

## Hempstead Harbor Water-Monitoring Report, August 23, 2010

Below is a copy of the water-monitoring report update for Hempstead Harbor covering the water-quality-sampling dates through August 18, 2010. The narrative and data are provided by:



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This program is funded by the **Hempstead Harbor Protection Committee** • 516-677-5790 • [www.hempsteadharbor.org](http://www.hempsteadharbor.org)

Sampling for the 2010 water-monitoring season began on May 13 with a reconnaissance trip to check out the condition and accessibility of monitoring stations and to check out a report of a large barge turned into a swimming pool that was tied off north of Mott's Cove.

Water testing began on May 20. We added two more stations as part of our regular program for full water-quality survey (to a total of 11 stations). (Some of the water-sampling stations have been monitored since the inception of the Coalition to Save Hempstead Harbor's (CSHH) Water-Monitoring Program in 1992.) These two new stations are CSHH #14 (by the NW corner of the brick building with stacks at the Glenwood Landing Power Plant and about 50' from shore and the cement outfall) and CSHH #15 (near the NW corner of Tappen Beach Pool and about 50' from shore and the cement outfall that drains Scudder's Pond). These two stations can be accessed only at high tide (which translates to about twice a month on our regular sampling days). Bacteria samples are also collected at these stations for analysis by Nassau County Department of Health (NCDH). The stations were added as part of our efforts to monitor bacteria levels from the powerhouse drainage area and Scudder's Pond, the two largest known contributors of bacteria to Hempstead Harbor. Both areas have been undergoing extensive study for to ameliorate storm-water impacts to the harbor.

In addition, we added shoreline stations #15A (outfall at the seawall north of pool that drains Scudder's Pond) and #15B (at Scudder's Pond weir) as regular sampling stations for bacteria only (analysis performed by Nassau County Department of Health). We began sampling at CSHH #14A (the cement outfall north of the National Grid/Glenwood Landing Power Plant) also for bacteria only (analysis performed also by NCDH) on June 9, 2010. (Jack Tiernan, manager of the plant, very generously arranged to have a gate with a lock installed in the fence adjacent to the plant to provide access specifically for water sampling.) Samples are collected weekly from CSHH #15A, 15B, and 14A before boarding the boat for midharbor sample collection.

Samples are collected less frequently from another two stations we've incorporated into the program: CSHH #13A and 13B, located at the head of Glen Cove Creek. Samples are collected for bacteria only and are intended to discern differences in bacteria levels of samples that have more dilution (i.e., from CSHH #13, about 60' from the Mill Pond Weir) from those that flow either directly from the 4' Nassau County outfall that drains Cedar Swamp Creek (#13A, adjacent to the Mill Pond weir at bulkhead on south side of Glen Cove Creek) and the dogleg at the head of GC Creek (north side) that now drains most of the water from Mill Pond. Both stations can be accessed only at peak high tide. (We now have a total of 20 stations from which we collect bacteria samples, with the frequency of sampling depending on weather and tidal conditions.)

Turbidity is being monitored again this season at two depths—half meter below surface as the first reading and at Secchi-disk depth as the second reading.

Below are highlights for sampling dates through August 18.

### AUGUST 4, 11, 18

**August 4:** High tide, 5:36 AM; outgoing tide during full survey at 5 stations; collected bacteria samples at 12 stations; wind was SW 6-19 kts.

**August 11:** High tide, 12:26 PM; incoming tide as we conducted a full survey at 11 stations and collected bacteria samples at 18 stations; wind was N-NE at 6-13 kts.

**August 18:** High tide, 7:10 AM; outgoing tide as we conducted a full survey at 5 stations and collected bacteria samples at 18 stations; no breezes.

#### **Rain, Temperature, and DO**

Hot and dry have been the operative words this summer. There was only a trace amount of **rainfall** from August 1-11, and less than a half an inch (or 12 mm) fell August 12-18 over four days. **Air temperature** ranged at 26-30°C, 25-31°C, and 23-26°C on August 4, 11, and 18, respectively (cloud cover most of the morning on August 18 kept things cooler). **Water temperature** was at 23°C at the surface and 22°C at the bottom on August 4; on August 11 and 18, average water temperature increased to about 24°C at the surface and 23°C at the bottom at most upper-harbor stations. Lower-harbor stations surveyed on August 11 had higher average water temperatures—25°C at surface and bottom— than upper-harbor stations. The usual variations occurred at stations near the Glen Cove STP outfall and at the head of Glen Cove Creek (because of the fresh- water flow

