

Eleventh update of the 2010 Helicopter Monitoring Program

Floatables:

The New York/New Jersey Harbor Complex was monitored for floatables six times from August 7 - 13, 2010. The Harbor was clear of significant floatables on August 10, 12 and 13.

On August 7, a patch of debris, approximately 50 yards long by 20 yards wide, was reported in the Upper harbor. On August 9, a floatable slick, approximately 200 yards long by 15 yards wide was reported in Newark Bay. On August 11, a floatable slick, approximately 500 yards long by 5 - 10 yards wide, was reported in Newark Bay.

All floatable debris slicks were reported to the Army Corps of Engineers, and cleanup was conducted as necessary.

Sampling:

Bottom water samples were collected for dissolved oxygen (DO) analysis at stations one and three nautical miles off the coast of New Jersey at the following stations: Sandy Hook (NYB20), Long Branch (JC14), Belmar (JC27), Bay Head (JC41), Seaside Heights (JC53), Barnegat (JC61), Beach Haven (JC69), Atlantic City (JC75), Strathmere (JC85) and Hereford (JC90), on June 29. Station NYB20 and stations ending with an "E" are approximately one nautical mile off the coast, and station NYB21 and stations ending with a "G" are approximately three nautical miles off the coast.

Results, analyzed and reported by NJDEP, are below:

date:	8/10/2010				
Station	Time	Temp	DO		
NYB20	835	16.2	5.45		
NYB21	830	14.8	6.4		
JC14E	848	16.2	4.45		
JC14G	843	13.7	5.95		
JC27E	858	16.2	4.95		
JC27G	852	15.5	5.8		
JC41E	911	15.3	5.7		
JC41G	908	13.9	7.05		
JC53E	924	15.9	6.1		
JC53G	919	12.8	6.8		
JC61E	1014	16.1	5		
JC61G	1011	13.6	6.55		
JC69E	1032	16.3	6.2		
JC69G	1029	13.8	5.4		
JC75E	1050	16	5.05		
JC75G	1045	14.8	4.85		
JC85E	1105	15.9	4.45		
JC85G	1100	14.2	4.7		
JC90E	1118	16.5	7.2	dup	trip
JC90G	1114	18.5	3.9	3.95	3.9

The lowest DO value, 3.9 mg/l, occurred three nautical miles off Hereford Inlet, (JC90G). All other values were above 4.5 mg/l. These values are typical for this time of year.

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 11. 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 waters by Manahawkin Bay are experiencing a bloom of what appears to possibly be the brown tide picoplanktoner *Aureococcus anophagefferens*. Further testing, by NJDEP is being conducted for verification.

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.*

See Pages 3-4 for a complete report.

NJDEP Water Monitoring and Standards
Bureau of Marine Water Monitoring
Algal Conditions in New Jersey Estuarine and Coastal Waters
Week of August 9, 2010

TO: Distribution

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

DATE: August 12, 2010

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters
Week of August 9, 2010

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 low levels of *Prorocentrum redfeldii* (280 cells/mL) with significant amounts of detritus. The waters of Sandy Hook Bay are experiencing elevated concentrations of *Cylindrotheca closterium* (2880 cells/mL). No toxic species were detected.

New Jersey Coastal Area

The ocean waters from Long Branch to Cape May are experiencing low levels of *Nannochloris oculata*. 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 Barnegat Inlet are experiencing low levels *Nannochloris oculata*. The waters by Manahawkin Bay are experiencing a bloom of what appears to possibly be the brown tide picoplanktoner *Aureococcus anophagefferens*. Further testing is being conducted for verification. All samples from Barnegat bay has a significant amount of detritus. No toxic species detected in any samples from Barnegat Bay.

Great Bay and Great Egg Harbor

The waters of Great Bay are experiencing sparse algal concentrations with a significant amount of detritus. 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 experiencing elevated levels of mixed dinoflagellates. 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: 08/11/2010

Collector: EPA

Station #	Time	Water Temp.	Chlorophyll (ug/l)	Dominant Species	Toxic Species*
26A	0838	24.8	11.77	<i>Prorocentrum redfeldii</i> (280 cells/mL) Significant amount of detritus	None present
906A	0845	25.7	13.46	<i>Cylindrotheca closterium</i> 2,880 cells/mL	None present
A11A	0850	23.3	7.57	<i>Nannochloris oculata</i>	None present
A24A	0900	22.4	5.05	<i>Nannochloris oculata</i>	None present
1605A	0905	25.8	10.51	Sparse algal concentrations Significant amount of detritus	None present
1651D	0912	27.1	11.77	Sparse algal concentrations Significant amount of detritus	None present
1670D	0919	26.6	13.46	Sparse algal concentrations Significant amount of detritus	None present
1703C	0923	28.1	15.98	<i>Aureococcus anophagefferens</i> Significant amount of detritus	None present
A54B	0927	21.3	6.31	<i>Nannochloris oculata</i>	None present
1800B	0931	26.6	14.30	Sparse algal concentrations Significant amount of detritus	None present
1818D	0936	25.4	8.41	Sparse algal concentrations Significant amount of detritus	None present
2100A	0941	26.7	7.57	Sparse algal concentrations Significant amount of detritus	None present
2720B	0957	22.8	8.83	Mixed diatoms (1,200 cells/mL) Significant amount of detritus	None present
A85A2	0959	21.7	3.78	<i>Nannochloris oculata</i>	None present
3826A	1021	20.6	5.89	Mixed dinoflagellates 1,840 cells/mL	None present
3895E	1015	26.6	18.92	Mixed dinoflagellates (1,840 cells/mL) 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>**