

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

cc: Jane Kenny, 2RA, via LAN
William Muszynski, 2DRA, via LAN
Patrick Durack, 2DECA, via LAN
Walter Mugdan, 2DEPP, via LAN
Bonnie Bellow, 2CD, via LAN
Herbert Barrack, 2OPM, via LAN
Eric Schaaf, 2ORC, via LAN
Paul Molinari, 2DEPP, via LAN
Deb Szaro, 2DESA, via LAN
Peter Brandt, 2CD, via LAN
Mario Del Vicario, 2DEPP, via LAN
Mary Mears, 2CD, via LAN
Janice Rollwagen, 2DEPP, via LAN
John Kushwara, 2 DECA, via LAN
Felix Locicero, 2DEPP, via LAN
Larry Gaugler, 2DECA, via LAN
Pat Carr, 2CD, 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
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

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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.