

NJDEP Water Monitoring and Standards
Bureau of Marine Water Monitoring
Algal Conditions in New Jersey Estuarine and Coastal Waters
Week of July 6, 2009

TO: Distribution

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

DATE: July 9, 2009

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters
Week of July 6, 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 bloom of *Nannochloris oculata* with low concentrations of mixed diatoms. No toxic species were detected. The waters of Sandy Hook Bay are experiencing a mild bloom of *Cerataulina pelagica* (2,720 cells/ml). No toxic species were detected.

New Jersey Coastal Area

The aircraft remote sensing program detected elevated chlorophyll levels in the coastal waters from Sandy Hook to Long Branch, so there was an extra sample that was collected off the coast of Sandy Hook. Both the remote sensing data and the analysis of the samples in the laboratory show that the bloom has greatly dissipated over the last couple of days.

The ocean waters from Sandy Hook to Long Branch are experiencing a moderate bloom of *Cerataulina pelagica* (4800 to 5640 cells/ml). The ocean waters from Manasquan to Cape May are generally clear with sparse algal concentrations. The potentially toxic species *Pseudonitzschia seriata* was detected but it was below bloom or toxic levels off the coast of Manasquan and Ship Bottom.

Barnegat Bay Area

The waters of Barnegat Bay near Island Beach are experiencing low concentrations of *Nitzschia longissima*. The waters from Barnegat Inlet 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 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

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 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
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Phytoplankton Data Sheet**

Date: 07/08/2009

Collector: EPA

Station #	Time	Water Temp.	Chlorophyll (ug/l)	Dominant Species	Toxic Species*
26A	0859	20.1	18.08	<i>Nannochloris oculata</i>	None present
906A	0905	18.1	16.82	<i>Cerataulina pelagica</i> 2720 cells/ml	None present
A11A	0915	19.2	12.19	<i>Cerataulina pelagica</i> 5640 cells/ml	None present
A24A	0924	16.6	3.78	Sparse algal concentrations	<i>Pseudonitzschia seriata</i>
1605A	0929	21.5	11.77	<i>Nitzchia longissima</i>	None present
1651D	0957	21.6	8.41	Sparse algal concentrations Significant amount of detritus	None present
1670D	1003	21.5	2.94	Sparse algal concentrations Significant amount of detritus	None present
1703C	1008	22.9	3.36	Sparse algal concentrations	None present
A54B	1012	17.1	2.52	Sparse algal concentrations	<i>Pseudonitzschia seriata</i>
1800B	1016	21.9	2.10	Sparse algal concentrations	None present
1818D	1020	21.8	1.68	Sparse algal concentrations	None present
2100A	1025	22.2	4.20	Sparse algal concentrations	None present
2720B	1040	21.9	1.68	Sparse algal concentrations	None present
A85A2	1044	18.6	1.26	Sparse algal concentrations	None present
3826A	1105	20.4	2.10	Sparse algal concentrations	None present
3895E	1113	23.7	21.44	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>**

