

## UPDATE OF NY BIGHT MONITORING PROGRAM

**August 4 - 10, 2001**

### NY Bight Sampling has been as follows:

|           |                      |                                         |
|-----------|----------------------|-----------------------------------------|
| August 4  | NY/NJ Harbor Complex | Overflight                              |
| August 6  | NY/NJ Harbor Complex | Overflight                              |
| August 7  | NY/NJ Harbor Complex | Overflight                              |
|           | Long Island Beaches  | Rockaway to Shinnecock Inlet            |
| August 8  | NY/NJ Harbor Complex | Overflight                              |
|           | New Jersey Beaches   | Sandy Hook to Ventnor City              |
| August 9  | NY/NJ Harbor Complex | Overflight                              |
|           | NJ Perpendiculars    | JC61, JC69, JC75, JC85, JC90            |
| August 10 | NY/NJ Harbor Complex | Overflight                              |
|           | NJ Perpendiculars    | NYB20's, partial JC14, JC27, JC41, JC53 |

### Projected Activities for Next Week:

|           |                      |                              |
|-----------|----------------------|------------------------------|
| August 11 | NY/NJ Harbor Complex | Overflight                   |
| August 13 | NY/NJ Harbor Complex | Overflight                   |
|           | Delaware River Basin | Delaware River               |
|           | Commission           |                              |
| August 14 | NY/NJ Harbor Complex | Overflight                   |
|           | Long Island Beaches  | Rockaway to Shinnecock Inlet |
| August 15 | NY/NJ Harbor Complex | Overflight                   |
|           | New Jersey Beaches   | Sandy Hook to Cape May       |
| August 16 | NY/NJ Harbor Complex | Overflight                   |
|           | NJDEP 200            | Sandy Hook to Barnegat       |
| August 17 | NY/NJ Harbor Complex | Overflight                   |
|           | NJ Perpendiculars    | JC61, JC69, JC75, JC85, JC90 |

## **Floatables**

The New York/New Jersey Harbor Complex was monitored for floatables a total of six times from August 4 - 10, 2001. The Harbor Complex was clear of significant floatables on August 4, and August 7 -10, 2001.

On August 6, 2001, a 2000 foot slick, containing trash and debris, was found in the Upper New York Harbor. The slick was reported to the Army Corps of Engineers and cleanup was conducted as necessary.

## **Bacteria**

Bacteriological samples were collected along the Long Island coast, from Rockaway Point (LIC01) to Shinnecock Inlet East (LIC28), on August 7. Samples were collected along the New Jersey Coast, from Sandy Hook (JC01A) to Ventnor City (JC77), on August 8. All samples were tested for fecal coliform (FC) and enterococcus bacteria.

Along the Long Island coast, the highest FC count, 35 FC/100ml, occurred at Rockaway Point (LIC01). Table 1 presents high enterococcus counts ranging from 35 - 75 enterococci/100ml. The highest enterococcus count, 75 enterococci/100ml, occurred at Shinnecock Inlet West (LIC27).

Along the New Jersey coast, the highest FC count, 2 FC/100ml, occurred at Sandy Hook (JC01A). Table 2 presents enterococcus counts ranging from 36 - 108 enterococci/100ml. The highest enterococcus count, 108 enterococci/100ml, occurred at Long Branch (JC14).

The EPA criteria for enterococcus, 35 enterococci/100ml, is based on a geometric mean of five samples collected over a 30 day period. The EPA single sample maximum criteria is 104 enterococci/100ml. NJDEP, and Suffolk and Nassau County Health Departments were notified of the unusually high bacteria counts.

## **Phytoplankton**

Phytoplankton samples were collected along the New Jersey coast, in Raritan Bay, Sandy Hook Bay, Barnegat Bay, and Great Bay on August 8. Samples were given to the New Jersey Department of Environmental Protection, Bureau of Marine Water Monitoring's Leeds Point Laboratory for analysis. The results, reported by NJDEP are as follows:

### **Raritan/Sandy Hook Bay Area**

A bloom of mixed diatoms occurred in Raritan Bay waters. Total diatom cell counts were 7860cells/ml. *Prorocentrum sp.* was present in low levels.

A mild bloom of mixed diatoms occurred in Sandy Hook Bay waters. The phytoplankton composition was similar to that of the Raritan Bay, but in lower concentrations. *Prorocentrum sp.* was present in low levels.

### New Jersey Coastal Area

In the coastal waters near Long Branch a mix of diatoms, similar in composition to the waters of both the Raritan and Sandy Hook Bay waters, was present, but in lower concentrations.

*Prorocentrum sp.* was present in low levels.

