

Water-Monitoring Report, June 23, 2008

Below is a copy of the sampling report update for Hempstead Harbor through June 19 for the 2008 water-monitoring season. 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

The water-monitoring season for 2008 began with a reconnaissance trip on April 18, 2008, in Hempstead Harbor to check conditions at all of the monitoring stations established since the inception of the Coalition to Save Hempstead Harbor's (CSHH) Water-Monitoring Program in 1992. Nine stations have been selected for full surveys, weekly to monthly, depending on tidal cycle, although there are a total of 13 stations at which samples are also collected for bacteria analysis that is conducted at the Nassau County Department of Health lab. If unusual conditions or discharges are visible, additional samples are collected for bacteria analysis.

JUNE 19

The weather quickly changed from cloudy at the start of the water sampling to clear by the time we reached our last station. The wind was from the east at 4 kts at the start but shifted—NE, W, and E again. The tide was incoming, with about 4 hours to peak high (at 1 pm). 16 mm of rain had fallen within 24 hours prior to monitoring, with a total accumulation for the preceding week of 33 mm. Only upper-harbor stations were monitored because of the tidal cycle.

Temperature and DO

Air temperature ranged from about 16°C to 20°C during the sampling period. Water temperature was about 20°C at the surface and about 17-20°C at the bottom. DO was unusually high at the surface to midcolumn, with surface levels at about 12 ppm throughout the upper harbor. Bottom DO ranged between about 5 ppm and 7 ppm. Stations 8 and 13, in Glen Cove Creek, showed the greatest variation between surface and bottom DO as well as salinity (near 22 ppt at the surface and over 24 ppt at the bottom).

Color and Clarity

Although water color was judged to be within a normal range—greenish-brown—it seemed that an algal bloom was in process, and the supersaturated DO levels seem to bear this out. Because of the moon tides, a more than usual amount of vegetation (seaweed and other) was on the surface; there were also more floatables than usual, particularly in Glen Cove Creek. Glen Cove Creek was very brown and murky. Work continued on rebuilding the bulkhead on the north side of the creek near the Li Tungsten site. Secchi depth ranged from 0.75 m to 2.0 m.

Observations

Wildlife

Two ospreys were seen in the vicinity of Beacon 11, one on the large nest that had been built at the top of the beacon. Two other ospreys were seen flying over Glen Cove Creek. Also seen were 8 swans, 15 mallards, 3 cormorants, and about 9 dozen Canada geese. No comb jellies were seen. Fish were jumping at the surface, and gulls were diving into water around them. About 9 dead horseshoe crabs were seen (in Tappen marina, near Beacon 11, and in Glen Cove Creek). (Last week there was evidence of horseshoe crab spawning on Tappen Beach, and 3 dead horseshoe crabs were seen then.)

Fishing Report

On June 13, Hempstead Harbor Angler Pete Emmerich reported:

Yes we are slamming the bass, but concentrating near Rye Beach. The harbor is full of bunker and blues but they are up and down with the time of day and night. Across the way in 60 feet of water has been a runway for bunker and bass.

Pete also commented on how brown the water was at that point. On June 17, Pete reported:

Wild fishing last night, the harbor is loaded with bunker, all stacked up by the tug boat slips on the West side of the harbor by the barges. Marking bass everywhere now, caught well last night between Prospect and Matinecock.

Human

The large Gladsky Marine crane and 3 barges were tucked in closer to the Gladsky marina. About 14 barges were off shore of the Port Washington gravel-transfer operation, and one was loaded with cement girders. Four powerboats were seen leaving the harbor and two kayakers were paddling off of Tappen Beach. The Nassau Ready Mix plant in the creek was operating, and a crane was unloading a gravel barge to the Rayson plant in Glen Cove Creek. Workers were rebuilding the steel bulkhead at the Li Tungsten site.

