

Third update of the 2013 Helicopter Monitoring Program

Floatables:

The New York/New Jersey Harbor Complex was monitored for floatables five times from June 8 - 14. Floatable flights were not conducted on June 13 due to poor weather. The Harbor was clear of significant floatables on June 8, 11, 12 and 14.

On June 10, a floatable slick, approximately ¼ mile long and 50 yards wide was reported in the Arthur Kill. A floatable slick, approximately ¾ mile long and 50 yards wide was reported in Newark Bay.

All floatable debris slick consisted of wood, plastic and paper, were reported to the Army Corps of Engineers, and cleanup was conducted as necessary.

New Jersey 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 June 12. 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 *Skeletonema costatum* and *Heterosigma akashiwo* (2920 and 2800 cells/mL respectively).

The toxic species *Dinophysis accuminata* was detected below bloom and toxic levels in both Sandy Hook Bay and in Barnegat Bay near Toms River.

**This data can also be found online
at <http://www.nj.gov/dep/bmw/phytoplankton.htm>**

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 pages 2-3 for the complete report by NJDEP.

NJDEP Water Monitoring and Standards
Bureau of Marine Water Monitoring
Algal Conditions in New Jersey Estuarine and Coastal Waters
Week of June 10, 2013

TO: Distribution

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

DATE: June 13, 2013

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters
Week of June 10, 2013

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 experiencing elevated levels of *Heterosigma akashiwo*(2240 cells/mL). The waters of Sandy Hook Bay are experiencing a bloom of *Skeletonema costatum* and *Heterosigma akashiwo*(2920 and 2800 cells/mL respectively). The toxic species *Dinophysis accuminata* was detected below bloom and toxic levels.

New Jersey Coastal Area

The ocean waters from Long Branch to Manasquan are experiencing low levels of *Skeletonema costatum* (240-360 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 Little Egg Harbor are generally clear with sparse algal concentrations. The toxic species *Dinophysis acuminata* was detected in Barnegat Bay near Toms River.

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 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. The waters at the mouth of the bay were generally clear with sparse algal conditions. 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: 06/12/13

Collector: EPA

| Station # | Time | Water Temp. | Chlorophyll (ug/l) | Dominant Species | Toxic Species* |
|-----------|------|-------------|--------------------|--|-----------------------------|
| 26A | 0911 | 16.2 | 7.57 | <i>Heterosigma akashiwo</i> 2240 cells/mL | None present |
| 906A | 0920 | 17.4 | 34.48 | <i>Skeletonema costatum</i> 2920 cells/mL <i>Heterosigma akashiwo</i> 2800 cells/mL | <i>Dinophysis acuminata</i> |
| A11A | 0927 | 14.7 | 5.05 | <i>Skeletonema costatum</i> 240 cells/mL | None present |
| A24A | 0938 | 15.1 | 5.89 | <i>Skeletonema costatum</i> 360 cells/mL | None present |
| 1605A | 0945 | 13.9 | 3.78 | Sparse algal concentrations | <i>Dinophysis acuminata</i> |
| 1651D | 0955 | 14.3 | 1.26 | Sparse algal concentrations | None present |
| 1670D | 1008 | 18.4 | 1.68 | Sparse algal concentrations | None present |
| 1703C | 1014 | 20.2 | 2.52 | Sparse algal concentrations | None present |
| A54B | 1017 | 13.1 | 0.42 | Sparse algal concentrations | None present |
| 1800B | 1024 | 19.7 | 3.78 | Sparse algal concentrations | None present |
| 1818D | 1029 | 19.9 | 6.73 | Sparse algal concentrations | None present |
| 2100A | 1040 | 19.7 | 5.89 | Sparse algal concentrations | None present |
| 2720B | 1057 | 14.7 | 4.63 | Sparse algal concentrations | None present |
| A85A2 | 1103 | 14.8 | 2.10 | Sparse algal concentrations | None present |
| 3826A | 1224 | 15.7 | 3.36 | Sparse algal concentrations | None present |
| 3895E | 1219 | 21.8 | 44.15 | 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.**
- **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>**