

NJDEP Water Monitoring and Standards  
Bureau of Marine Water Monitoring  
Algal Conditions in New Jersey Estuarine and Coastal Waters  
Week of July 16, 2012

TO: Distribution

FROM: Bill Heddendorf, Environmental Specialist 3  
Bureau of Marine Water Monitoring

DATE: July 19, 2012

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters  
Week of July 16, 2012

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 and Sandy Hook Bay are experiencing a mild bloom of mixed diatoms (2920-2200 cells/mL). . No toxic species were detected.

**New Jersey Coastal Area**

The ocean waters off the coast of Long Branch have slightly elevated levels of *Prorocentrum micans* (200 cells/mL). The ocean waters from Manasquan to Cape May are generally clear with sparse algal concentrations. No toxic species were detected in the ocean waters off the coast of New Jersey.

**Barnegat Bay Area**

The waters of Barnegat Bay from Toms River to Island Beach are experiencing a bloom of *Nannochloris oculata*. Further analysis is being conducted to see if the brown tide specie *Aureococcus anophagefferens* is also present. The waters from Barnegat Inlet to Little Egg Harbor have low levels of mixed diatoms dominated by *Nitzschia longissima*. No toxic species were detected.

**Great Bay**

The waters of Great Bay have low levels of mixed diatoms (520 cells/mL). No toxic species were detected.

**Great Egg Harbor**

The waters of Great Egg have low levels of *Thalassiosira sp* (200 cells/mL). 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 were generally clear with sparse algal conditions. 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.***

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Phytoplankton Data Sheet**

**Date:** 07/18/12

**Collector:** EPA

Station #	Time	Water Temp.	Chlorophyll (ug/l)	Dominant Species	Toxic Species*
26A	0747	26.1	28.59	Mixed diatoms 2920 cells/mL	None present
906A	0749	27.2	22.71	Mixed diatoms 2200 cells/mL	None present
A11A	0759	21.5	6.73	<i>Prorocentrum micans</i> 200 cells/mL	None present
A24A	0810	23.7	2.52	Sparse algal concentrations	None present
1605A	0816	27.4	11.35	<i>Nannochloris oculata</i>	None present
1651D	0825	27.8	17.66	<i>Nannochloris oculata</i>	None present
1670D	0831	26.5	7.15	Mixed diatoms 1040 cells/mL	None present
1703C	0837	28.2	7.15	<i>Nitzschia longissima</i> 240 cells/mL	None present
A54B	0842	24.3	2.10	Sparse algal concentrations	None present
1800B	0847	27.4	10.51	<i>Nitzschia longissima</i>	None present
1818D	0851	27.2	5.05	Sparse algal concentrations Significant amount of detritus	None present
2100A	0857	27.6	6.31	Mixed diatoms 520 cells/mL	None present
2720B	0956	28.2	7.99	<i>Thalassiosira sp.</i> 200 cells/mL	None present
A85A2	1001	24.2	2.10	Sparse algal concentrations	None present
3826A	1025	25.8	4.20	Sparse algal concentrations Significant amount of detritus	None present
3895E	1016	29.1	45.83	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.***
- **This data can also be found online at <http://www.nj.gov/dep/bmw/phytoplankton.htm>**
- **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>**

**Chlorophyll ( $\mu\text{g/L}$ )**

- 0 - 5
- 5 - 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 +
- ~ Coast

