

## Hempstead Harbor Water-Monitoring Report, June 8, 2009

Below is a copy of the sampling report update for Hempstead Harbor through June 3 for the 2009 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](http://www.hempsteadharbor.org)

The water-monitoring season for 2009 began May 13. Instead of our usual April reconnaissance, we scheduled a full survey on May 20 on the high tide. Nine stations have been selected for full surveys, weekly to monthly, depending on weather conditions and the tidal cycle. (Some of the stations have been monitored since the inception of the Coalition to Save Hempstead Harbor's (CSHH) Water-Monitoring Program in 1992.) Four additional stations (a total of 13) are included for collecting samples (the frequency dependent on weather and tidal cycle) that are taken to the Nassau County Department of Health lab for bacteria analysis. If unusual conditions or discharges are visible, additional samples are collected for bacteria and plankton analysis. 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.

### JUNE 3

We were joined by Pat Aitken, the water-monitoring-program coordinator from Friends of the Bay in Oyster Bay; Pat was there to observe our sampling program in Hempstead Harbor and the area we cover.

It was cloudy during most of the sampling period, with partial clearing by mid-morning and back to cloudy with a few raindrops falling by the end of the survey. We had some morning rain before the start of the survey, with about 5mm during the preceding 24 hours; the total preceding week's accumulation was 21 mm. The wind was mostly from the NE, switching at times to a NW wind, up to about 10kts, causing small waves. There was an incoming tide (less than an hour to high at about 9 am).

Ammonia was again detected—this time just at CSHH #2, near the mouth of the harbor, where the water color had turned to a thick brown to reddish brown; the Secchi depth was at 0.5 m and the turbidity level was high, at 5.63 NTUs. Ammonia and chlorine were not detected at the STP. The following day, patches of a red tide were reported outside of the harbor, with a brown tide inside near the mouth of the harbor. (See the fishing report below.)

Also, Dan Ryan of Severn Trent (the STP operator) explained that the varying levels of ammonia and chlorine that we detected over the last couple of weeks were due to the installation of the backup generator at the plant. The generator allows the UV disinfection system to work as it was intended—without the use of chlorine. If the power goes out, the generator will keep the UV system working without interruption. Dan said that the chlorine vats were being emptied.

### Temperature and DO

Air temperature ranged from about 19°C to 21°C during the sampling period. Water temperature was about 18-19°C at the surface and 16-18°C at the bottom, with the higher readings at stations where water depth is only at about 2 m. Bottom DO ranged between about 7 ppm and 8 ppm throughout the harbor, but deeper-water stations CSHH #2 and #3 had supersaturated levels at the surface, as high as 12.8 at # 2 where the brown tide was noted.

### Color and Clarity

Water color was a normal green at all stations but CSHH # 2, as previously noted, where the water color was a thick brown to reddish brown and Secchi depth was 0.5 m. Secchi depth at other stations ranged from 0.9 m to 1.2 m, except at lower-harbor station #5, where it was 0.6 m.

### Observations

#### Wildlife

One osprey was seen on the nest at the top of Beacon 11 and one was flying nearby; 5 other ospreys were noted including 2 at the sailboat nest and 2 newly hatched chicks of the 3 eggs noted a few weeks ago (1 egg remained unhatched). Also noted were 3 cormorants, 10 mallards, 11 egrets, about 90 Canada geese, 31 swans, and 1 falcon (near the KeySpan plant).



Two newly hatched osprey chicks (chick heads have black nears eyes and beak) near remaining unhatched egg (60309)  
(photo by Carol DiPaolo)

On June 1, a Glenwood Landing resident reported a dead osprey in front of the Gladsky Marine operation. Eric Swenson (HHPC director) picked it up so that it could be given to Stella Miller, president of the Huntington Audubon, who made arrangements for NYDEC staffer Ward Stone to examine it at the DEC's lab outside of Albany. There were no visible signs of what could have killed the osprey; it's possible that it was electrocuted in the power lines of the plant.

