

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
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Attached for your information is the seventh update of the 2003 NY Bight Monitoring Program. This update covers the period from August 9- August 22, 2003.

Attachment

cc: Jane Kenny, 2RA, via LAN
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Grebe Glogower Braun

UPDATE OF NY BIGHT MONITORING PROGRAM FROM August 9 - August 22, 2003

NY Bight Sampling has been as follows:

August 9	NY/NJ Harbor Complex	Cancelled due to inclement weather
August 11	NY/NJ Harbor Complex	Overflight
	NJ Shellfish - Wet weather	Sandy Hook to Sea Bright
August 12	NY/NJ Harbor Complex	Overflight
	LI Beaches	Rockaway Point to Smith Point
August 13	NY/NJ Harbor Complex	Overflight
	NJ Beaches	Sandy Hook to Island Beach State Park
August 14	NY/NJ Harbor Complex	Overflight
	NJ 200 station network	Sandy Hook to Barnegat
August 15	NY/NJ Harbor Complex	Overflight
	Blackout of 2003	Harbor, Staten Island, Coney Island, NJ, LI
August 16	NY/NJ Harbor Complex	Overflight
	Blackout of 2003	Harbor, Staten Island, Coney Island, NJ, LI
August 17	Blackout of 2003	Harbor, Staten Island, Coney Island, NJ, LI
August 18	NY/NJ Harbor Complex	Overflight
	Blackout of 2003	Harbor, Staten Island, Coney Island, NJ, LI
August 19	NY/NJ Harbor Complex	Overflight
	LI Beaches	Rockaway to Shinnecock Inlet
August 20	NY/NJ Harbor Complex	Overflight
	NJ Beaches	Sandy Hook to Ship Bottom
August 22	NY/NJ Harbor Complex	Cancelled due to mechanical problems
	Perpendiculars	Cancelled due to small craft warnings

Projected Activities for Next Week:

August 23	NY/NJ Harbor Complex	Overflight
	Perpendiculars	NYB20's, JC14, JC27, JC41, JC53
August 25	NY/NJ Harbor Complex	Overflight
	DRBC	Delaware Bay and Trenton
August 26	NY/NJ Harbor Complex	Overflight
	LI Beaches	Rockaway to Shinnecock Inlet
August 27	NY/NJ Harbor Complex	Overflight
	NJ Beaches	Sandy Hook to Cape May
August 28	NY/NJ Harbor Complex	Overflight
	Perpendiculars	JC61, JC69, JC75, JC85, JC90
August 29	NY/NJ Harbor Complex	Overflight
	Perpendiculars	NYB20's, JC14, JC27, JC41, JC53

Floatables

The New York/New Jersey Harbor Complex was monitored for floatables nine times during August 9 - August 22, 2003. The Harbor was clear of significant floatables on August 15, 16, 19 and 20.

On August 11, a slick approximately 500 yards long, was reported in the Upper Harbor and consisted of paper and plastic. An oily sheen, approximately two miles long, was reported two miles south of the Verrazano Bridge.

On August 12, a slick approximately 500 yards long by 20 yards wide was reported in the Upper Harbor. A small slick, approximately 300 yards long by 10 yards wide was reported in Newark Bay, on August 13. A larger slick, approximately one mile long with varying widths, was reported in Newark Bay, on August 14. All slicks consisted of plastic, paper and some natural material.

On August 18, the Corps of Engineers vessel the *Driftmaster*, was reported cleaning up a slick in the Upper Harbor. The slick was approximately one half mile long by 3 feet wide and consisted of paper and plastic.

All slicks were reported to the Corps of Engineers and cleanup was conducted as necessary.

Bacteria

Bacteriological samples were collected from Rockaway Point to Smith Point County Park on August 12, from Sandy Hook to Island Beach State Park on August 13, from Rockaway Point to Shinnecock Inlet on August 19, and from Sandy Hook to Ship Bottom on August 20. The samples were tested for fecal coliform (FC) and enterococcus bacteria.

Along the Long Island beaches, the highest FC count, 8 FC/100ml, occurred at Cedar Island Beach and the highest enterococcus count, 4 enterococci/100ml, occurred at Long Beach, on August 12. On August 19, the highest FC count, 4 FC/100ml, occurred at Atlantic Beach. The highest enterococcus count, 228 enterococci/100ml, occurred at Cedar Island Beach. This value exceeds the EPA water quality criteria of 104 enterococci/100ml. The Suffolk County Department of Health Services Bureau of Marine Resources was informed of the high result.