The coastal waters, from near Manasquan to near Ship Bottom, were generally clear with algal concentrations sparse. No toxic species were detected.

### Barnegat Bay Area

The waters in this area were generally clear with moderate algal concentrations. *Prorocentrum sp.* was present in low levels at the northernmost stations.

### Great Bay

The waters of the Great Bay contained a significant amount of detritus with algal concentrations sparse. No toxic species were detected.

## **Dissolved Oxygen**

On August 3 and 9, bottom water samples were collected at the Barnegat (JC61), Beach Haven (JC69), Atlantic City (JC75), Strathmere (JC85), and Hereford Inlet (JC90) perpendiculars.

Portions of the Sandy Hook (NYB20), Long Branch (JC14), Belmar (JC27), Bay Head (JC41) and Seaside Heights (JC53) perpendiculars were sampled on August 10. Results of dissolved oxygen analysis for August 10 will be included in next week's report.

Table 3 presents the bottom DO results for the perpendiculars sampled on August 3 & 9. The lowest DO value for August 3, 2.6 mg/l and the lowest DO value for August 9, 2.0 mg/l, occurred nine and three nautical miles off Beach Haven, respectively. These low DO values are most likely due to the high temperatures the area has been experiencing.

**Table 1**

Enterococcus counts over 35 enterococci/100ml along the Long Island Coast - August 7, 2001.

| Long Island Station           | Enterococci (per 100ml) |
|-------------------------------|-------------------------|
| Atlantic Beach (LIC07)        | 38                      |
| Long Beach (LIC09)            | 46                      |
| Short Beach (LIC12)           | 43                      |
| Water Island (LIC20)          | 50                      |
| Bellport Beach (LIC21)        | 35                      |
| Moriches Inlet West (LIC23)   | 59                      |
| West Hampton Beach (LIC25)    | 36                      |
| Tiana Beach (LIC26)           | 63                      |
| Shinnecock Inlet West (LIC27) | 75                      |
| Shinnecock Inlet East (LIC28) | 35                      |

**Table 2**

Enterococcus counts over 35 enterococci/100ml along the New Jersey Coast - August 8, 2001.

| New Jersey Station             | Enterococci (per 100ml) |
|--------------------------------|-------------------------|
| Sandy Hook (JC05)              | 48                      |
| Long Branch (JC13)             | 53                      |
| Long Branch (JC14)             | 108                     |
| Bradley Beach (JC24)           | 49                      |
| Shark River Inlet (JC26)       | 78                      |
| South Manasquan Inlet (JC37)   | 51                      |
| Bay Head (JC41)                | 67                      |
| Lavallette (JC49)              | 80                      |
| Island Beach State Park (JC59) | 36                      |
| Barnegat (JC61)                | 48                      |
| Ship Bottom (JC65)             | 57                      |

**Table 3**

Dissolved Oxygen Concentrations of Bottom Water Samples at the Barnegat (JC61), Beach Haven (JC69), Atlantic City (JC75), Strathmere (JC85), and Hereford Inlet (JC90) perpendiculars (mg/l) - August 3 & 9, 2001.

| Location<br>(Nautical<br>Miles<br>Offshore) | Barnegat<br>JC 61 |     | Beach Haven<br>JC 69 |     | Atlantic City<br>JC 75 |     | Strathmere<br>JC 85 |     | Hereford Inlet<br>JC 90 |     |
|---------------------------------------------|-------------------|-----|----------------------|-----|------------------------|-----|---------------------|-----|-------------------------|-----|
|                                             | 8/3               | 8/9 | 8/3                  | 8/9 | 8/3                    | 8/9 | 8/3                 | 8/9 | 8/3                     | 8/9 |
| 1                                           | 6.5               | 5.8 | 4.2                  | 2.4 | 5.7                    | 3.0 | 5.8                 | 3.6 | 6.8                     | 4.2 |
| 3                                           | 3.8               | 3.3 | 4.2                  | 2.0 | 5.9                    | 4.0 | 5.5                 | 4.0 | 5.8                     | 3.0 |
| 5                                           | 3.4               | 2.1 | 4.1                  | 2.3 | 5.3                    | 3.1 | 3.9                 | 4.7 | 6.8                     | 5.1 |
| 7                                           | 3.1               | 3.2 | 3.4                  | 2.3 | 4.0                    | 3.3 | 3.4                 | 6.0 | 6.5                     | 5.0 |
| 9                                           | 3.8               | 6.7 | 2.6                  | 3.0 | 3.4                    | 3.5 | 3.2                 | 4.9 | 5.9                     | 6.4 |