#### *Fishing Report*

Pete Emmerich of the Hempstead Harbor Anglers Club reported the following:

*We were on the water Tuesday night 6/2 and again Thursday 6/4. There is a tremendous amount of "rain bait" in the harbor, particularly along the west side from Mott's Point to Prospect Point. I was unable to distinguish what type of bait it was (and we didn't stop as we were looking for bunker), but I hear from a good source that it was sand eels. What was so interesting about this is that there were acres upon acres of bluefish feeding on this bait, and the feed was not the normal bluefish slash and burn type feeding but they were acting almost in a majestic manner. Sporadically the blue would "porpoise" out of the water and slip back in without the violent thrash you expect from a blue. This action was one fish at a time; then 25 feet away another blue would repeat this action. You could see these blues feeding in this pattern all over the area I described. On Thursday the action was a starting to move east towards the middle of the harbor.*

*Tuesday night we found bunker with bass feeding on them close to Buoy 42A near Mamaroneck and boats were catching all through the Sound with a large concentration of boats fishing in 50 feet of water off Matinecock Point. While snagging bunker, we caught a bass that swallowed the bunker as soon as it was snagged, and I even snagged a bluefish in the same school of bunker. Last night was tougher with the SW wind against an incoming tide, so we had fish under the boat and wrapped around the anchor line. We were fishing in 52 feet of water off Webb.*

*What is up with the red bloom in the LI Sound? I heard it came out of Manhasset, but the water was red last night at Sands Point, Prospect Point, and well into the sound and in the mouth of Hempstead.*

#### **Human**

Gladsky Marine barges and crane were in their usual position north of the KeySpan plant. Work was going on by the KeySpan seawall south of the white stacks. The fireworks barge was still tied off north of Motts Cove; barges with viaduct materials were in this area as well. About 21 barges were anchored off of the Port Washington gravel operation. Four powerboats were noted traveling through the harbor.

#### **MAY 27**

Although clouds were around all morning with intermittent light drizzle, the water was calm with only light breezes--up to about 4 kts at some stations, E-SE. The tide was slack with about 6½ hours to the next high tide (2:30 pm), so only upper-harbor stations were monitored. Other than the trace precipitation for the day, no rain had fallen during the previous week.

Some unusual testing results were noted again this week. Ammonia was detected in samples collected at all stations; normally, no ammonia is detected at midharbor stations—on occasion it has been detected at the sewage treatment plant (as it was the previous week). A large presence of fish could explain the wide dispersion of ammonia. See the fishing report below. Also, there were no detectable amounts of chorine from the STP outfall, whereas there were higher-than-usual levels the week before.

#### **Temperature and DO**

Air temperature ranged from about 13°C to 15°C during the sampling period. Water temperature was about 15-16°C at the surface and 14-16°C at the bottom. Bottom DO ranged between about 5 ppm and 8 ppm, with lower levels at the two shallow stations in Glen Cove Creek—other stations were in the 7-8 ppm range. Surface DO dropped from the supersaturated levels of the week before.

#### **Color and Clarity**

Water color was a normal green at all stations monitored. Secchi depth ranged from 1 m to 1.5 m.

#### **Observations**

##### *Wildlife*

One osprey was seen on the nest at the top of Beacon 11, and one was flying over Glen Cove Creek. Also seen were 3 swans, 4 mallards, 2 cormorants, and 1 egret. No comb jellies were noted. A large blue-mussel set was noted all along the south seawall parallel to the floating dock beneath The Wharf (formerly Steamboat Landing Restaurant) and the sewage treatment plant, with the thickest numbers closest to the STP outfall.

##### *Fishing Report*

Pete Emmerich, our fishing reporter from the Hempstead Harbor Anglers, described fishing as "red hot" during the preceding week:

*Red-hot bass fishing in the middle of the harbor off Webb and Maxwells. Friday night [May 22] 2 of us boated 40 bass from 26 to 38 inches in huge bunker schools from 5 pm until 8:30 and quit because we were too tired to continue.*

*Friends had 9 fluke to 5 pounds at Matinecock on Saturday. Monday night [May 24] was another red-hot fishing night; my buddy had 10 bass himself, 3 of which were over 30 pounds, weighed one in at 34 pounds.*

*Large bluefish are also in the mix. It is possible to catch bass only, but many people are having blues mixed in. So far it looks like a very promising season. We just hope the bunker stay-- it is great fishing right now.*

On May 28, Pete reported:

*Took a ride last night, but I could not get past Maxwell's due to the east wind. Rode around the harbor and marked plenty of bait but could find no bunker jumping. I saw many cormorants, so I guess they are feeding on smaller bait.*

### Human

The large Gladsky Marine crane and 5 barges were anchored off of the KeySpan/National Grid property that is adjacent to Tappen Marina; about 20 barges were anchored off of the Port Washington gravel operation; 2 barges were in Glen Cove by the Raison plant.