from the large county outfall pipe). **Bottom DO** levels were up from July but still low at many stations, ranging at about 1-4 ppm on August 4, with the lowest DO recorded at CSHH #2 (the station at the mouth of the harbor, nearest to Long Island Sound); surface DO ranged at about 4-6 ppm at CSHH #1, 2, 3, and 8; surface DO at the head of Glen Cove Creek (CSHH #13) was at about 3.2 ppm. Recorded DO levels on August 11 showed greater variation throughout the harbor, with bottom DO ranging at 1-6 ppm; surface DO levels ranged at about 4-7 ppm. On August 18, bottom DO generally ranged from about 4-5 ppm, with supersaturated levels at surface (ranging at about 6-11 ppm); CSHH #13 had bottom DO at about 8 ppm.

### Color and Clarity

On all sampling dates in August so far, water color was judged to be a normal green or brown-green. On August 11 and 18, it seemed that an algal bloom was in process—the water had a "thicker" or murkier look to it, and on August 18, supersaturated Do levels near the surface in different parts of the harbor seemed to bear out a growth phase of an algal bloom. Secchi depth was greater on August 4 (about 1-1.5 meters) than on August 11 and 18 (when it measured generally at or below 1 meter) for upper-harbor stations; lower-harbor stations had higher turbidity (Secchi depth was at about a half a meter).

### Observations

#### Wildlife

**August 4:** Comb jellies (both sea walnuts and sea gooseberries) were noted throughout the harbor. The **blue-claw crabs are back**—this was the first time we noticed them since the population explosion in 2007. Dozens of blue crabs clung to the bulkhead along the south side of Glen Cove Creek, and 4 were by the Tappen Marina bulkhead. We had reports that there large numbers of blue crabs in Oyster Bay as well. We saw a dead bunker (about 12 inches) floating in Glen Cove Creek near CSHH #10 with noticeable reddish patches around its body and along the edges of its gills; we took a plankton sample and sent it to NCDH for analysis. The birds we noted while sampling included 4 cormorants, 2 egrets, 2 blue herons, and 2 dozen ducks and ducklings, about 7.5 dozen Canada geese (mostly at the beaches—Tappen and North Hempstead Beach Park), 2 ospreys, 2 swans and 6 cygnets, about a dozen hooded gulls, 3 killdeer, and one other plover- type bird.

**August 11:** A **sandworm mating ritual** was taking place by Beacon 11—1-2-inch sandworms with bright-red tips were swirling around in the water. This usually occurs around a full or new moon (as was the case) and generally earlier in the season in Hempstead Harbor but can be seen as late as September. There was a report that this had also occurred in early July near Morgan Beach in Glen Cove. (Local fishermen refer to this phase of the sandworms as cinder worms.) Comb jellies (both types) and bait fish were noted throughout the harbor. We saw 6 blue-claw crabs—at Tappen Marina and the bulkhead by the STP in Glen Cove Creek. Also noted were 12 cormorants, 1 blue heron, 2 dozen ducks and 6 ducklings, 4 egrets, about 5.5 dozen Canada geese, 5 ospreys (including the three fledglings on the duck-blind nest--they all flew off as we approached), 18 swans and 11 cygnets, 2 killdeer, 2 dozen terns, and an **American goldfinch** (in the brush along the north side of Glen Cove Creek).

**August 18:** Comb jellies and bait fish were noted in different parts of the harbor. A dozen blue-claw crabs were noted by the bulkhead below Steamboat Landing in Glen Cove Creek and 2 at Tappen Marina. Small shrimp too numerous to count were also noted in those locations. Birds noted included 2 cormorants, 7 blue herons, 9 ducks and 3 ducklings, 11 egrets (both snowy and great), 1.5 dozen Canada geese, 6 ospreys, 29 swans and 11 cygnets, and 6 terns.



