

Ninth update of the 2009 Helicopter Monitoring Program

Floatables:

The New York/New Jersey Harbor Complex was monitored for floatables five times from July 18 - 24. The Harbor was clear of significant floatables on July 18, 22, 23 and 24. The floatable flight was not conducted on July 21 due to heavy rain.

On July 20, a small slick, approximately 200 feet long by 20 feet wide, was reported in Newark Bay. A second slick, approximately 150 feet long by 5 feet wide, was reported in the Upper Harbor.

On July 22, an oily sheen, approximately 300 feet long by 150 feet wide, was reported in the Upper Harbor.. Oily sheens are reported to the US Coast Guard.

The floatable debris consisted of large wood, paper and plastics and was reported to Army Corps of Engineers. The Army Corps of Engineers conducted clean-ups as necessary.

Sampling:

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 July 22. 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 along the Cape Shore near Dias Creek are experiencing a bloom of *Clindrotheca closterium*..

The waters of Barnegat Bay from Toms River to Barnegat Inlet are experiencing a bloom of *Nannochloris oculata*.

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 next page for a complete report.

NJDEP Water Monitoring and Standards
Bureau of Marine Water Monitoring
Algal Conditions in New Jersey Estuarine and Coastal Waters
Week of July 20, 2009

TO: Distribution

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

DATE: July 23, 2009

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters
Week of July 20, 2009

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 Bay are experiencing a mild bloom of *Skeletonema costatum* (1,880 cells/mL). No toxic species were detected.

The aircraft remote sensing program detected elevated chlorophyll levels in the waters of Sandy Hook Bay and around the Hook into the ocean, so there were extra samples collected on Tuesday. The waters of were experiencing a bloom of mixed nontoxic dinoflagellates, which has dissipated and is now generally clear with sparse algal concentrations. No toxic species were detected.

New Jersey Coastal Area

The ocean waters from Long Branch to Ship Bottom are experiencing a moderate bloom of *Prorocentrum triestinum* and *Thalassiosira nordenskioeldii*. Cell counts ranged from 520 to 920 cells/mL. The ocean waters off the coast of Cape May are generally clear with sparse algal concentrations. No toxic species were detected.

Barnegat Bay Area

The waters of Barnegat Bay from Toms River to Barnegat Inlet are experiencing a bloom of *Nannochloris oculata*. The waters from Manahawkin to Little Egg Harbor are generally clear with sparse algal concentrations. No toxic species detected were detected.

Great Bay

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

Great Egg Harbor

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

Delaware Bay/Capeshore Area

The waters along the Cape Shore near Dias Creek are experiencing a bloom of *Clindretheca closterium* (96,000 cells/mL). The waters at the mouth of the bay are generally clear with sparse algal concentrations. 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: 07/22/2009

Collector: EPA

Station #	Time	Water Temp.	Chlorophyll (ug/l)	Dominant Species	Toxic Species*
26A	1008	21.2	8.41	<i>Skeletonema costatum</i> 1,880 cells/mL	None present
906A	1017	21.4	3.36	Sparse algal concentrations	None present
A11A	1023	19.7	10.51	<i>Prorocentrum triestinum</i> (680 cells/mL) <i>Thalassiosira nordenskiöldii</i> (520cells/mL)	None present
A24A	1033	20.2	12.19	<i>Prorocentrum triestinum</i> (840 cells/mL) <i>Thalassiosira nordenskiöldii</i> (840cells/mL)	None present
1605A	1038	22.7	16.82	<i>Nannochloris oculata</i>	None present
1651D	1112	22.3	16.82	<i>Nannochloris oculata</i>	None present
1670D	1118	23.2	16.82	<i>Nannochloris oculata</i>	None present
1703C	1123	24.3	3.78	Sparse algal concentrations	None present
A54B	1127	21.6	5.47	<i>Prorocentrum triestinum</i> 680 cells/mL	None present
1800B	1136	23.2	3.78	Sparse algal concentrations	None present
1818D	1139	23.2	5.05	Sparse algal concentrations	None present
2100A	1144	23.4	3.78	Sparse algal concentrations	None present
2720B	1158	23.2	2.52	Sparse algal concentrations	None present
A85A2	1202	22.3	2.94	Sparse algal concentrations	None present
3826A	1224	21.4	4.63	Sparse algal concentrations	None present
3895E	1233	25.7	24.81	<i>Clindrotheca closterium</i> 96,000 cells/mL	None present

- Toxic Species = toxic species associated with shellfish safety including; *Prorocentrum lima.*, *Alexandrium* spp., *Dinophysis* spp., and *Pseudonitzschia* spp.
- 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>

