

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
Monitoring and Assessment Branch (DESA-MAB)

Attached for your information is the eighth update of the 2004 NY Bight Monitoring Program. This update covers the period from August 6 - 27, 2004.

Attachment

cc: Jane Kenny, 2RA, via LAN
Kathleen Callahan, 2DRA, via LAN
Dore LaPosta, 2DECA, via LAN
Walter Mugdan, 2DEPP, via LAN
Bonnie Bellow, 2PAD, via LAN
Joann Brennan McKee, 2OPM, via LAN
Eric Schaaf, 2ORC, via LAN
Paul Molinari, 2DEPP, via LAN
Deb Szaro, 2DESA, via LAN
Peter Brandt, 2PAD, via LAN
Mario Del Vicario, 2DEPP, via LAN
Mary Mears, 2PAD, via LAN
John Kushwara, 2 DECA, via LAN
Felix Locicero, 2DEPP, via LAN
Janice Rollwagen, 2DEPP, via LAN
Larry Gaugler, 2DECA, via LAN
Pat Carr, 2PAD, via LAN
John Bourbon, 2DESA, via LAN
Jim Ferretti, 2DESA, via LAN
Deborah Kay, 2DESA, via LAN
Irwin Katz, 2DESA, via LAN
Bob Dieterich, 2DEPP, via LAN
Douglas Pabst, 2DEPP, via LAN
Robert Nyman, 2DEPP, via LAN
Leslie McGeorge, NJDEP, via LAN
Alfred Korndoerfer, NJDEP, via EMAIL
Eric Feerst, NJDEP, via EMAIL
Robert Connell, NJDEP, via EMAIL
Virginia Loftin, NJDEP, via EMAIL
Elaine Makatura, NJDEP, via EMAIL
Carol Hoffman, NYSDEC, via EMAIL
Robert Nuzzi, SCHD, via EMAIL
Lester Jargowsky, MCHD, via EMAIL
Ann Marie Fournier, MCHD, via EMAIL
Williams Simmons, MCHD, via EMAIL
Elizabeth Cosgrove, MCHD, via EMAIL
J. Fredrick Grassel, Rutgers via EMAIL
Dr. Robert Howarth, Cornell, via EMAIL
Robert Reid, NOAA, via EMAIL
Richard M. Warren, OCUA, via EMAIL
Richard C. Kunze, OCUA, via EMAIL
Kristen Milligan, COA, via EMAIL

2MOS-MAB-DESA:HGrebe:hg:x6797:bldg209:finalized:8/27/04

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Grebe

Glogower

Braun

UPDATE OF NY BIGHT MONITORING PROGRAM FROM August 6 - 27, 2004

NY Bight Sampling has been as follows:

August 6	NY/NJ Harbor Complex Perpendiculars	Overflight NYB20's, JC14
August 7	NY/NJ Harbor Complex	Overflight
August 9	NY/NJ Harbor Complex	Cancelled due to mechanical problems
August 10	NY/NJ Harbor Complex Long Island Beaches	Cancelled due to mechanical problems Cancelled due to mechanical problems
August 11	NY/NJ Harbor Complex New Jersey Beaches	Cancelled due to rain Cancelled due to rain
August 12	NY/NJ Harbor Complex NJ Beaches	Overflight Sandy Hook Sea Isle City
August 13	NY/NJ Harbor Complex Perpendiculars	Overflight Cancelled due to small craft warnings
August 14	NY/NJ Harbor Complex	Overflight
August 16	NY/NJ Harbor Complex	Cancelled due to rain
August 17	NY/NJ Harbor Complex Long Island Beaches	Overflight Rockaway to Shinnecock Inlet East
August 18	NY/NJ Harbor Complex New Jersey Beaches	Cancelled due to mechanical problems Sandy Hook to Cape May
August 19	NY/NJ Harbor Complex Perpendiculars	Overflight JC61, 69, 75, 85, 90
August 20	NY/NJ Harbor Complex Perpendiculars	Overflight NYB20's, JC14, 27, 41, 53
August 21	NY/NJ Harbor Complex	Cancelled due to mechanical problems
August 23	NY/NJ Harbor Complex Perpendiculars	Cancelled due to mechanical problems Cancelled due to mechanical problems
August 24	NY/NJ Harbor Complex Long Island Beaches	Overflight Rockaway to Shinnecock Inlet East
August 25	NY/NJ Harbor Complex New Jersey Beaches	Overflight Sandy Hook to Cape May
August 26	NY/NJ Harbor Complex Perpendiculars	Overflight NYB20's, JC14, 27, 41, 53
August 27	NY/NJ Harbor Complex Perpendiculars	Overflight JC61, 69, 75, 85, 90