*Blue herons and ducks are seen frequently in Glen Cove Creek and other parts of the harbor (photos by Carol DiPaolo, 8/4/10 and 8/11/10)*

### Striped Bass Survey

NY DEC staff were seining in Hempstead Harbor on August 17 as part of the DEC's annual striped bass study for the NYS marine district. DEC marine biologist Jennifer O'Dwyer provided preliminary information on the seining and reported the following for five of the six sites that were sampled:

*"...there was not much algae, shrimp, or jelly. We are still catching large amounts of young of the year (yoy) Striped Bass which I hope is a good sign. Here are our totals for the day:*

*Striped Bass (yoy)= 48  
Striped Bass (old) = 1  
Bluefish (yoy) = 152  
Alewife = 1  
Winter Flounder (yoy) = 3  
Tautog (yoy) = 1  
Pipefish = 4*

*Silversides = 24499  
Killifish = 116  
Green Crab = 2  
Blue Crab = 1 Female  
Calico Crab = 1  
Asian Shore Crab = 1*

*At some sites due to the large numbers we had to sub-sample the silversides so that number is a best estimate not an exact count.*



*Blue-claw crabs netted from bulkhead beneath The Wharf at Steamboat Landing in Glen Cove Creek (photos by Carol DiPaolo, 8/18/10)*

## JULY 7, 15, 21, 28

**July 7:** High tide, 7:24 AM; outgoing tide as we conducted a full survey at 5 stations and collected bacteria samples at 14 stations; wind, NE 6-21 kts.

**July 15:** High tide, 2:30 PM; slack to incoming tide as we conducted a full survey at 4 stations and collected bacteria samples at 12 stations; wind, NE 10-21 kts. There were 1-ft waves at CSHH #2. (Because the water was very low at the head of Glen Cove Creek, we couldn't hold our position for a full survey at CSHH #13; we were able to collect a bacteria sample.) While sampling by the STP, we noted a very white opaque flow from the pipe at CSHH #10.

**July 21:** High tide, 8:30 AM; incoming tide at the start, but outgoing for most of the survey at 11 stations; collected bacteria samples at 20 stations; wind was mostly NW and 8-15 kts. Lots of foam was around the power plant; we hadn't seen this in a long while, and it is caused by algal cells taken in with the water for cooling and then heated up and dispersed again in the harbor. On July 19, Jack Tiernan, GWL power plant manager, called to report soap suds flowing from the Powerhouse Drain; Nassau County DPW staff, Tim Kelly and Dan Fucci were called and they arrived to take samples and see whether there was any indication of an upland illicit discharge.

**July 28:** High tide, 1:29 PM; incoming tide during sampling; full survey at 5 stations and collected bacteria samples at 12 stations.

### **Rain, Temperature, and DO**

Total rainfall for July was 103.5 mm (about 50 mm less than what we had in July 2009). There was no rainfall the week preceding the July 7 survey, 70 mm within 48 hours of the July 15 survey, and no rain within 48 hours of the July 21 and July 28 surveys. **Air temperature** ranged at about 29-34°C, 23-24°C (cloudy), 29-32°C, and 27-31°C on July 7, 15, 21, and 28, respectively. **Water temperature** was at 23-25°C at the surface at most stations during our surveys but increased to 27°C on July 28. Bottom water temperature showed variations primarily due to depth. The lowest bottom temperature at the beginning of the month was about 18°C and the lowest by the end of the month was at about 21°C, but bottom temperatures at some stations had reached 25°C. **Bottom DO** crashed to 0.58 ppm at CSHH #2 (the station nearest LIS). The ranges for each of the survey dates were about 2-7 ppm on July 7; about 3-4 ppm on July 15; about 1-6 ppm on July 21; and less than 1 ppm to 5 ppm on July 28. Supersaturated levels of DO at the surface were recorded on July 7 at some stations.

## Color and Clarity

On three of the four survey dates, water color was judged to be a normal green, although it was soupy looking on July 21; it was brown on July 28. Secchi-depth ranges were 1-1.5 m on July 7; 1-2 m on July 15; 0.8-1 m on July 21; and 0.7-1.3 m on July 28.

## Observations

### Wildlife

*July 7:* Comb jellies (both sea walnuts and sea gooseberries) were noted throughout the harbor. We saw 2 dead striped bass along the north side of Glen Cove Creek—one was the remnant of a fillet and the other was whole with a hook and cut line attached to it. The birds we noted while sampling included 7 cormorants, 10 ducks, 1 egret, and 12 dozen Canada geese (mostly at the beaches—Tappen and North Hempstead Beach Park), 2 ospreys, 2 swans and 6 cygnets, 4 killdeer, and about 2 dozen terns. A swan family that we see frequently in Glen Cove Creek is unusual because one of the cygnets was a standout from the others—white from the outset (see picture below).

