

Water-Monitoring Report, August 30, 2008

Below is a copy of the sampling report update for Hempstead Harbor through August 27 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

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.

In late June, we purchased a turbidity meter, which reads **turbidity levels in nephelometric turbidity units (NTUs)**, and so we have added a new field in the attached spreadsheet to record NTUs. We are attempting to see whether there is any correlation between Secchi depth in Hempstead Harbor and NTU readings and also to see whether NTU levels are below numeric standards that have been set in some states. Turbidity samples will now be taken at stations CSHH #1, #2, #7, #8, and #13 during full surveys; additional samples at other locations will be taken if unusual conditions are noted.

In reviewing **fecal coliform and enterococci levels** for samples taken at CSHH stations 1-13, **from May through August, there were no exceedances of the levels (either in CFUs or log average) at CSHH #1-9. The hot spot for high bacterial levels occurred at stations CSHH #10-13** and storm water seems to be the major factor. A detailed analysis of the data will be provided at a later date.

AUGUST 27

It was partly cloudy at the start of the water sampling and remained partly cloudy to partly sunny during the rest of the sampling period. The wind shifted between N, NE, and E at 4-8 mph (about 5-9 kts). The tide was incoming, with about a half an hour to peak high (at 9 am). No rain had fallen within 24 hours prior to monitoring, with only a trace amount over the preceding 12 days. Because of the high tide, we were able to do a full survey at both upper- and lower-harbor stations.

Temperature and DO

The shifting of wind and clouds caused more variation in air temperature than usual between stations—ranging from about 21°C to 23°C during the sampling period. Water temperature was about 22-23°C at both the surface and the bottom. DO levels ranged at about 5-10 ppm at the surface and at about 5-8 ppm at the bottom. Higher surface levels indicated the growth phase of an algal bloom, which was apparent throughout most of the harbor, particularly in the lower harbor.

Color and Clarity

Although water color was judged to be within a normal range— a murky greenish-brown—it seemed that an algal bloom was in process, and the supersaturated DO levels in areas that had lower Secchi depths seem to bear this out. Glen Cove Creek was very brown and murky. Secchi depth ranged from 0.50 m to 1.50 m.

Observations

Wildlife

Few ospreys are seen near their nests; the five ospreys noted were seen flying over different parts of the harbor. Also seen were 3 cormorants; 5 blue herons (one of which was seen in the lower harbor and looked multicolored—like a tricolored (or Louisiana) heron); 4 ducks; 14 egrets; 26 Canada geese; 21 swans; and 2 terns.

Comb jellies were seen in large numbers but fewer than previously, and most were very small sea walnuts and sea gooseberries.

Human

Six powerboats and two sailboats were leaving the harbor and 3 crew teams were rowing from below the Bar Beach to midharbor. The large Gladsky Marine crane and 3 barges and tug boats were tucked in closer to the Gladsky marina, and 5 barges and crane were off of the KeySpan/National Grid property. Four barges, 3 tugs, and 4 cranes were off of the former Hinfen property, which is being used as a staging area for work for the Roslyn viaduct; the property was filled with cement girders. About 20 barges were off of the Pt. Washington gravel operation; 1 tug was pushing a gravel barge in, and 1 barge w/ trailer, crane, and excavator was anchored nearby.

AUGUST 20

The weather was clear, and the wind was from the N at about 15 kts. The tide was incoming, with about 6 hours to peak high (at about 2 PM). There were waves in midharbor and whitecaps closer to the LIS; wind and waves caused us to abandon station CSHH #2. The tide seemed lower than usual for peak low. There had been no rainfall for the 48 hours prior to monitoring, and the total accumulation for the preceding week was 27.5 mm. Because of the low tide, only upper-harbor stations were monitored.

Temperature and DO

Air temperature stayed pretty consistent during the monitoring period—20-21°C. Water temperature was 23-24°C at both the surface and bottom. Although DO levels at upper harbor stations had improved—6-8ppm at surface and 5-6 ppm at bottom—DO levels at the head of Glen Cove Creek near Mill Pond were at 3ppm at surface and 2ppm at bottom.

Color and Clarity

Water color was very brown and judged normal to abnormal in parts of the harbor and in Tappen Marina.

Plankton samples were collected from stations CSHH #1, 8, and Tappen Marina. An algal bloom appeared to be in process both from the look of the water, although Secchi depths ranged from 0.75 m to 1.25 m. At station CSHH #13, at the head of Glen Cove Creek, the water color was a light opaque green.

Observations

Wildlife

What was most notable was what we weren't seeing—blue claw crabs. At this time last year the number of crabs throughout the harbor was unprecedented, but this year, the few blue crabs seen have been at the beach with the gulls picking at them. Gulls seemed to be the prominent birds during the monitoring period, although 2 cormorants, 1, blue heron, 12 ducks, 2 egrets, 2 Canada geese, 1 osprey, and 4 swans were also noted.

