

NJDEP Water Monitoring and Standards  
Bureau of Marine Water Monitoring  
Algal Conditions in New Jersey Estuarine and Coastal Waters  
Week of August 18, 2008

TO: Distribution

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

DATE: August 21, 2008

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters  
Week of August 18, 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**

The waters of Raritan Bay are experiencing a mild bloom of mixed diatoms dominated by *Skeletonema costatum* (total diatom count 2640 cells/ml). The waters of Sandy Hook Bay are experiencing a bloom of *Chaetoceros sp.* (5120 cells/ml). No toxic species were detected.

**New Jersey Coastal Area**

The ocean waters off the coast of Long Branch have low concentrations of mixed diatoms dominated by *Chaetoceros sp.* The ocean waters from Manasquan to Cape May are generally clear with sparse algal concentrations. No toxic species were detected.

**Barnegat Bay Area**

The waters of Barnegat Bay from Island Beach to Barnegat Inlet are experiencing a bloom of *Nannochloris oculata*. The waters from Manahawkin Bay to 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 experiencing a mild bloom of *Skeletonema costatum* (1680 cells/ml). 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 have sparse algal concentrations with a significant amount of detritus. The waters of Delaware Bay near Dias Creek are experiencing a large bloom of *Cylindrotheca closterium* (300,000 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: 08/20/2008**

**Collector: EPA**

| Station # | Time | Water Temp. | Chlorophyll (ug/l) | Dominant Species  | Toxic Species* |
|-----------|------|-------------|--------------------|---|----------------|
| 26A       | 0921 | 22.3        | 18.50              | <i>Skeletonema costatum</i><br>Total diatom count 2640 cells/ml | None present   |
| 906A      | 0929 | 22.6        | 28.17              | <i>Chaetoceros sp</i><br>5120 cells/ml                          | None present   |
| A11A      | 0934 | 21.2        | 3.78               | Low concentrations of mixed diatoms                             | None present   |
| A24A      | 0948 | 20.9        | 2.52               | Sparse algal concentrations                                     | None present   |
| 1605A     | NS   | NS          | NS                 | No Sample   | No Sample      |
| 1651D     | 1000 | 22.7        | 6.31               | <i>Nannochloris oculata</i>                                     | None present   |
| 1670D     | 1006 | 23.2        | 10.09              | <i>Nannochloris oculata</i>                                     | None present   |
| 1703C     | 1012 | 23.1        | 2.10               | Sparse algal concentrations                                     | None present   |
| A54B      | 1016 | 20.9        | 2.52               | Sparse algal concentrations                                     | None present   |
| 1800B     | 1023 | 23.3        | 2.10               | Sparse algal concentrations                                     | None present   |
| 1818D     | 1026 | 22.8        | 3.78               | Sparse algal concentrations                                     | None present   |
| 2100A     | 1030 | 22.4        | 7.99               | <i>Skeletonema costatum</i><br>1680 cells/ml                    | None present   |
| 2720B     | 1121 | 22.1        | 2.10               | Sparse algal concentrations                                     | None present   |
| A85A2     | 1125 | 21.3        | 4.20               | Low concentration of<br><i>Prorocentrum redfeldii</i>           | None present   |
| 3826A     | 1145 | 19.8        | 8.41               | Sparse algal concentrations<br>Significant amount of detritus   | None present   |
| 3895E     | 1152 | 23.6        | 35.74              | Bloom of <i>Cylindrotheca closterium</i><br>300,000 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>

