

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> Total diatom count 2640 cells/ml	None present
906A	0929	22.6	28.17	<i>Chaetoceros sp</i> 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> 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 <i>Prorocentrum redfeldii</i>	None present
3826A	1145	19.8	8.41	Sparse algal concentrations Significant amount of detritus	None present
3895E	1152	23.6	35.74	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>