*July 15:* Comb jellies (both types) were noted throughout the harbor but an unusually dense population formed thick clouds of jelly around the dock near the STP and adjacent marina. We noted a thick set of blue mussels on the south seawall in Glen Cove Creek by the STP. Also noted were 6 cormorants, 2 blue herons, 2 ducks, 9 egrets, 4 dozen Canada geese, 4 ospreys, 6 swans and 6 cygnets, and 5 terns.

*July 21:* A small number of comb jellies were seen near Beacon 11 (CSHH #1) and half of a large dead eel was seen in the lower harbor. A man was shooting off firecrackers or flares at Bar Beach to chase the geese away; we saw about 150 Canada geese at the North Hempstead Beach Park (north), about three dozen geese at the bar south of the beach, plus an additional 20 geese in other areas. Also noted were 2 cormorants, 2 ducks, 11 egrets (both snowy and great), 9 ospreys (including 3 chicks still in the duck-blind nest), 10 swans and 5 cygnets, and 6 hooded gulls.

*July 28:* Comb jellies (both sea walnuts and sea gooseberries) were noted at CSHH #1 and #2. We saw large numbers of bait fish in Glen Cove Creek. Large numbers of Canada geese the North Hempstead Beach Park (south) (8 dozen) and north of Tappen Beach (2 dozen). Also noted were 1 blue heron, 7 ducks and 7 ducklings, 13 egrets (most on the sand bar on the north side of Glen Cove Creek), 1 kingfisher, 4 ospreys, and 2 swans and 6 cygnets.



*Swan family in Glen Cove Creek with one white cygnet among its darker siblings  
(photo by Carol DiPaolo, 7/7/10)*

### Striped Bass Survey

NY DEC staff were seining in Hempstead Harbor on July 30 as part of the DEC's annual striped bass study for the NYS marine district. DEC marine biologist Jennifer O'Dwyer provided preliminary information on the seining and reported the following:

*Our boat was fixed and we were able to sample Hempstead Harbor on Friday, 7/30/10. We were able to sample all 6 stations. We had a small amount of grass shrimp and comb jellies at most sites. We*

had a severe amount of algae at each site due to sampling near low tide. We caught a good assortment of fish and crabs. Here are the tallies:

Silversides	4717	Northern pipefish	41
Killifish	234	Scup	1
Striped Bass	4	Tautog	1
YOY Striped Bass	9	Northern Puffer	2
Bluefish	58	Calico Crab	7
Winter Flounder	33	Green Crab	6
American Eel	2	Asian Shore Crab	1
Atlantic Tomcod	1	Mud Crab	55
Bay Anchovy	13	Spider Crab	8
Blueback Herring	3	Blue Crab	8
Halfbeak	1	Horseshoe crab	2
Grubby Sculpin	2		

All the Bluefish, Winter Flounder, and Tautog were young of the year (YOY). I separated the older and YOY Striped Bass.

## **JUNE 2, 9, 16, 23, 30**

**June 2:** High tide, 3:10 AM; outgoing tide at start of sampling; full survey at 5 stations and collected bacteria samples at 11 stations; mostly calm with a N-NW breeze at 6-8 kts. A lot of debris (plastic bottles, pieces of paper, plastic, and Styrofoam, and boards) were noted along with a lot of vegetation floating on the surface—probably from rain and winds the day before. A new navigational marker was in place near Beacon 11. A sulfur odor was noted at the head of Glen Cove Creek and Scudder's Pond.

**June 9:** High tide, 9:30 AM; an incoming tide at start of full survey at 3 stations. Trouble with YSI meters made for a shorter run for DO levels; collected bacteria samples at 19 stations; mostly calm with a breeze from the south up to 5 kts. This was the first date that samples were collected at CSHH #14A (at the large cement outfall adjacent to the National Grid power plant at Glenwood Landing (the plant manager, Jack Tiernan arranged for a gate and lock to be installed specifically for water-sample collection).

**June 16:** High tide, 2 AM.; outgoing tide at start of survey at 5 stations; collected bacteria samples at 8 stations; wind, S-SW 8-10 kts. YSI meters were being serviced, so bottom DO levels were measured with a Winkler titration kit.

**June 23:** High tide, 9:47 AM; incoming tide; full survey at 5 stations; collected bacteria samples at 11 stations; wind mostly NW 6-21 kts.

