrations were sparse from Tuckerton to Little Egg Inlet. Picoplankton concentrations have increased near Tuckerton since the last sampling. No toxic species were detected.

Great Bay

Algal concentrations were sparse with a large amount of detritus. 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/Capeshe Area

A mild bloom of mixed diatoms (1000 cells/ml) was observed in the waters of the Delaware Bay just off Dias Creek. *Thalassionema nitzschioides* was the dominant species. Near the mouth of the bay, the waters were generally clear with sparse algal concentrations. No toxic species were detected.

Dissolved Oxygen

The Barnegat (JC61), Beach Haven (JC69), Atlantic City (JC75), Strathmere (JC85) and Hereford (JC90) perpendiculars were sampled on July 29. The Sandy Hook (NYB20), Long Branch (JC14), Belmar (JC27), Bay Head (JC41) and Seaside Heights (JC53) perpendiculars were sampled on August 1.

Table 1 presents the bottom dissolved oxygen (DO) results for the perpendiculars sampled on July 29. The lowest DO value, 2.4 mg/l, occurred nine nautical miles off

Atlantic City.

Tables 2 and 3 present the bottom dissolved oxygen (DO) results for the perpendiculars sampled on August 1. The lowest DO value 1.8 mg/l, occurred one nautical mile of Bay Head.

These low DO values are most likely due to the high temperatures the area has been experiencing.

Table 1

Dissolved Oxygen Concentrations of Bottom Water Samples at the Barnegat (JC61), Beach Haven (JC69), Atlantic City (JC75), Strathmere (JC85) and Hereford (JC90) perpendiculars - July 29.

Location (Nautical Mile Offshore)	Barnegat JC 61	Beach Haven JC 69	Atlantic City JC 75	Strathmer e JC 85	Hereford JC 90
1	5.4	5.6	3.8	3.7	5.0
3	6.8	4.1	3.4	4.0	5.1
5	3.8	4.9	3.1	4.7	5.4
7	4.2	5.4	2.7	4.4	4.4
9	4.5	4.3	2.4	5.1	6.7

Table 2

Dissolved Oxygen Concentrations of Bottom Water Samples at the Sandy Hook perpendiculars (mg/l) - August 1, 2002.

Location (Nautical Miles Offshore)	Station	DO (mg/l)
2	NYB 20	3.8
4	NYB 21	5.0
6	NYB 22	4.4
7	NYB 23	3.7
8	NYB 24	6.7

Table 3

Dissolved Oxygen Concentrations of Bottom Water Samples at the Long Branch (JC14), Belmar (JC27), Bay Head (JC41) and Seaside Heights (JC53) perpendiculars (mg/l) - August 1, 2002.

Location (Nautical Miles Offshore)	Long Branch JC 14	Belmar JC 27	Bay Head JC 41	Seaside Heights JC 53
1	3.6	3.6	1.8	3.9
3	4.3	4.2	3.2	3.6
5	4.8	4.4	3.3	3.5
7	4.3	4.7	4.0	4.1
9	6.3	4.9	3.9	4.2