Projected Activities for the Remainder of the Season:

Temporary flight restrictions around Manhattan will be in effect during the Republican National Convention. These flight restrictions will prohibit us from conducting the floatables run. The flight restrictions also extend to some northern New Jersey beaches and western Long Island beaches. All floatable flights have been cancelled from August 30 - September 2. All beaches outside of the flight restricted areas have been scheduled to be sampled.

August 28	NY/NJ Harbor Complex	Overflight
August 30	Perpendiculars	JC14, 27, 41, 53
August 31	Long Island Beaches	Robert Moses State Park to Shinnecock Inlet East
September 1	New Jersey Beaches	Long Branch to Cape May Point
September 2	Perpendiculars	JC61, 69, 75, 85, 90
September 3	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	Sandy Hook to Barnegat
September 8	NY/NJ Harbor Complex	Overflight
	NJDEP Nutrient Run	Barnegat to Cape May

Floatables

The New York/New Jersey Harbor Complex was monitored for floatables on August 7, 12, 13, 14, 17, 18, 19, 20, 24, 25, and 26. The Harbor Complex was clear of significant debris on August 7, 14, 19, 20, 24, 25, and 26.

On August 12, a slick, approximately 3/4 mile long by 10 yards wide, was reported in the Upper Harbor. The slick was of medium to heavy density and consisted of paper and plastic.

On August 13, a total of three slicks were reported, one in the Kill Van Kull, one in the Upper Harbor and one in the Lower Harbor. Each slick was approximately 1/4 mile long by 5 yards wide, and consisted of light density paper and plastic.

On August 17, a slick, approximately 1/4 mile long by 5 yards wide, was reported in Newark Bay. The slick consisted of light density paper, plastic and wood.

On August 18, two slicks were reported, one in Newark Bay and one in the Upper Harbor. Each slick was approximately 1/4 mile long by 5 yards wide, and consisted of paper, plastic and wood.

All slicks were reported to the Army Corps of Engineers and clean-ups were conducted as necessary.

Bacteria

On August 17 and 24, bacteriological samples were taken along the Long Island coast from Rockaway Point (LIC01) to Shinnecock Inlet East (LIC28). On August 12, water samples were collected along the New Jersey coast from Sandy Hook (JC01A) to Barnegat (JC61) and from Long Port (JC79) to Sea Isle City (JC87). On August 18 and 25, samples were taken along the New Jersey coast from Sandy Hook (JC01A) to Cape May Point (JC99). The Long Island samples were tested for fecal coliform (FC) and enterococcus bacteria. New Jersey samples were analyzed for enterococcus bacteria.

On August 17, along the Long Island coast, the highest fecal coliform count, 11 FC/100ml, occurred at Long Beach (LIC08). The highest enterococcus count, 6 enterococci/100ml, occurred at Rockaway Beach (LIC03).

On August 24, along the Long Island coast, the highest fecal coliform count, 20 FC/100ml, occurred just west of Moriches Inlet (LIC23). The highest enterococcus count, 4 enterococci/100ml, occurred at Rockaway Beach (LIC02).

Along the New Jersey coast, the highest enterococcus count for August 12, 54 enterococci/100ml, occurred at Long Branch (JC14); the highest enterococcus count for August 18, 9 enterococci/100ml, occurred at Sea side Park (JC53); and the highest enterococcus count for August 25, 20 enterococci/100ml, occurred at Cape May Inlet (JC96).