JUNE 11

The weather was clear, and the wind was from the N at 4 kts. The tide was outgoing, with about 10½ hours to peak high (at about 7 pm). Although a windstorm blew in the night before, it dropped only a trace amount of rain; total rainfall accumulation for the preceding week was 23 mm. A large amount of vegetation was visible on the surface of the harbor from the previous night's storm. Because of the outgoing tide, only upper-harbor stations were monitored. Station CSHH #13 was added as a full-survey station, in addition to collecting the usual samples for bacterial analysis.

Temperature and DO

Air temperature quickly rose from about 21°C to a little over 27°C during the sampling period. Water temperature was 18-20°C at the surface and about 15-18°C at the bottom. Although DO levels were within a normal range for this time of year at CSHH #1, other stations had supersaturated levels. CSHH #2 (closest to the sound) had supersaturated DO levels at every meter in the water column (about 9.6-10 ppm) except for the bottom (8.5 ppm). CSHH #13 (near the Mill Pond Weir in Glen Cove Creek) started with DO at 14.4 ppm at a ½ meter below the surface and within 3 meters dropped to 2.9 ppm at the bottom. Surface salinity at CSHH #13 was unusually low—17.3 ppt— and increased to 24 ppt at the bottom.

Color and Clarity

Water color was a normal green throughout most of the harbor. An algal bloom appeared to be in process both from the look of the water—high level of turbidity—and supersaturated DO levels. Still, secchi levels ranged from 1 m to 1.5 m.

Observations

Wildlife

Three ospreys were seen in the vicinity of Beacon 11: with one returning to the beacon with a branch, another on the nest, and one flying nearby. Also seen were 4 swans, 10 mallards, 4 cormorants, about 4 dozen Canada geese between the Bar Beach fishing pier and Hempstead Harbor Beach (both beaches have been joined together as the Town of North Hempstead Beach Park), about 3 dozen Canada geese in Glen Cove Creek and a separate three geese and three goslings in near the marina in the creek, 6 ducks, and 1 snowy egret. Lots of bunker were jumping near the barges in the harbor, and large schools of young bunker (5") were in Glen Cove Creek.

A volunteer went to the lower harbor during the evening high tide to check on the status of the osprey nest in the blue sailboat—two hatchlings were in the nest.

Striped Bass Survey

NY DEC staff were seining in Hempstead Harbor on June 10 as part of the DEC's annual striped-bass study for the NYS marine district. DEC marine biologist Jennifer Dwyer provided us with a preliminary report on the catch for June 10 so that we can compare observations. The crew seined at five stations in Hempstead Harbor and caught mostly bay anchovies (1,024) and silversides (1,802), but also a young of the year bluefish, an older bass, 4 older tautogs, 2 green crabs, 3 male and 1 female horseshoe crabs, 1 male blue-claw crab, and some comb jellies and shrimp. Interestingly, two schools of fan lance were in the area but most were able to swim through the netting. They also caught an adult diamondback terrapin (255 mm across 275 mm long) near the bar at the south of the Town of North Hempstead Beach Park.

Human

The large Gladsky Marine crane and barges were anchored off of the KeySpan/National Grid property, adjacent to Tappen Marina; a barge with a truck and 25 other barges were anchored off of the Port Washington gravel operation. Four powerboats and a cigarette boat were seen in the harbor. A boat had washed up on shore between Sea Isle and the Sea Cliff Yacht Club pier. Three fishermen were fishing off of the beach between the Hempstead Harbor Club and the old ferry terminal.

MAY 28-JUNE 4, 2008

Sampling cancelled because of continued problems with boat engine.

MAY 21

The weather was clear, and the wind was from the N at 4 kts. The tide was incoming, with about 4 hours to peak high (1:10pm). 13 mm of rain had fallen within 24 hours prior to monitoring, with a total accumulation for the preceding week of 44.5 mm. Monitoring was cut short to three upper-harbor stations because of an engine problem.

Temperature and DO

Air temperature ranged from about 16°C to 18°C during the sampling period. Water temperature was just under 14°C at the surface and at 13.4-13.7°C at the bottom. Bottom DO ranged between 7 ppm and 8.7 ppm.