*Gladsky cranes and barges off shore, north of power plant (5/20/09) (photo by Carol DiPaolo)*

Because of the low tide, all of three outfall pipes monitored by the STP were visible. There was no flow noted from CSHH #9, but a flow was visible from #10, below the water surface. An opaque flow from #10 has been noted pretty regularly, but at this time it was nearly white. Attempts to trace the source of the flow have not been successful.

### MAY 20

The weather was clear, and the water was calm. There were some light breezes switching direction—from all directions but only up to about 4 kts. The tide was incoming with about a half hour to the next high tide (8:24 am), allowing us to do a full survey of both lower- and upper-harbor stations. Only 7 mm of rain had fallen during the preceding week.

Some unusual testing results were noted this week. Ammonia (0.25 ppm) was detected near the STP outfall, and higher than usual amounts of chlorine were also detected there (0.4 ppm, free and available) and 0.6 (total residual).

### Temperature and DO

Air temperature ranged from about 16°C to 24°C during the monitoring period. Water temperature ranged from 14°C to 16°C at the surface and from about 13°C to 14°C at the bottom at all stations but #13 (at the head of Glen Cove Creek), where the water depth was only at about 2 m, and bottom water temperature was 15°C. Bottom DO ranged between about 8 ppm and 9 ppm at all stations but #13, where it was a little less—7.4 ppm.

### Color and Clarity

The water color was a normal green, although some foam and pollen-slick patches were noted in the lower harbor. Secchi depth ranged from 0.75 m at CSHH #6 in the lower harbor to 1.4 m at CSHH #2.

## Observations

### *Wildlife*

Three ospreys were on/by Beacon 11; two osprey nests were on pilings south of Bar Beach; an **osprey nest was again on the blue sailboat and had three eggs** in it; an osprey nest was on the south platform on the west shore; 2 ospreys were on a nest on a private dock on the east shore, and 3 ospreys were by station #7. Also noted 5 cormorants, 6 mallards, 10 egrets, 31 Canada geese and on **goose on a nest on a duck blind in Mott's Cove**, 24 swans, and 20 brants.



*Osprey nest in sailboat in lower harbor with three eggs (5/20/09) (photo by Carol DiPaolo)*



*Canada goose and nest on duck blind in Mott's Cove (5/20/09) (photo by Carol DiPaolo)*

Fish were jumping near CSHH #1, and a large school of bunker was near CSHH #2.

No comb jellies were observed.

#### *Human*

Work on the Roslyn viaduct continues—the north side has been completed and the gantry has been moved to the western part of the span to work on the south side of the viaduct. Workers were falling trees on the western shore near CSHH #7, below the tan condos/townhouses. Water was seen flowing from the 4'-outfall on the western shore on the north side of the viaduct; the large pipe on the SE shore of Mott's Cove also had a large flow. Duck blinds were seen on shore near Sterling Glen and by the north osprey platform on the western shore, and also in Mott's Cove. The fireworks (for Memorial Day) barge was by seawall north of Mott's Cove, along with a crane and two other barges. A tug pulled in a fuel barge to the terminal, and about 19 barges were anchored off of the Port Washington gravel operation. Eight fishermen were fishing off of the Bar Beach pier.



Gantry on western side of Roslyn viaduct to begin demolition and reconstruction of south side of viaduct (5/13/09)(photo by Carol DiPaolo)

## **MAY 13**

*This was our first trip out for the season—we were unable to make our planned reconnaissance trip in April. No unusual weather conditions preceded this trip. The usual migrating water birds were seen on the harbor during winter months and early spring, including a large raft of brants that were seen regularly from April through May between the Tappen Pool and Rum Point and around to Sea Cliff Beach. The first sighting of a turkey vulture was noted last season for Hempstead Harbor, and there were reports of a turkey vulture flying over Glen Cove Road, north of Northern Boulevard at the end of February, at the end of March, and again in early April.*

For the May 13 sampling, the weather was clear, and winds were out of the NE-E up to about 7kts and then switched to SW and W. The tide was outgoing with about 7 hours to the next high tide (3:20 pm), so we surveyed only upper harbor stations. We had only a trace amount of rain within 24 hours of sampling, but 59 mm of rain had fallen during the preceding week, and most of that fell about four days preceding sampling. Yet, about 2½ hours following low tide, most of the pipes that were visible along the north bulkhead in Glen Cove Creek had considerable flow, along with the county outfall at the head of the creek, near CSHH #13.

