Twelfth update of the 2012 Helicopter Monitoring Program

Floatables:

The New York/New Jersey Harbor complex was monitored for floatables six times from August 18 to August 24. The harbor was clear of significant debris on August 21, 23 and 24.

On August 18, a slick, approximately ¼ mile long and 20 - 30 feet wide, was reported in Gravesend Bay.

On August 20, a patch of debris light in concentration was reported in Newark Bay. A slick, approximately ¼ mile long and 30 - 50 feet wide, was reported in Gravesend Bay.

On August 22, a slick, approximately ¼ mile long and 20 - 40 feet wide, was reported in Gravesend Bay.

All floatable debris consisted of wood, paper, plastic, or rubber, were reported to the Army Corps of Engineers, and cleanup was conducted as necessary.

Sampling:

Phytoplankton samples were collected along the New Jersey coast, in Raritan Bay, Sandy Hook Bay, Barnegat Bay, Great Bay, Great Egg Harbor and Delaware Bay, on August 22. Samples were given to the New Jersey Department of Environmental Protection (NJDEP), Bureau of Marine Water Monitoring Leeds Point Laboratory for analysis. These samples help fulfill NJDEP's commitments to the National Shellfish Sanitation Program. Results, as reported by NJDEP are as follows:

The ocean waters from Long Branch to Manasquan experienced a mild bloom of mixed diatoms dominated by*Prorocentrum sp* and *Chaetoceros sp*.

The toxic specie *Psuedonitzschia sp* was detected off the coast of Ship Bottom, but it was below bloom or toxic levels.

The waters of Barnegat Bay near Toms River experienced a bloom of picoplankton dominated by*Nannochloris*and *Synechocystis sp.*

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

No samples collected in the New Jersey Coastal Waters were found to contain the Paralytic Shellfish Poisoning species *Alexandrium spp.*

This data can also be found online at http://www.nj.gov/dep/bmw/phytoplankton.htm

See next page for the complete report by NJDEP

NJDEP Water Monitoring and Standards
Bureau of Marine Water Monitoring
Algal Conditions in New Jersey Estuarine and Coastal Waters
Week of August 20, 2012

TO: Distribution

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

DATE: August 23, 2012

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters
Week of August 20, 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 have sparse algal concentrations with a significant amount of detritus. No toxic species were detected.

New Jersey Coastal Area

The ocean waters from Long Branch to Manasquan are experiencing a mild bloom of mixed diatoms dominated by *Prorocentrum* and *Chaetoceros*. The ocean waters from Ship Bottom to Cape May are generally clear with sparse algal concentrations. The toxic specie *Psuedonitzschia sp* was detected off the coast of Ship Bottom, but it was below bloom or toxic levels.

Barnegat Bay Area

The waters of Barnegat Bay near Toms River are experiencing a bloom of picoplankton dominated by *Nannochloris* and *Synechocystis sp.* The waters from Island Beach to Manahawkin are generally clear with sparse algal concentrations. The waters near Little Egg Harbor have low levels of mixed diatoms. No toxic species were detected.

Great Bay

The waters of Great Bay have low levels of *Chaetoceros sp* (1680 cells/mL). No toxic species were detected.

Great Egg Harbor

The waters of Great Egg 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 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.