**June 30:** High tide, 2:36 PM; incoming tide as we conducted a full survey at 5 stations and collected bacteria samples at 12 stations. **On the night of June 25 into the morning of June 26, a power failure or interruption caused systems to fail at the Glen Cove Sewage Treatment Plant, and 900,000 gallons of sewage was released—with 300,000 gallons recovered but 600,000 gallons of sewage released to the harbor. The beaches remained open because of communication failures. Although many people were at the beach and swimming, we received no reports of the spill until early Monday morning (June 28) when a special sample-collection run was scheduled. We collected samples at CSHH #1-3 and 8-13 for analysis by NCDH. We were joined by a NYDEC staffer who collected samples at stations that coincided with SGA #50 for shellfisheries. All of the bacteria results for both fecal coliform and enterococci were very low. The moon tides may have helped to quickly move the sewage out of the harbor.**

### **Rain, Temperature, and DO**

Total rainfall for June was 50.5 mm (compared with 294 mm for June 2009). We had 12 mm of rain within 24 hours of the June 2 water monitoring; no significant rainfall within 48 hours of the other June monitoring dates.

**Air temperature** ranged at about 21-23°C, 19-22°C (cloudy), 21-23°C (cloudy), 26-29°C, 19-20°C (windy) on June 2, 9, 16, 23, and 30, respectively, during the monitoring period. **Water temperature** varied at surface and bottom: generally, 18-20°C at the surface and 16-19°C at bottom for June 2, 9, and 16. For June 23 and 30, temperatures at the surface were at about 20-23°C; bottom temperatures ranged at 16-19°C on June 23 and about 18-23°C on June 30. DO data is limited for June 9 and 16 because of problems with DO probe on the YSI meter. **Bottom DO** showed wide variations, as did surface DO, reaching supersaturated levels for both (see attached spreadsheet).

## Color and Clarity

On all but one of the five survey dates in June, water color was judged to be normal and, most of the time, green, although it appeared brown at CSHH #1 on June 2 and "thick" and dark green on June 23. On June 16, the color was judged an abnormal red-brown to an olive green in sections of the harbor. Secchi depths reached 1.5 m on June 16 and 30 and fell as low as 0.3 at the head of the harbor on June 9.

## Observations

### Wildlife

*June 2:* Comb jellies were noted at CSHH #1 (Beacon 11). The birds we noted while sampling included 3 cormorants, 18 mallards and 7 ducklings, 2 egret, and 6 dozen Canada geese (mostly at the beaches—North Hempstead Beach Park and Tappen Beach), 1 kingfisher, 2 ospreys, 5 swans and 10 cygnets, 13 hooded gulls.

*June 9:* No comb jellies were noted. Birds noted included 6 cormorants, 16 ducks and 6 ducklings, 8 egrets, about 6.5 dozen Canada geese, 6 ospreys, 15 swans and 6 cygnets, and 20 hooded gulls.

*June 16:* Comb jellies were noted at CSHH #1 (both sea walnuts and sea gooseberries) in large numbers. Also noted were 2 cormorants, 20 ducks and 7 ducklings, about 17 dozen Canada geese (most were north of Tappen Pool), and 6 swans and 14 cygnets.

*June 23:* No jellies noted. Some birds, particularly land-based birds, are so numerous and are such a common sight around the beaches and harbor that we rarely include them in our reports. The swallows that dart around the marinas are among these, but because our boat slip is adjacent to the marina bulkhead, we were able to get a close look at the swallows' nests and tiny chicks. As we loaded gear onto the boat at the slip in Tappen Marina, dozens of swallows were flying to and from nests built under beams in the bulkhead of the marina. Tiny swallow heads could be seen peaking out of the nests; the swallows and nests blended perfectly with the colors of rusty metal of the bulkhead. The sailboat/osprey home (see description below for May 26) was back on a mooring in the lower harbor but no ospreys claimed it. Three osprey chicks were thriving on the duck blind nest. Also noted were 11 cormorants, 3 dozen ducks and 7 ducklings, 9 egrets (both great and snowy), about 16 dozen geese, 3 ospreys plus 3 osprey chicks in nest), and 13 swans and 9 cygnets.

*June 30:* Comb jellies (only sea gooseberries) were noted at CSHH #1. Also noted were 6 cormorants, about 9 dozen Canada geese (at North Hempstead Beach Park and Tappen Beach), 3 egrets, 1 osprey, 2 swans, 4 hooded gulls and 3 terns.