Color and Clarity

Water color was a normal green throughout most of the harbor with lots of seaweed visible on local beaches. Glen Cove Creek was very brown and murky, probably from dirt and sand entering the creek from collapsed sections of the bulkhead and repair work being done to rebuild those sections. Secchi depth ranged from 1 m to 1.75 m.

Observations

Wildlife

Two ospreys were seen in the vicinity of Beacon 11, with one returning to the beacon with nesting material. Also seen were 4 swans, 10 mallards, 4 cormorants, 10 Canada geese, and two black-crowned night herons (along Glen Cove Creek). There was an unusual sighting of a turkey vulture flying over Glen Cove Creek. Turkey vultures have also been seen near Manhasset Bay.

One comb jelly (a sea walnut) was observed at CSHH #3, which may signal another shift in the appearance of comb jellies in the harbor, which are usually seen in early June. Last season the comb jellies arrived unusually late in the season (mid-August) and were seen in fewer numbers than in previous years.

On May 20, a local resident reported seeing a small diamondback terrapin at Sea Isle in Glen Cove Creek.

Human

The large Gladsky Marine crane and 5 barges were anchored off of the KeySpan/National Grid property that is adjacent to Tappen Marina; a fuel barge was at the Exxon terminal; a large tug and barge with crane, truck, and trailer was anchored off of the Port Washington gravel-transfer operation and 6 other barges were anchored further north two power boats and a clammer headed out of the harbor.

MAY 14

This was the first of week of our regular monitoring for the 2008 season. We brought out both of our YSI 600 series sondes to do side-by-side testing. Both sondes had been returned from YSI following the manufacturer's reconditioning and recalibration of the equipment.

The weather was clear, and the wind was from the N at 4 kts. The tide was slack, with the next high tide at 8:25 pm. Only 2.5 mm of rain had fallen in the previous 48 hours, with a total accumulation for the preceding week of 33.5 mm.

Temperature and DO

Air temperature ranged from about 14°C to 15.9°C, actually getting cooler as the morning wore on. Water temperature ranged from 13.2°C to 13.9 °C at the surface and from 12.1°C to 12.7°C at the bottom. Bottom DO ranged between 6.3 ppm and 8.5 ppm.

Color and Clarity

The water was notably clear, and water color was a normal light green throughout most of the harbor.

Observations

Wildlife

Two ospreys were at the nest on Beacon 11. There were also the usual gulls, swallows, and pigeons and other land-based birds that are frequently seen along the shores of the harbor but not counted or specifically noted on data sheets during monitoring. Also, observed were 3 swans, 3 dozen mallards and/or black ducks, 2-1/2 dozen Canada geese, 1 cormorant, and 1 great egret.

Fish were jumping near CSHH #2 and a moon jelly was seen near Beacon 11 (moon jellies haven't been seen during weekly monitoring over the last several years).

Striped Bass Survey

NY DEC staff were seining in Hempstead Harbor on May 15 as part of the DEC's annual striped bass study for the NYS marine district. This season, DEC marine biologist Jennifer Dwyer will provide preliminary information on the seining so that we can compare the DEC's catch with our monitoring observations and fishing reports. The crew seined at five stations in Hempstead Harbor and caught mostly silversides (over a thousand at one station) and killifish, along with 2 lions mane jellyfish, 1 Atlantic herring, and 1 pipefish.

APRIL STATION SURVEY

Unlike last season, there were no notable storms or other events just prior to our April reconnaissance trip, which was conducted on April 18 from 8am to 11:30 am—timed around the incoming tide, with high tide at about 11 am. April 2008 was relatively dry, with only about 42 mm of rainfall up to April 18, as compared with about 193 mm for the same period in 2007. The mornings were still very cool (mid- to high 40s°F or 7-8°C). A green algal bloom seemed present throughout most of the harbor, although Glen Cove Creek was more of an opaque green as compared with the rest of the harbor.



Osprey nest on Beacon 11.

