

NJDEP Water Monitoring and Standards  
Bureau of Marine Water Monitoring  
Algal Conditions in New Jersey Estuarine and Coastal Waters  
Week of August 4, 2008

TO: Distribution

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

DATE: August 8, 2008

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters  
Week of August 4, 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 bloom of *Skeletonema costatum* (10,520 cells/ml). The waters of Sandy Hook Bay are experiencing a bloom of *Thalassiosira minima* (7,640 cells/ml). No toxic species were detected

**New Jersey Coastal Area**

The ocean waters off the coast of Long Branch are experiencing a mild bloom of mixed diatoms (1240 cells/ml). The ocean waters from Manasquan to Cape May are generally clear with sparse algal concentrations. The potentially toxic species *Psuedonitzschia seriata* associated with amnesic shellfish poisoning was detected off the coast of Long Branch but it was below bloom or toxic levels.

**Barnegat Bay Area**

The waters of Barnegat Bay from Toms River 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 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 have a vast assemblage of phytoplankton 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: 08/07/2008**

**Collector: EPA**

Station #	Time	Water Temp.	Chlorophyll (ug/l)	Dominant Species	Toxic Species*
26A	0857		55.92	<i>Skeletonema costatum</i> 10,520 cells/ml	None present
906A	0904		40.79	<i>Thalassiosira minima</i> 7640 cells/ml	None present
A11A	0910		17.24	Mild bloom of mixed diatoms 1240 cells/ml	<i>Pseudonitzschia seriata</i>
A24A	0920		3.36	Sparse algal concentrations	None present
1605A	0929		12.19	<i>Nannochloris oculata</i>	None present
1651D	0943		9.67	<i>Nannochloris oculata</i>	None present
1670D	0950		10.09	<i>Nannochloris oculata</i>	None present
1703C	0957		2.94	Sparse algal concentrations	None present
A54B	1002		3.36	Sparse algal concentrations	None present
1800B	1014		2.94	Sparse algal concentrations	None present
1818D	1019		5.05	<i>Skeletonema costatum</i> 1040 cells/ml	None present
2100A	1123		2.10	Sparse algal concentrations	None present
2720B	1136		3.36	Sparse algal concentrations	None present
A85A2	1142		4.20	Sparse algal concentrations	None present
3826A	1200		8.83	Vast assemblage of phytoplankton Significant amount of detritus	None present
3895E	1209		57.18	Bloom of <i>Cylindrotheca closterium</i> 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>