Gate for sampling Powerhouse Drain  
(photos by Carol DiPaolo, 8/4/10 and 7/19/10)



Soap suds flowing from Powerhouse Drain on 7/19/10

## Fishing Report

I contacted Hempstead Harbor angler Pete Emmerich about water conditions on June 23 and a report received on June 24 of lots of seaweed washing up on shore, especially below Bar Beach, and that the water was looking thick with an algal bloom. However, it was pretty windy on the 24<sup>th</sup> and I thought that might mix things up in the water column. Pete's response:

*We were out swimming in the harbor all weekend, didn't see anything like an algae bloom although it looked a little red last weekend on the way onto Manhasset Harbor. There was lots of sea weed and other garbage moving out of the back harbor on the outgoing tide yesterday. I assumed it was due to a new moon high yesterday.*

*Tons of bunker in the harbor Friday and Saturday night but the fisherman had trouble finding bass. I think it was because of the full moon. Bluefish are starting to make a stronger appearance.*

Pete didn't see any signs of the sewage spill that had occurred Friday into Saturday.

### *Striped Bass Survey*

NY DEC staff were seining in Hempstead Harbor on June 2 as part of the DEC's annual striped bass study for the NYS marine district. DEC marine biologist Jennifer O'Dwyer provided preliminary information on the seining and reported the following:

*We were able to do all 6 stations on Wednesday. It was a great day to be out on the water. The air and water temps are warming up fast. We saw small amounts of grass shrimp in each seine and there was not much jellyfish in the water, just a few comb jellies. The amount of algae, mostly ulva, is increasing. We are working with our Crustacean Unit on a Blue Crab pot survey in Hempstead and Wednesday was the first day. We only caught spider crabs but we're still working on finding the best locations for the pots. We caught a lot of small fish and a good assortment of crabs. Here are the totals:*

<i>Silversides</i>	<i>925</i>	<i>Northern Pipefish</i>	<i>29</i>
<i>Killifish</i>	<i>9</i>	<i>Spider Crab</i>	<i>4</i>
<i>Sandlance/SandEel</i>	<i>2</i>	<i>Green Crab</i>	<i>5</i>
<i>Pollock</i>	<i>1</i>	<i>Rock Crab</i>	<i>2</i>
<i>Atlantic Tomcod</i>	<i>12</i>	<i>Horseshoe Crab</i>	<i>5</i>
<i>Naked Goby</i>	<i>2</i>	<i>Blue Crab (YOY)</i>	<i>1</i>
<i>Summer Flounder</i>	<i>1</i>	<i>Lady/Calico Crab</i>	<i>2</i>
<i>Tautog</i>	<i>1</i>	<i>Mud Crab</i>	<i>6</i>
<i>Winter Flounder</i>	<i>4</i>	<i>Asian Shore Crab</i>	<i>1</i>
<i>Spotted Hake</i>	<i>1</i>		



*Three osprey chicks (heads at left) on duck blind blend with nesting material; swallow on nest with chicks at Tappen Marina (photos by Carol DiPaolo, 6/23/10)*

## **MAY 20, 26**

*May 20: This was the first survey date for the 2010 season, but we had been out the previous week, on May 13, to do a reconnaissance run. We also checked out a report that a barge turned into a swimming pool—The Floating Pool Lady— had been towed into the lower harbor, north of Mott's Cove. The pool was used at City Island and was due to be towed there in June.*

*During our survey on May 20, we also checked out a report of flooding from construction on West Shore Road that was draining through an outfall at Bar Beach Cove. We found the area, where vegetation had been recently cut and thrown over the outfall to the cove. It seemed that the flow of water from the outfall had scoured the area immediately around it. We were told that the flow was not from construction but from groundwater.*

We were prevented from doing any testing at the head of Glen Cove Creek because of barges blocking access to the creek east of the STP. We called Glen Cove Harbor Patrol, and the barges were moved out by our June 2 survey but now are tied in the middle of the harbor.

High tide, 3:04 PM; outgoing to low tide through most of water monitoring; full survey at 4 stations and collected bacteria samples at 10 stations; NE breeze, 8 kts at the start, and then calm for the rest of the survey.



*The Floating Pool Lady—a barge turned into swimming pool; tied off north of Mott's Cove (photo by Carol DiPaolo, 5/1310)*

**May 26:** High tide, 10:49 AM; an incoming tide or high tide for most of the monitoring period, which included a full survey at 4 stations and bacterial collection at 16 stations. As we traveled past the power plant to collect bacteria samples in the lower harbor, we noticed steam coming out of a new green discharge pipe at the plant; we measured temperature just below the surface, expecting it to be warmer than the surrounding area, but it was cooler—14.5°C as compared with about 15-15.5°C near the bar south of Bar Beach. A barge with fireworks was tied off at the bulkhead south of the power plant, in preparation for the Memorial Day fireworks scheduled for the harbor.