### **Temperature and DO**

Air temperature ranged from about 15°C to 20°C during the monitoring period. Water temperature ranged from 14°C to 16°C at the surface and from about 12°C to 14°C at the bottom at all stations. Bottom DO was 7.9 ppm at CSHH #2 (at 7.4 m), but other stations were at supersaturated levels—ranging from 9.2 ppm to 11.4 ppm at the bottom. Surface DO levels were 9.4 ppm to 10.6 ppm.

### **Color and Clarity**

The water color was a normal green, and Secchi depth ranged from 0.75 m at CSHH #8 (near STP outfall in Glen Cove Creek) to 1.5 m AT CSHH #2 (near the mouth of the harbor).

## Observations

### Wildlife

Two ospreys were bringing nesting material back to Beacon 11, and an osprey was seen flying over Glen Cove Creek. A large number (about 150) brants were seen near the north end of North Hempstead Beach Park. Also noted were 4 cormorants, 5 mallards, 2 egrets, 11 Canada geese, and 3 swans.

A large number of blue mussels were noted on the north seawall entering Glen Cove Creek, below the old ferry terminal. No comb jellies were observed, but see below.

### Striped Bass Survey

NY DEC staff were seining in Hempstead Harbor on May 13 as part of the DEC's annual striped bass study for the NYS marine district. DEC marine biologists Julia Socrates and Jennifer Dwyer have shared preliminary information on the seining so that we can compare the DEC's catch with our monitoring observations and fishing reports. Jennifer O'Dwyer provided the following information for the season's first seine in Hempstead Harbor, after sampling six stations:

*We had a few moon jellies and grass shrimp in the net, and the usual ulva and some red algae. We got quite the assortment of species. Here are our catch totals:*

*atlantic tomcod 2  
bay anchovy 6  
calico crab 1  
cunner 1  
green crab 22  
menhaden 1  
mud crab 5*

*naked goby 2  
pipefish 17  
pollock 70  
silversides 137  
spider crab 1  
tautog 2  
winter flounder 3*



*NYSEDEC seine crew for annual striped bass survey, Tappen Beach (5/13/09) (photo by Carol DiPaolo)*



*Human*

People were fishing off of the Bar Beach pier; barges were anchored off of the Port Washington gravel operation loaded with girders for the Roslyn viaduct construction; 2 barges were by the Raison asphalt plant in Glen Cove Creek; and 5 power boats were noted traveling through the harbor.

More floatables than usual were noted in Glen Cove Creek, where debris tends to collect between the dock and seawall on the side near the STP. Items included 2 tennis balls, 4 plastic beverage bottles, along with pieces of paper and 4 bottles at the head of the creek.



*Repaired bulkhead on south side of Glen Cove Creek below Nassau Ready Mix and the old LiTungston plant (5/13/09) (photo by Carol DiPaolo)*