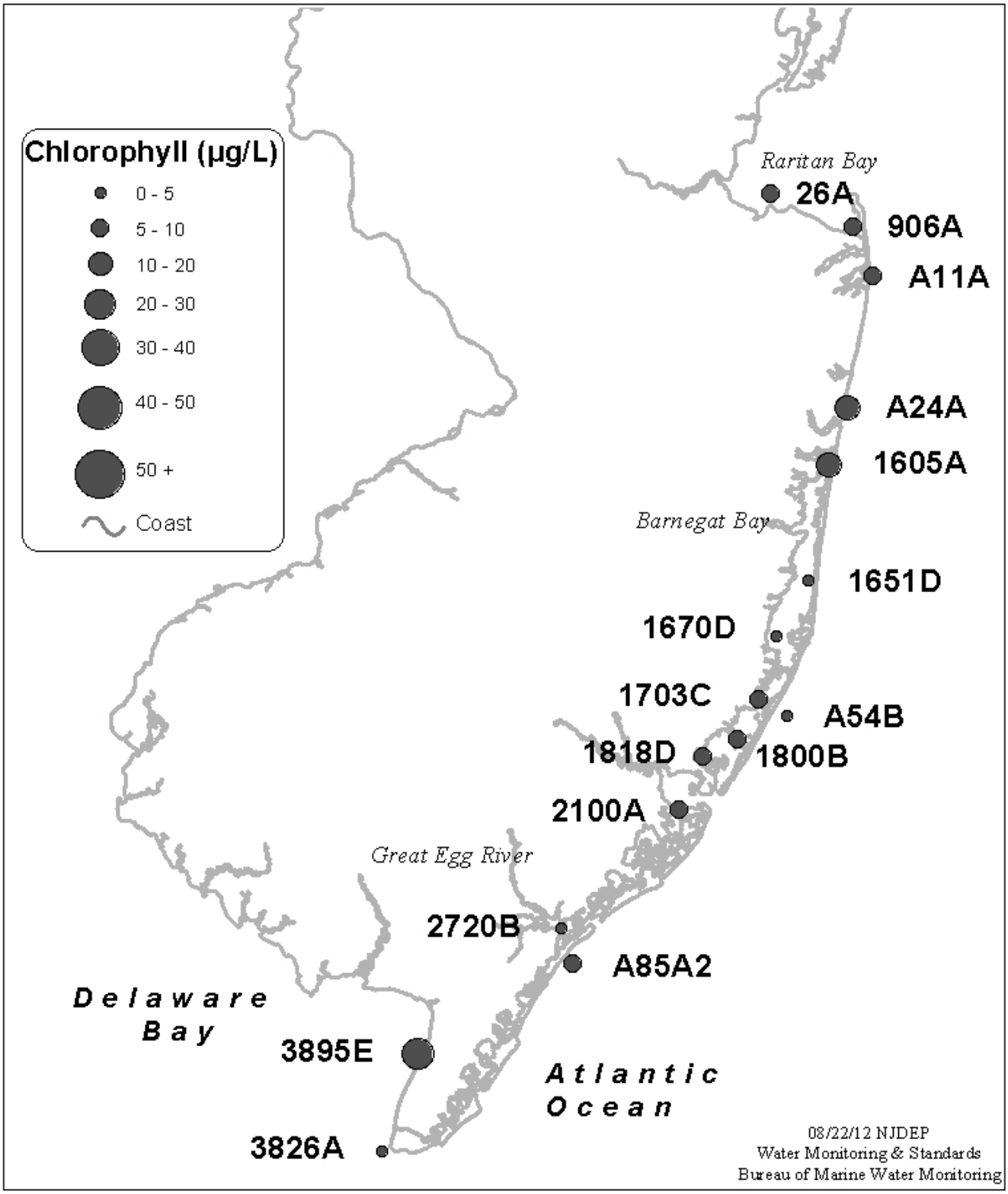
NJDEP Water Monitoring and Standards
Bureau of Marine Water Monitoring
Phytoplankton Data Sheet

Date: 08/22/12

Collector: EPA

Station #	Time	Water Temp.	Chlorophyll (ug/l)	Dominant Species	Toxic Species*
26A	0825	23.9	9.67	Sparse algal concentrations Significant amount of detritus	None present
906A	0835	24.1	7.15	Sparse algal concentrations Significant amount of detritus	None present
A11A	0840	22.3	5.89	*Prorocentrum sp.* 160 cells/mL	None present
A24A	0850	22.4	11.35	*Chaetoceros sp.* 1520 Cells/mL	None present
1605A	0856	24.3	12.19	*Nannochloris* and *Synechocystis* Total cell count ~120,000 cells/mL	None present
1651D	0907	23.5	4.63	Sparse algal concentrations Significant amount of detritus	None present
1670D	0914	24.6	2.94	Sparse algal concentrations	None present
1703C	0920	24.1	5.89	*Navicula sp.* 960 cells/mL	None present
A54B	0922	23.3	1.68	Sparse algal concentrations	*Psuedonitschia sp*
1800B	0929	23.8	5.05	Mixed diatoms 1920 cells/mL	None present
1818D	0932	23.9	5.89	Mixed diatoms 1160 cells/mL	None present
2100A	1019	24.0	9.67	*Chaetoceros sp* 1680 cells/mL	None present
2720B	1032	24.1	2.94	Sparse algal concentrations	None present
A85A2	1036	22.9	6.31	Sparse algal concentrations	None present
3826A	1058	22.1	2.10	Sparse algal concentrations	None present
3895E	1050	25.1	25.65	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 (µg/L)
0 - 5
5 - 10
10 - 20
20 - 30
30 - 40
40 - 50
50 +
Coast
Raritan Bay
26A
906A
A11A
A24A
1605A
Barnegat Bay
1651D
1670D
1703C
A54B
1818D
1800B
2100A
Great Egg River
2720B
A85A2
Delaware Bay
3895E
Atlantic Ocean
3826A
08/22/12 NJDEP
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