We began the survey at CSHH #1, where ospreys was on a nest at the top of the navigational light, and then worked our way to the lower harbor and then back north to Bell 6 and around to Glen Cove Creek. As we traveled along the eastern shore and to CSHH Stations #4-7, we noted the large Gladsky Marine crane and barges that were anchored off of the KeySpan/National Grid property, as they were last season. A "Soil Mechanics Drilling Corporation" apparatus was being used at the power plant, and the Hinfin/Glen Harbor property was being used as a staging area, as it was last season, for the building of the new viaduct. Work continued at the Roslyn Viaduct, with a large gantry spanning nearly half the distance from east to west. It seemed that the lower harbor had silted in from previous seasons, and it was difficult to get as far south as we had previously.



Gladsky Marine crane.



Cranes and barges at former Hinfin property—staging area for Roslyn Viaduct construction.



Mott's Cove (CSHH #5).



Gantry for Roslyn Viaduct construction.

As we made our way north again, we saw a duck blind on the west shore just about midway between the two osprey platforms. Six fishing boats were in the harbor, and people were fishing off of Bar Beach. We were told that flounder were being caught. Two barges with cranes, a tug, and 18 other barges were tied off of the Port Washington gravel-transfer operation. Moorings were being set in the mooring field off of Sea Cliff and Glen Cove, and six old dock sections had been tied off below the promenade on the north side of Glen Cove Creek. The north side of the creek at the head of the creek had large sections that had previously collapsed and further eroded.



Collapsed bulkhead on north side of Glen Cove Creek.

Wildlife Observations

There was a lot of bird activity in the harbor—the ospreys were back and building their nests, as were the Canada geese (a goose nest was visible at the shoreline below Horizon and Sterling Glen in Roslyn and one also by the green tank on the north side of Glen Cove Creek). Seven ospreys were seen, six of which were on nests at (1) Beacon 11, (2) blue sailboat in the lower harbor (no eggs), (3) pilings on the west shore of the lower harbor, below the southern most osprey platform and (4) on the platform, and (5) and (6) two nests on the pilings just south of Bar Beach.

Also noted throughout the harbor were 6 swans, 3 egrets, 12 cormorants, 2 dozen Canada geese, 1 duck, and 1 belted kingfisher.

(During the winter months, the usual migratory birds were seen in the harbor: buffleheads, old squaw, and scaups. Also, on January 22, a seal was seen off of Sea Isle, near the marina, in Glen Cove Creek. Seals were also seen at about the same time off of Center Island.)



Osprey nests in lower harbor—on bow of sailboat and on piling of old oil dock.

On April 23, we had our first fishing report from Hempstead Harbor Anglers Club member Pete Emmerich:

Sea Cliff has been loaded with adult bunker for 2 weeks, a friend of mine has already caught 8 bass to 25 lbs on live bunker all in shallow (2 feet) of water in the back and local in the Harbor.

I was launching Keith's boat on Sunday—you have to see the size and amount of spearing in Glen Cove Marina!



CSHH Water-Monitoring Program 2008

| Date | Water Temp (°C) | | Salinity (ppt) | | DO (ppm) | | pH (ppm) | | Air Temp (°C) | Secchi(m) | Depth (m) (bottom) | Time AM |
|---|---|--------|----------------|--------|----------|--------|----------|--------|---------------|-----------|-----------------------|------------|
| | Surface | Bottom | Surface | Bottom | Surface | Bottom | Surface | Bottom | | | | |
| CSHH #1 - Beacon 11 | | | | | | | | | | | | |
| 6/19/08 | 19.71 | 19.58 | 23.51 | 24.29 | 11.48 | 7.20 | 8.21 | 7.88 | 16.6 | 0.75 | 3.4 | 8:50 |
| 6/11/08 | 18.89 | 16.89 | 24.04 | 24.33 | 6.82 | 5.17 | 7.61 | 7.37 | 21.2 | 1.00 | 4.6 | 8:45 |
| 5/21/08 | 13.93 | 13.72 | 22.19 | 23.32 | 7.93 | 6.98 | 7.7 | 7.7 | 17.7 | 1.00 | 3.3 | 9:07 |
| 5/14/08 | 13.24 | 12.13 | 22.72 | 24.06 | 8.99 | 7.42 | 7.9 | 7.8 | 15.9 | 2.00 | 5.4 | 8:15 |
| CSHH #2 - Bell Marker 6 | | | | | | | | | | | | |
| 6/19/08 | 20.27 | 16.84 | 24.59 | 25.41 | 11.57 | 6.35 | 8.4 | 7.8 | 16.8 | 2.0 | 7.7 | 9:30 |
| 6/11/08 | 18.27 | 15.20 | 24.57 | 24.86 | 9.58 | 8.54 | 8.0 | 7.6 | 23.7 | 1.50 | 8.5 | 9:35 |
| 5/21/08 | Engine problems prevented monitoring at all stations. | | | | | | | | | | | |
| 5/14/08 | 13.15 | 12.13 | 23.74 | 24.22 | 9.46 | 8.72 | 8.0 | 8.0 | 14.2 | 2.50 | 8.6 | 8:45 |
| CSHH #3 - Glen Cove Creek, Red Marker | | | | | | | | | | | | |
| 6/19/08 | 20.26 | 18.68 | 24.22 | 25.04 | 12.08 | 5.62 | 8.4 | 7.6 | 17.8 | 1.20 | 4.3 | 10:10 |
| 6/11/08 | 20.42 | 16.80 | 23.4 | 24.53 | 9.78 | 7.06 | 8.0 | 7.68 | 24.6 | 1.25 | 4.1 | 10:00 |
| 5/21/08 | 13.89 | 13.44 | 22.68 | 23.06 | 8.57 | 8.70 | 7.8 | 7.8 | 16.3 | 1.75 | 3.8 | 9:45 |
| 5/14/08 | 13.19 | 12.20 | 23.45 | 24.32 | 9.56 | 8.45 | 8.0 | 7.9 | 14.0 | 2.50 | 4.9 | 10:15 |
| CSHH #8 - Glen Cove Sewage Treatment Plant Outfall | | | | | | | | | | | | |
| 6/19/08 | 20.22 | 20.02 | 21.85 | 24.47 | 11.47 | 8.90 | 8.3 | 8.0 | 20.1 | 1.0 | 3.8 | 10:40 |
| 6/11/08 | 20.07 | 17.63 | 19.30 | 24.31 | 8.25 | 6.36 | 7.7 | 7.5 | 27.4 | 1.3 | 2.8 | 10:50 |
| 5/21/08 | 13.87 | 13.72 | 20.86 | 23.36 | 8.58 | 7.29 | 7.7 | 7.7 | 17.8 | 1.00 | 3.3 | 10:15 |
| 5/14/08 | 13.93 | 12.71 | 17.26 | 23.97 | 8.93 | 6.32 | 7.8 | 7.6 | 20.8 | 2.00 | 4.2 | 10:45 |



CSHH Water-Monitoring Program 2008

| Date | Water Temp (°C) | | Salinity (ppt) | | DO (ppm) | | pH (ppm) | | Air Temp (°C) | Secchi(m) | Depth (m) (bottom) | Time AM |
|--|-----------------|--------|----------------|--------|----------|--------|----------|--------|------------------|-----------|-----------------------|------------|
| | Surface | Bottom | Surface | Bottom | Surface | Bottom | Surface | Bottom | | | | |
| CSHH #13 - 60' West of the Mill Pond Weir | | | | | | | | | | | | |
| 6/19/08 | 19.86 | 18.96 | 21.67 | 24.21 | 11.92 | 4.82 | 8.14 | 7.44 | 20.4 | 1.0 | 4.1 | 11:00 |
| 6/11/08 | 20.25 | 17.16 | 17.30 | 24.18 | 14.40 | 2.91 | 8.37 | 7.20 | 27.1 | 1.0 | 2.9 | 11:15 |

CSHH #4 - Bar Beach Spit

CSHH #5 - Mott's Cove

CSHH #6 - East of Former Incinerator Site

CSHH #7 - West of Bryant Landing (formerly site of oil dock)