## CSHH Water-Monitoring Program 2009

Date	Water Temp (°C)		Salinity (ppt)		DO (ppm)		pH (ppm)		Air Temp (°C)	Secchi(m)	Turbidity (NTUs)	Depth (m) (Bottom)	Time (AM)
	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom					
<b>CSHH #1 - Beacon 11</b>													
6/3/09	17.69	16.51	24.32	24.95	7.96	6.92	7.9	7.7	18.5	1.0	2.39/2.11	4.7	8:35
5/27/09	15.87	15.72	24.18	24.48	7.20	7.54	7.4	7.6	13.5	1.0	2.61/2.33	2.3	8:40
5/20/09	13.98	13.14	24.19	24.88	9.17	8.21	8.0	7.9	15.7	1.2	1.77/2.14	4.3	8:16
5/13/09	14.62	13.60	23.45	24.27	9.43	9.23	8.2	8.0	13.9	1.3	1.48/1.69	3.4	9:00
<b>CSHH #2 - Bell Marker 6</b>													
6/3/09	18.66	15.83	24.47	25.04	12.81	6.95	8.2	7.8	20.4	0.50	5.63	8.3	10:07
5/27/09	15.21	14.15	24.81	25.26	7.24	7.15	7.8	7.8	12.7	1.00	2.34/2.34	6.5	9:15
5/20/09	14.57	12.89	24.53	25.07	10.17	8.80	8.1	8.0	21.8	1.40	1.98/2.23	9.4	10:20
5/13/09	14.35	11.66	24.27	25.16	10.45	7.88	8.2	7.9	14.7	1.50	1.31/1.94	7.4	9:45
<b>CSHH #3 - Glen Cove Creek, Red Marker</b>													
6/3/09	18.40	16.79	24.39	24.97	12.12	8.04	8.2	7.8	20.3	1.1	2.80/3.26	4.1	11:45
5/27/09	15.35	15.24	24.32	24.96	7.51	7.16	7.8	7.8	13.5	1.2	1.80/1.88	2.9	9:45
5/20/09	14.66	13.23	23.82	24.88	10.29	9.07	8.1	8.0	23.5	1.1	2.41/1.74	4.2	10:57
5/13/09	14.70	13.84	24.05	24.3	10.6	11.42	8.2	8.2	15.2	1.4	1.8/1.62	3.3	10:16
<b>CSHH #8 - Glen Cove Sewage Treatment Plant Outfall</b>													
6/3/09	18.61	17.77	23.67	24.61	8.80	8.27	7.9	7.8	22.1	1.1	2.58/2.71	2.3	12:15
5/27/09	15.73	15.51	24.61	24.84	7.50	6.37	7.8	7.7	14.4	1.5	1.79/1.92	2.5	10:25
5/20/09	15.65	14.40	23.94	24.49	9.05	8.85	7.9	7.9	23.6	1.0	2.42/2.24	2.9	11:23
5/13/09	15.83	13.56	14.30	24.52	9.71	10.71	7.9	8.0	20.1	0.75	4.13/2.76	2.8	10:50
<b>CSHH #13 - 60' West of the Mill Pond Weir</b>													
6/3/09	18.25	17.97	23.86	24.20	7.63	6.98	7.7	7.7	21.0	1.20	3.66/3.33	1.4	12:30
5/27/09	15.89	15.67	24.64	24.75	6.13	5.27	7.6	7.6	15.1	1.0	3.3/2.33	1.7	10:40
5/20/09	15.97	15.37	22.96	24.30	8.37	7.41	7.7	7.7	24.3	0.8	3.47/3.69	1.8	11:40
5/13/09	14.65	13.92	14.27	23.93	9.70	9.18	7.6	7.7	19.5	0.8	3.87/4.31	1.8	11:20
<b>CSHH #4 - Bar Beach Spit</b>													
6/3/09	17.83	17.08	24.36	24.68	7.73	6.80	7.8	7.7	20.5	1.1	2.96/2.72	4.8	10:35
5/20/09	14.75	13.33	23.87	24.67	8.63	8.43	7.9	7.9	22.4	1.0	2.87/2.98	7.4	10:00
<b>CSHH #5 - Mott's Cove</b>													
6/3/09	17.52	17.34	24.13	24.30	6.86	6.74	7.7	7.7	19.9	0.6	3.89/3.57	1.5	10:05
5/20/09	14.13	13.81	23.89	24.27	8.77	8.59	7.9	7.9	21.4	1.0	2.13/3.67	1.4	9:37
<b>CSHH #6 - East of Former Incinerator Site</b>													
6/3/09	18.04	17.87	24.02	24.17	6.85	6.71	7.6	7.6	18.9	1.10	3.44/3.26	2.0	9:40
5/20/09	14.51	13.96	23.50	24.09	8.51	8.52	7.8	7.9	20.9	0.75	3.33/--	2.0	9:18
<b>CSHH #7 - West of Bryant Landing (formerly site of oil dock)</b>													
6/3/09	18.15	18.02	23.67	24.08	6.51	6.24	7.6	7.6	18.3	0.90	4.21/4.21	1.6	9:18
5/20/09	14.42	14.39	23.61	23.75	8.03	8.05	7.8	7.8	18.3	0.80	5.25/4.97	1.2	9:00



## CSHH Water-Monitoring Program 2009

Date	Water Temp (°C)		Salinity (ppt)		DO (ppm)		pH (ppm)		Air Temp (°C)	Secchi(m)	Turbidity (NTUs)	Depth (m) (Bottom)	Time (AM)
	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom					