

NJDEP Water Monitoring and Standards
Bureau of Marine Water Monitoring
Algal Conditions in New Jersey Estuarine and Coastal Waters
Week of July 23, 2007

TO: Distribution

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

DATE: July 26, 2007

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters
Week of July 23, 2007

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 were experiencing a bloom of *Skeletonema costatum* (5820 cells/ml). The waters of the Sandy Hook Bay had a mild bloom of *Skeletonema costatum* (1620 cells/ml). No toxic species were detected.

New Jersey Coastal Area

The ocean waters from Long Branch to Ship Bottom were generally clear with low concentrations of *Prorocentrum sp.* and *Skeletonema costatum*. The ocean waters off Ship Bottom also contained *Cerataulina pelagica* in low concentrations. The ocean water off Cape May were generally clear with a vast assemblage of phytoplankton. No toxic species were detected.

Barnegat Bay Area

The waters of Barnegat Bay near Toms River had low concentrations of *Nitzschia longissima*. The waters of Barnegat Bay from Island Beach State Park to Manahawkin had sparse algal concentrations with significant amounts of detritus. No toxic species detected in any samples from Barnegat Bay.

The waters of Little Egg Harbor had sparse algal concentrations with significant amounts of detritus. No toxic species were detected.

Great Bay

The waters of Great Bay had a vast assemblage of phytoplankton in low concentrations. No toxic species were detected.

Great Egg Harbor

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

Delaware Bay/Capeshore Area

The waters of the Delaware Bay near the mouth of the bay were generally clear with sparse algal concentrations. The waters of the Delaware Bay near Dias Creek had sparse algal concentrations with significant amounts of detritus. 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.

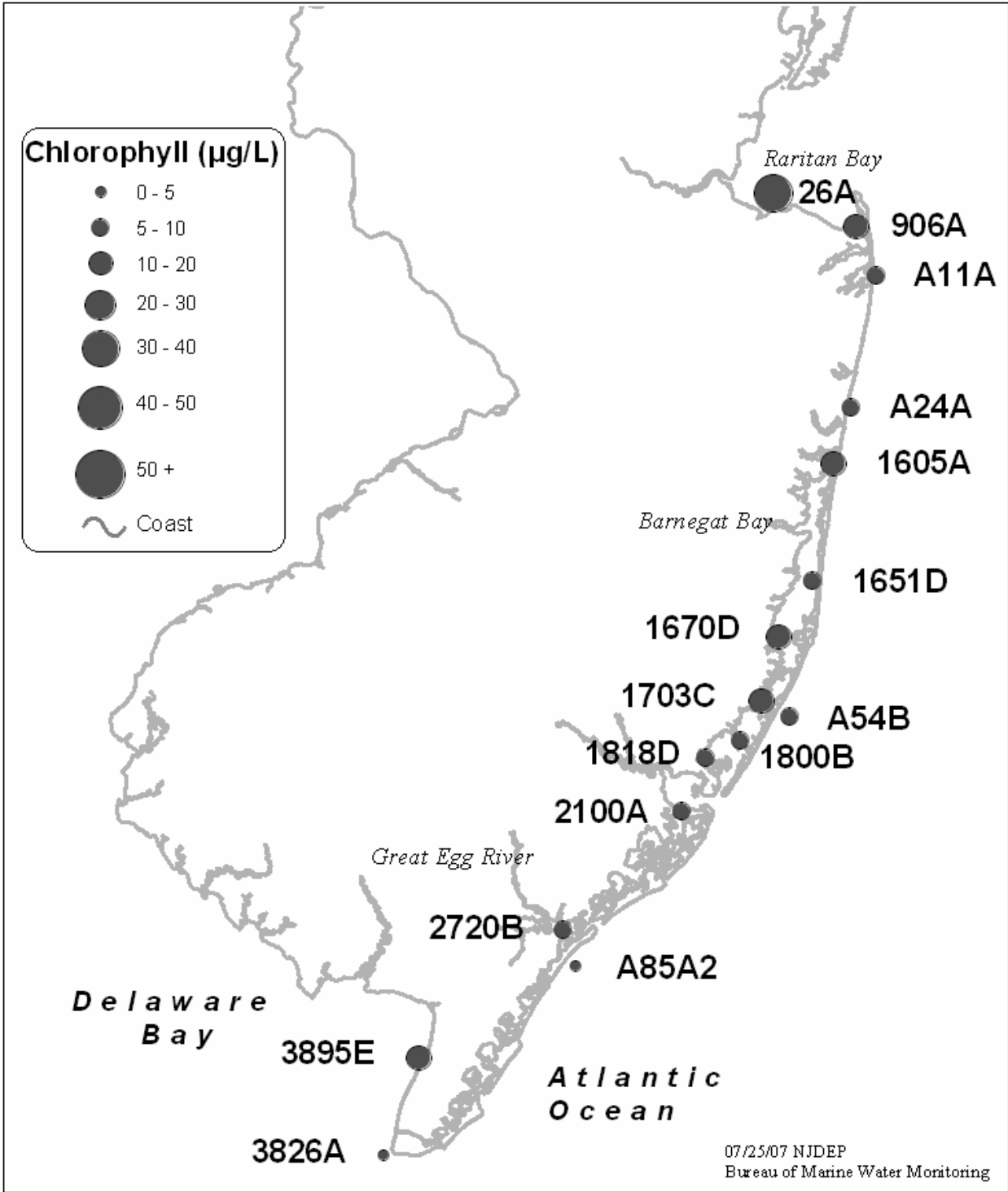
**NJDEP Water Monitoring and Standards
Bureau of Marine Water Monitoring
Phytoplankton Data Sheet**

Date: 07/025/2007

Collector: EPA

| Station # | Time | Water Temp. | Chlorophyll (ug/l) | Dominant Species | Toxic Species* |
|-----------|------|-------------|--------------------|---|----------------|
| 26A | 1025 | 22.7 | 32.38 | Bloom of <i>Skeletonema costatum</i> (5820 cells/ml) | None present |
| 906A | 1033 | 23.1 | 10.51 | Mild bloom of <i>Skeletonema costatum</i> (1620 cells/ml) | None present |
| A11A | 1038 | 21.1 | 7.57 | Low concentrations of <i>Prorocentrum sp.</i> and <i>Skeletonema costatum</i> | None present |
| A24A | 1050 | 21.1 | 5.05 | Low concentrations of <i>Prorocentrum sp.</i> and <i>Skeletonema costatum</i> | None present |
| 1605A | 1055 | 23.3 | 14.30 | Low concentration of <i>Nitzschia longissima</i> | None present |
| 1651D | 1120 | 24.0 | 7.15 | Sparse algal concentrations Significant amounts of detritus | None present |
| 1670D | 1125 | 23.2 | 11.35 | Sparse algal concentrations Significant amounts of detritus | None present |
| 1703C | 1130 | 24.4 | 14.72 | <i>Pluerosigma sp.</i> (360 cells/ml) Significant amounts of detritus | None present |
| A54B | 1133 | 22.5 | 7.99 | Low concentration of <i>Cerataulina pelagica</i> | None present |
| 1800B | 1138 | 24.0 | 9.67 | Sparse algal concentrations Significant amounts of detritus | None present |
| 1818D | 1141 | 24.0 | 5.05 | Sparse algal concentrations Significant amounts of detritus | None present |
| 2100A | 1145 | 23.6 | 7.57 | Vast assemblage of phytoplankton in low concentrations. | None present |
| 2720B | 1200 | 24.4 | 5.05 | Sparse algal concentrations | None present |
| A85A2 | 1202 | 22.3 | 4.20 | Vast assemblage of phytoplankton in low concentrations. | None present |
| 3826A | 1220 | 22.5 | 2.52 | Sparse algal concentrations | None present |
| 3895E | 1230 | 24.4 | 12.61 | Sparse algal concentrations Significant amounts of detritus | None present |

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



Seventh update of the 2007 Helicopter Monitoring Program

Floatables:

The New York/New Jersey Harbor complex was monitored for floatables seven times from July 18 - July 27. The Harbor Complex was clear of significant floatable debris on July 20, 21 and 27. Floatable flights were cancelled due to rain on the July 18 and 23.

On July 19, a slick of light density, approximately 400 yards long, was reported in the Newark Bay. A slick of heavy density, approximately 100 yards long by 30 yards wide, was reported in the Upper Harbor. A slick of moderate density, approximately 100 yards long by 40 yards wide, was reported in the Gravesend Bay.

On July 24, a slick of moderate density, approximately 200 yards long, was reported in the Arthur Kill.

On July 25, a slick of moderate density, approximately 400 yards long, was reported in the Arthur Kill.

On July 26, a slick of light density, approximately 300 yards long, was reported in the Arthur Kill. A patch of scattered debris, approximately 100 yards long by 100 yards wide, was reported in the Upper Harbor.

On July 26, an oily rainbow sheen, approximately 300 yards long and 10 yards wide, was reported off the Coney Island Coast.

All floatable debris slicks consisted of large wood and plastics and were reported to Army Corps of Engineers. The Army Corps of Engineers conducted clean-ups as necessary. The oily sheens were reported to the US Coast Guard.

Sampling:

Water quality samples were collected at 26 locations from Rockaway to Shinnecock Inlet, on July 24. Samples were given to the New York State Department of Environmental Conservation (NYSDEC) to conduct fecal coliform analyses. These samples help fulfill NYSDEC's commitments to the National Shellfish Sanitation Program.

Water quality samples were collected at 16 locations along the New Jersey coast on July 25. Samples were given to the New Jersey State Department of Environmental Protection to conduct phytoplankton analyses. The waters of Raritan Bay are experiencing a bloom of *Skeletonema costatum* (5820 cells/ml). There is also a mild bloom of *Skeletonema costatum* (1620 cells/ml) in Sandy Hook Bay.

There were no toxic algae species detected in New Jersey Estuarine and Coastal Waters.