

NJDEP Water Monitoring and Standards
Bureau of Marine Water Monitoring
Algal Conditions in New Jersey Estuarine and Coastal Waters
Week of July 14, 2008

TO: Distribution

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

DATE: July 17, 2008

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters
Week of July 14, 2008

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

There was a large bloom of *Heterosigma akashiwo* (168,000 cells/ml) in the Raritan Bay near Keyport Harbor on Tuesday but it seems to be dissipating. The waters of Sandy Hook Bay have low concentrations of *Gyrodinium sp* and *Katodinium roundatum*. No toxic species were detected

New Jersey Coastal Area

The ocean waters off the coast of Long Branch are experiencing a mild bloom of *Skeletonema costatum* (1960 cells/ml). The ocean waters from Manasquan to Cape May are generally clear with sparse algal concentrations. The potentially toxic species *Pseudonitzschia seriata* associated with amnesic shellfish poisoning was detected off the coast of Long Branch and Ship Bottom but it was below bloom or toxic levels.

Barnegat Bay Area

The waters of Barnegat Bay and Little Egg Harbor are generally clear with sparse algal concentrations. No toxic species detected in any samples from Barnegat Bay.

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 of Delaware Bay near the mouth of the bay had low concentrations of mixed diatoms with a significant amount of detritus. The waters of Delaware Bay near Dias Creek are experiencing a bloom of *Cylindrotheca closterium* (117,000 cells/ml). 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: 07/16/2008

Collector: EPA

| Station # | Time | Water Temp. | Chlorophyll (ug/l) | Dominant Species | Toxic Species* |
|-----------|------|-------------|--------------------|--|--------------------------------|
| 26A | 0843 | | 5.05 | Sparse algal concentrations Significant amounts of detritus | None present |
| 906A | 0851 | | 12.19 | Low concentrations of <i>Gyrodinium sp.</i> | None present |
| A11A | 0855 | | 9.25 | Mild bloom of <i>Skeletonema costatum</i> 1960 cells/ml | <i>Pseudonitzschia seriata</i> |
| A24A | 0926 | | 2.10 | Sparse algal concentrations | None present |
| 1605A | 0931 | | 2.10 | Sparse algal concentrations | None present |
| 1651D | 0940 | | < 0.42 | Sparse algal concentrations | None present |
| 1670D | 0945 | | 3.78 | <i>Cylindrotheca closterium</i> 200 cells/ml | None present |
| 1703C | 0951 | | 3.36 | Sparse algal concentrations | None present |
| A54B | 0955 | | 2.52 | <i>Prorocentrum redfeldii</i> 320 cells/ml | <i>Pseudonitzschia seriata</i> |
| 1800B | 1008 | | 1.68 | Sparse algal concentrations | None present |
| 1818D | 1012 | | 2.52 | Sparse algal concentrations | None present |
| 2100A | 1017 | | 2.52 | Sparse algal concentrations | None present |
| 2720B | 1056 | | 4.20 | Sparse algal concentrations | None present |
| A85A2 | 1101 | | 2.10 | Sparse algal concentrations | None present |
| 3826A | 1134 | | 12.19 | Low concentration of mixed diatoms Significant amount of detritus | None present |
| 3895E | 1140 | | 56.35 | Bloom of <i>Cylindrotheca closterium</i> 117,000 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>