#### **Rain, Temperature, and DO**

Total rainfall for May was 84.5 mm (compared with 135 mm for May 2009). We had 1.5 mm of rain within 24 hours of the May 20 water monitoring (28 mm within 48 hours); we had only 1.5 mm with 24 and 48 hours of the May 26 water monitoring. **Air temperature** ranged at about 15-22°C on May 20 and 21-30°C during the monitoring period. **Water temperature** was 13-14°C at the surface and 11-13°C at bottom for May 20 and 16-17°C at surface and 14-16°C at bottom on May 26. **Bottom DO** ranged at about 8-9 ppm on May 20 and 8-10 ppm on May 26.

#### **Color and Clarity**

On both survey dates in May, water color was judged to be a normal green, although on, May 26, the lower harbor (below the bar) was very murky with pollen slicks on the surface. Water in the upper harbor was clear on both survey dates in May, and Secchi depths reached nearly 2.5 m on May 20 and 2 m on May 26.

#### **Observations**

##### **Wildlife**

**May 20:** Comb jellies—large sea walnuts—were noted in Tappen Marina; we usually don't notice them until June. The birds we noted while sampling included 15 cormorants, 1 snowy egret, and 30 Canada geese, 2 ospreys in the nest at Beacon 11, and 3 swans.

**May 26:** No comb jellies were noted. There have been approximately 6 easily visible osprey nests in the harbor that we've seen for the last fifteen years. Over the last seven years or so, a blue sailboat that has been moored in the lower harbor and has served as a platform for an osprey nest during that time broke its mooring and had been removed early in the season. The returning ospreys had to find an alternate site and chose a duck blind off the western shore of the lower harbor. They seemed to have some trouble making a suitable nest on the duck blind, and it seemed that they were late in laying their eggs, but they finally managed. Another duck blind, in Mott's Cove, had a goose nest on it, but it seemed to have been raided—1 egg had rolled off to the side of it. Our bird count for this survey included 4 cormorants, 15 ducks, about 9 dozen Canada geese and 13 goslings, 10 ospreys—all on nests, and 15 swans.



### Fishing Report

On May 25, Pete Emmerich, member of the Hempstead Harbor Anglers, reported on May 25 the following:

*Start of another year, and it is gangbusters. Bunker all over the harbor, bass are everywhere, blue fish also, seem early for blues? Fluke are close also, reached Bayville already, should be here in another week or 2. Fishing out in the mouth of Hempstead in 45 to 60 feet of water, mammoth bunker schools being pushed by fish....*

When I asked Pete for more details on his catch and whether he has seen any evidence of a red tide that was reported that the bass he caught was about 30-32 pounds, and the largest caught that night was 42 inches long and about 35 pounds:

*We had 6 bass like this last night, and they were caught in the middle of the harbor, this side of the shipping channel. I guess we can call that the mouth of the harbor, but it is certainly north of the line from Prospect to Matinnecock. There were bunker all the way to Bar Beach last night. I'm sure there are bass there as well.*

*Have seen no red tide but have taken notice of the jelly fish— saw them Friday night about ¼ mile north of the Prospect buoy, and plenty last night as well.*

### Striped Bass Survey

NY DEC staff were seining in Hempstead Harbor on May 5 as part of the DEC's annual striped bass study for the NYS marine district. DEC marine biologist Jennifer O'Dwyer provided preliminary information on the seining and reported the following:

*We were scheduled to sample Hempstead originally on Tuesday the 4<sup>th</sup>, but we had some engine problems and so had to try again on the Wednesday the 5<sup>th</sup>. Everything went well, weather was great, and we saw splashes at the surface in the middle of the harbor but we didn't catch much. There was very little shrimp and some jelly, mostly comb jellies, but one station we had gooseberries. Here are our catch totals:*

*Silversides = 876  
Atlantic Herring = 17  
Bay Anchovy = 3  
Young of the Year Blue Crab = 1*

*Spider Crab = 1  
Horseshoe Crabs = 4 ( 2 females and 2 males)*



Osprey on duck-blind nest (photo by Carol DiPaolo, 5/13/10)