Along the New Jersey beaches, the highest FC count, 3 FC/100ml, occurred at Spring Lake and the highest enterococcus count, 5 enterococci/100ml, occurred at Asbury Park. On August 20, the highest FC count, 3 FC/100ml, occurred at Sandy Hook and the highest enterococcus count, 4 enterococci/100ml, occurred at Shark River Inlet.

NJDEP Wet Weather Shellfish

As part of our Performance Partnership Agreement with NJDEP, surface water samples were collected at ten stations from Sandy Hook to Sea Bright. Measurement of temperature and salinity was recorded in the field, and the samples were analyzed for total and fecal coliform. All data were transmitted to NJDEP and will assist NJDEP in their longstanding compliance with the requirements of the National Shellfish Sanitation Program.

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 August 14. The remaining stations from Barnegat to Delaware Bay were cancelled due to the blackout of 2003. 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.

Blackout of 2003 Water Quality Monitoring Response

To determine the effects of the blackout, surface water samples were collected via our EPA helicopter at 35 stations (5 open water stations and 30 bathing beach stations) on August 15, 16, and 18. Samples were also collected at 23 stations on August 17 and at 5 stations on August 19. All samples were analyzed for fecal coliform and enterococcus bacteria. Station locations were as follows:

- 5 open water stations around Manhattan: 2 in the Hudson River, 2 in the East River and one off Battery Park
- 4 beach stations off Coney Island: west 37th Street, Coney Island Amusement Park, Brighton Beach and Manhattan Beach
- 8 beach stations off the Long Island coast: Rockaway Point, Rockaway, Atlantic Beach, Point Lookout, Jones Beach, East Overlook, Gilgo Beach, and Robert Moses State Park
- 7 beach stations off the New Jersey coast: three beaches on Sandy Hook, Sea Bright, Monmouth Beach, Belmar and Spring Lake
- 6 beach stations in Sandy Hook/Raritan Bay New Jersey: Atlantic Highlands, Conover Beach, Ideal Beach, Keansburg, North Keansburg, and Union Beach
- 5 beach stations on Staten Island: South Beach, Midland Beach, Cedar Grove Beach and

2 stations along Oakwood Beach

Bacteria values were consistently high at the stations around Manhattan. Only two bathing beaches, Coney Island Amusement Park, New York and Keansburg beach, New Jersey, had values above the fecal coliform standard of 200 fecal coliforms/100ml and/or the enterococcus standard of 104 enterococci/100ml. These values occurring, on August 18 were 250 fecal coliform/100ml and 260 enterococci/100ml in the waters off the Coney Island Amusement Park, and 167 enterococci/100ml at Keansburg beach.

All data were shared with the New Jersey Department of Environmental Protection (NJDEP) and the New York City Department of Health (NYCDOH).

In addition to this sampling, NJDEP sampled by boat the waters over the shellfish beds in Sandy Hook and Raritan Bay. Their results showed exceedances of the shellfish overlying waters standard of 88 fecal coliforms per 100ml. Portions of the shellfish beds were closed and will remain closed pending the results of further water sampling. Shellfish beds that exceeded fecal coliform standards will remain closed for several weeks to give the shellfish time to purge themselves of contaminants.

On August 15, the NYCDOH closed city beaches on Coney Island and Staten Island, based on models predicting the sewage bypass to flow onto these beaches. The NYCDOH collected samples each day on these beaches and reopened them when possible. All beaches were reopened by Wednesday, August 20.

Phytoplankton

Phytoplankton samples were collected along the New Jersey coast, in Raritan Bay, Sandy Hook Bay, and northern Barnegat Bay, on August 20. 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:

Stations along the New Jersey Coast, in Sandy Hook Bay and Barnegat Bay, contained extremely sparse algal concentrations, with only a few individuals found of the species reported. Raritan Bay is experiencing a mild bloom of *Skeletonema costatum*, with 780 cells/ml. No toxic species were reported at any station.

Dissolved Oxygen

Bottom water samples were collected for dissolved oxygen (DO) analysis at the one and three mile station locations along the Sandy Hook (NYB20), Long Branch (JC 14), Belmar (JC27), Bay Head (JC41) and Seaside Heights (JC53) perpendiculars on August 18.

Tables 1 and 2 present the bottom dissolved oxygen results for the perpendiculars sampled on August 18. The lowest DO value, 3.9 mg/l, occurred one nautical miles off Belmar and Bay

Head. 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)- August 18, 2003.

Location (Nautical Miles Offshore)	Station	DO (mg/l)
2	NYB20	6.1
4	NYB21	5.6

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 18, 2003.

Location (Nautical Miles Offshore)	Long Branch JC 14	Belmar JC 27	Bay Head JC 41	Seaside Heights JC 53
1	4.4	3.9	3.9	4.9
3	5.9	4.5	5.3	4.9