

Fourth update of the 2012 Helicopter Monitoring Program

Floatables:

The New York/New Jersey Harbor Complex was monitored for floatables five times from June 23 to June 29. The floatable flight was not conducted on June 23 due to mechanical problems with the helicopter. The harbor was clear of significant floatables on June 26, 27, and 28.

On June 25, two slicks, each approximately $\frac{1}{4}$ - $\frac{1}{2}$ mile long by 10-20 feet wide were reported in Gravesend Bay. A slick approximately $\frac{1}{2}$ mile long and 10-50 feet wide was reported in the Upper Harbor. An oily sheen, approximately $\frac{1}{4}$ mile long and 75 feet wide was reported in the Arthur Kill.

On June 29, a slick approximately $\frac{1}{2}$ mile long and 10 to 20 feet wide was reported in the Upper Harbor. A slick approximately $\frac{1}{4}$ mile long and 5 to 100 feet wide was reported in Gravesend Bay.

All floatable debris consisted of wood, paper, plastic, or rubber, were reported to the Army Corps of Engineers, and cleanup was conducted as necessary. Oily sheens are reported to the United States Coast Guard National Response Center.

Sampling:

New Jersey:

Phytoplankton samples were collected along the New Jersey coast, in Raritan Bay, Sandy Hook Bay, Barnegat Bay, Great Bay, Great Egg Harbor, and Delaware Bay on June 25. Samples were given to the New Jersey Department of Environmental Protection (NJDEP), Bureau of Marine Water Monitoring Leeds Point Laboratory for analysis. These samples help fulfill NJDEP's commitments to the National Shellfish Sanitation Program. Results, as reported by NJDEP are as follows:

The waters of Sandy Hook Bay are experiencing a bloom of *Nannochloris oculata* (100,000 cells/mL). No toxic species were detected.

NJDEP has implemented an aircraft remote sensing program for estimating chlorophyll levels in NJ's coastal waters. This program provides a valuable perspective on algal conditions and trends. To view these maps please visit the website. <http://www.nj.gov/dep/bmw/remotesensing.htm>

No samples collected in the New Jersey Coastal Waters were found to contain the Paralytic Shellfish Poisoning species *Alexandrium spp.*

See the complete report by NJDEP on page 3.

Long Island:

Water quality samples were collected at 26 locations from Rockaway to Shinnecock Inlet, on June 26. Samples were given to the New York State Department of Environmental Conservation (NYSDEC) to conduct bacteriological analyses. These samples help fulfill NYSDEC's commitments to the National Shellfish Sanitation Program.

NJDEP Water Monitoring and Standards
Bureau of Marine Water Monitoring
Algal Conditions in New Jersey Estuarine and Coastal Waters
Week of June 25, 2012

TO: Distribution

FROM: Bill Heddendorf, Environmental Specialist 3
Bureau of Marine Water Monitoring

DATE: June 28, 2012

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters
Week of June 25, 2012

Samples were collected by the USEPA helicopter and analyzed at the NJDEP Bureau of Marine Water Monitoring's Leeds Point Laboratory.

Raritan/Sandy Hook Bay Area

The waters of Raritan are generally clear with sparse algal concentrations. The waters of Sandy Hook Bay are experiencing a bloom of *Nannochloris oculata* (100,000 cells/mL). No toxic species were detected.

New Jersey Coastal Area

The ocean waters from Long Branch to Manasquan are experiencing low levels of mixed diatoms and *Prorocentrum sp.* (400-680 cells/mL). The ocean waters from Ship Bottom to Cape May are generally clear with sparse algal concentrations. No toxic species were detected in the ocean waters off the coast of New Jersey.

Barnegat Bay Area

The waters of Barnegat Bay from Toms River to Island Beach State Park have elevated levels of *Nitzschia paleacea* (1200-1360 cells/mL). The waters from Barnegat Inlet to Little Egg Harbor are generally clear with sparse algal concentrations. No toxic species were detected.

Great Bay

The waters of Great Bay has sparse algal concentrations with a significant amount of detritus. No toxic species were detected.

Great Egg Harbor

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

Delaware Bay/Capeshore Area

A normally diverse assemblage of phytoplankton with a large amount of detritus is present in the waters along the Cape Shore near Dias Creek and at the mouth of the bay. No toxic species were detected.

No samples collected in the New Jersey Coastal Waters were found to contain the Paralytic Shellfish Poisoning species *Alexandrium spp.

**NJDEP Water Monitoring and Standards
Bureau of Marine Water Monitoring
Phytoplankton Data Sheet**

Date: 06/27/12

Collector: EPA

Station #	Time	Water Temp.	Chlorophyll (ug/l)	Dominant Species	Toxic Species*
26A	0757	20.8	2.94	Sparse algal concentrations	None present
906A	0804	20.5	19.76	<i>Nannochloris oculata</i> 100,000 cells/mL	None present
A11A	0810	19.6	5.47	Mixed diatoms 680 cells/mL	None present
A24A	0821	19.6	6.31	<i>Prorocentrum sp</i> 400 cells/mL	None present
1605A	0827	20.6	8.83	<i>Nitzschia paleacea</i> 1200 cells/mL	None present
1651D	0835	20.6	8.83	<i>Nitzschia paleacea</i> 1360 cells/mL	None present
1670D	0842	20.9	3.78	Sparse algal concentrations	None present
1703C	0847	21.3	2.94	Sparse algal concentrations	None present
A54B	0852	18.9	2.52	Sparse algal concentrations	None present
1800B	0859	21.1	5.89	<i>Chaetoceros sp</i> 320 cells/mL	None present
1818D	0903	21.2	3.36	Sparse algal concentrations	None present
2100A	0948	22.1	6.73	Sparse algal concentrations Significant amount of detritus	None present
2720B	1001	23.6	3.36	Sparse algal concentrations	None present
A85A2	1006	20.3	2.10	Sparse algal concentrations	None present
3826A	1032	22.8	26.91	Diverse assemblage of phytoplankton Significant amount of detritus	None present
3895E	1022	22.2	52.14	Diverse assemblage of phytoplankton Significant amount of detritus	None present

- Toxic Species = toxic species associated with shellfish safety including; *Prorocentrum lima.*, *Alexandrium spp.*, *Dinophysis spp.*, and *Pseudonitzschia spp.*
- This data can also be found online at <http://www.nj.gov/dep/bmw/phytoplankton.htm>
- The Bureau has implemented an aircraft remote sensing program for estimating chlorophyll levels in NJ's coastal waters. This program provides a valuable perspective on algal conditions and trends. To view these maps please visit the website. <http://www.nj.gov/dep/bmw/remotesensing.htm>

Chlorophyll (µg/L)