Phytoplankton

Phytoplankton samples were collected along the New Jersey coast, in Raritan Bay, Sandy Hook Bay, Barnegat Bay, and Great Bay on August 18. 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 *Skeletonema costatum* was reported in the waters of the Raritan Bay. In Sandy Hook Bay *Skeletonema costatum* was dominant, but below bloom concentrations. No toxic species were detected.

New Jersey Coastal Area

The coastal waters off both Long Branch and Cape May are generally clear with sparse algal concentrations. No toxic species were detected.

The ocean waters off both Manasquan and Ship Bottom have a low concentration of mixed diatoms. No toxic species were detected.

Barnegat Bay Area

The waters of Barnegat Bay near Toms River were dominated by *nannochloris*. No toxic species were detected.

The Barnegat Bay waters from just north of Barnegat Inlet to Little Egg Inlet have sparse algal concentrations and significant amounts of detritus. No toxic species were detected.

Great Bay

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

Great Egg Harbor

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

Delaware Bay/Capesheore Area

A diverse assemblage of diatoms is present in the waters of the Delaware Bay in mild bloom concentrations. No toxic species were detected.

Dissolved Oxygen

Bottom water samples were collected for dissolved oxygen (DO) analysis at the Sandy Hook (NYB20) and Long Branch (JC14) perpendiculars on August 6; at the the Sandy Hook (NYB20), Long Branch (JC14), Belmar (JC27), Bay Head (JC41) and Seaside Heights (JC53) perpendiculars on August 20 and 26; and at the Barnegat (JC61), Beach Haven (JC69), Atlantic City (JC75), Strathmere (JC85) and Hereford (JC90) perpendiculars on August 19 and 27. The data for August 27, are not available for this week's report and will be reported next week.

Tables 1 and 2 present the bottom dissolved oxygen (DO) results for the perpendiculars sampled on August 6, 20 and 26. The lowest DO value, 2.3 mg/l, occurred one nautical mile off Atlantic City, (JC27E). According to dissolved oxygen guidelines, this value is considered to be lethal if prolonged. This station will be resampled on Friday, August 27.

Table 3 presents the bottom DO results for the perpendiculars sampled on August 2. The lowest DO concentration, 3.0 mg/l, occurred one nautical mile off Hereford Inlet (JC90E).

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)- August 6, 20 and 26, 2004.

Location (Nautical Miles Offshore)	Station	DO (mg/l)		
		8/6	8/20	8/26
Date				
2	NYB20	4.8	6.3	5.0
4	NYB21	5.9	4.9	7.8
6	NYB22	5.4	4.6	5.6
7.4	NYB23	4.9	7.4	7.4
8.6	NYB24	5.4	8.0	7.2

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) - August 6, 20 and 26, 2004.

Location (Nautical Miles Offshore)	Long Branch JC 14			Belmar JC 27		Bay Head JC 41		Seaside Heights JC 53	
	Date	8/6	8/20	8/26	8/20	8/26	8/20	8/26	8/20
1	9.1	4.2	---	3.3	2.3	4.2	7.5	4.9	8.6
3	5.2	4.3	8.7	3.5	6.5	4.3	4.9	6.2	7.1
5	5.5	4.2	5.6	5.8	5.2	4.2	5.5	7.6	8.7
7	4.9	6.8	6.6	6.5	6.5	6.8	6.0	7.2	7.5
9	7.4	8.3	7.3	8.4	6.4	8.3	4.9	7.4	6.9

“—“ = sample not analyzed

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 2, 2004.

Location (Nautical Mile Offshore)	Barnegat JC 61	Beach Haven JC 69	Atlantic City JC 75	Strathmere JC 85	Hereford JC 90
1	5.7	3.9	5.3	5.2	3.0
3	6.2	5.5	7.2	6.3	7.3
5	5.4	6.0	6.2	6.6	5.4
7	5.3	5.5	6.4	6.7	5.8
9	5.6	5.9	6.5	7.3	7.0