

Sunday, September 16, 2012.

Members of the Bayshore Watershed Council, an all volunteer group dedicated to restoring Raritan and Sandy Hook bays, were on hand along with several local residents to seine and monitor water quality by the side of four bayside beaches: Cliffwood Beach in Aberdeen Township, Conaskonck Point in Union Beach, near the mouth of Pews Creek in the Port Monmouth section of Middletown Township, and near the mouth of Many Mind Creek in Atlantic Highlands.

The goal was to see if water quality in Raritan Bay and Sandy Hook Bay, a gritty urban-suburban estuary downstream from New York City, was healthy during a late summer day. To do this, watershed members had to find out what might be living along the shallow edge of this estuary. It is along the edge of a sandy beach where most people swim and fish, and a good diversity of aquatic life should be found.

One way to discover how healthily a natural body of water might be is to conduct a biological test. One of the best tests is through a seining program. Two people pull a long net through the shallow water to capture fish, crabs, and anything else that lives along the shallow edge of the bay, mostly small and juvenile animals. After recoding and taking a close look at what was found, participants then release the animals back into the water.

Seining is like a taking a brief health check to see the abundance and diversity of who's swimming in the water. In general, the more variety of life in the water, the healthy it is. Watershed volunteers were using a 50-foot long, hand-woven seine net with a five foot pole on each end. A seine is a net with a float line on top and a lead line on the bottom. The word seine is French, from the Latin *sagēna*, which means a fishing net designed to enclose fish. A seine net is an excellent tool for collecting fish, crabs, and aquatic animals with minimal injury to the animals. All fishes, crabs, and other aquatic creatures can be easily identified, cataloged, and returned to the water.

Among the catch was herring, including bluebacks and shad, by the hundreds, a half-a-dozen 4" snapper blues, Atlantic silversides and striped killifish by the handful, some born just a few weeks earlier, a northern pipefish, several species of drums, lots of comb jellies, mole crabs, and mud snails, and a few skillet fish and juvenile blennies. There was also an assortment of crabs and shrimps: blue crabs, lady crabs, spider crabs, mud crabs, mole crabs, snapping shrimp and shore shrimp. It was a varied bag for sure.

For some people, this was their first time exploring the bay for which they live so near. Yet everyone had fun discovering what interesting life lives in the bay. Many people also had a good time holding different species of fish, such as snapper blues and pipefish before releasing them into the estuary. Each haul of the seine net brought something new to reveal.

In spite of the diversity, though, the turbidity was poor. The water was cloudy and turbid, so much so that in some places you could only see a few inches down. Perhaps this was due to

recent rains that had washed in an abundance of sand, sediment, and other substances, some possibly toxic. There could have also been an abundance of algae floating in the water. Whatever the reason, the water didn't look fit for swimming.

Below are the details of the event. Species found and data collected are listed beneath each seine location. The weather was partly sunny with air temperatures in the low 70s. Winds were breezy out of the northwest. In addition to seining, water temperature and turbidity information were documented by volunteers at each site.

Thanks and appreciation goes to Frank from Aberdeen, Ron and his son from Hazlet, the Martin family from Oceanport, the Sheridan family from Keyport, and Kathy and Don from Aberdeen Township. Much obliged for all your wonderful help, time, and good spirits.

### **10:00am Cliffwood Beach/Near the mouth of Whale Creek**

Water Temperature: 72 degrees

1.5 ft turbidity

Outgoing tide

First Haul

29 Silversides or Spearing

10 YOY Silversides

14 Striped Killifish

1 Snapper Bluefish

1 Cunner

5 Sand Shrimp

1 Pipefish

7 Bay Anchovies

Lots of Comb jellies

### **12 noon Conaskonck Point/Union Beach**

Water Temperature: 74 degrees

1/2 foot turbidity

Outgoing tide

44 Silversides or Spearing

1 Snapping Shrimp

14 Hermit Crabs

8 Lady Crabs (all males)

1 Comb Jelly

1 Blue-claw Crab (male)

1 YOY Blue-claw Crab

Lots of Shore Shrimp

1 Snapper Bluefish

1 Blueback Herring

2 juvenile blennies

### **2pm Near the Mouth of Pews Creek in Port Monmouth**

Water Temperature: 72 degrees

1 foot turbidity

Low Tide

350+ Herring (a mixture of Blueback Herring and Hickory Shad species)

13 Silversides

4 Shore Shrimp

7 Lady Crabs

3 Comb jellies

Lots of Mud Snails

Lots of Hermit Crabs

25 Mole Crabs

### **4pm Near the Mouth of Many Mind Creek in Atlantic Highlands**

Water Temperature; 76 degrees

1/2 foot turbidity

Incoming tide

1 Pipefish

2 Skilletfish

10 Blueback Herring

65 Silversides or Spearing

50 Striped Killifish

Lots of Comb Jellies

Lots of Hermit Crabs

5 Silver Perch

3 Snapper Bluefish

5 Black-tipped Mud Crabs

Lots of Comb Jellies

Lots of Mud Crabs