Fishing Report

On August 21, Pete Emmerich reported that he had been out on the harbor the preceding night and had a chance to catch up with local anglers:

I am told that the harbor is "dead"— no luck catching or getting even a bite of fluke or Sea Robin. I marked plenty of bait in the harbor, had bluefish coming up next to my boat as I cleaned it just North of the barges. Marina is loaded with bait and snappers with larger fish crashing them (small blues or schoolie stripers).[A] friend cruised the Western Sound and could find no bunker. He also told me of a large bunker kill in Greenwich this week. Lots of bunker in the morning, dead bunker floating by afternoon.

Only report I got was fluke at Mamaroneck and Execution [Rock Lighthouse].

Striped Bass Survey

As we entered Glen Cove Creek, we saw DEC staff seining between Sea Cliff Yacht Club and Sea Isle as part of the DEC's annual striped-bass study for the NYS marine district. DEC marine biologist and fish and wildlife technician Jennifer O'Dwyer provided us with a preliminary report on the catch for August 20, which was amazing in terms of the diversity of species caught and quantity and also in comparison with what we were seeing. Here's Jennifer's report:

We caught a good assortment of species yesterday. It seems the jellyfish have moved out and the shrimp and algae have moved in, we got a few net fulls of ulva and fucus at some sites and some grass shrimp in each haul. Here are our totals:

Striped Bass=20

Bluefish=18

Silverside=1071

Killifish=343

Menhaden=25

Alewife=2

Pipefish=69

Tautog=37

Cunner=13

Winter Flounder=33

Spot=8
Grubby Sculpin=4
Rock Gunnel=1
Banded Drum=1
Creville Jack=1
Blue Crab=6
Green Crab=10
Spider Crab=6
Calico (Lady) Crab=2
Mud Crab=6

Pretty good numbers, and I don't remember ever catching so many pipefish before. One of the blue claws was a female with eggs we caught on the sandbar in the inner harbor in between the power station and the launching ramp.

Human

Nineteen barges were off of the Pt. Washington gravel operation, and one had a crane, trailer, and construction equipment on it. A tug was pushing a barge with a crane on it out of the lower harbor. Two barges (one very large) were in Glen Cove creek, and one with gravel was being unloaded. Seven powerboats were leaving the harbor. One rower and one sailboat were also noted.

AUGUST 13

The weather was partly cloudy, and the wind was from the NE at about 4 mph. The tide was incoming, with about a half an hour to peak high (9 AM). No rain had fallen in the preceding 48 hours, but just before that a storm dropped 36.5 mm, with total accumulation for the preceding week of 38.5 mm. Because of a late start, only upper-harbor stations were surveyed.

Temperature and DO

Air temperature started out at about 22°C and rose to over 27°C by the end of the sampling period. Water temperature was at about 23°C at both surface and bottom throughout the upper harbor. DO ranged between about 7 ppm and 10 ppm at surface and about 4-7 ppm at bottom.

Color and Clarity

Water color in the harbor and Glen Cove Creek seemed to be still affected from the storm earlier in the week—the water was brown with lots of floatables and vegetation. Secchi depth ranged from 0.75 m to 1.50 m.

Observations

Wildlife

Two cormorants, 4 ducks, 20 Canada geese, and 13 swans were noted. Comb jellies were observed at CSHH #3.

Human

Off of the Pt. Washington gravel operation, 14 barges were on the northern anchor, and one barge with a crane was on the southern anchor. A small tug was in the creek with a barge being unloaded on the south side of the creek. One small fishing boat was near Bell 6, and a powerboat was leaving the creek.

AUGUST 7

The weather was clear, water surface was calm, and the wind was from the SW at only 3-4 kts. There had been 38 mm of rainfall during the preceding 24 hours, with a total accumulation for the week of 64 mm. The tide was outgoing, with 9 hours to the next high tide at 5:30 pm. Because of the low tide, the discharge pipes along Glen Cove Creek were visible, with large flows from the large county storm pipe near Mill Pond and the new pipe that was installed in the new bulkhead by the Li Tungsten site; an opaque flow was visible beneath the water surface from large discharge pipe (CSHH #10) by the STP (#8). We had ammonia readings of 0.25 ppm at CSHH #1 and 13 (which is unusual) and relatively high chlorine readings from the STP outfall (0.4 ppm free and available and 0.8 total residual) (plant manager Dan Ryan said that twice a year the plant is required to do a 24 hour coliform check of the UV system for which all chlorine is cut off and then switched on again every two hours, at which point there is a heavier amount released at the initial turn-on).

Temperature and DO

Air temperature ranged from about 25°C to 29°C during the monitoring period. Water temperature ranged from about 24°C to 25°C at the surface and from 22°C to 24°C at the bottom. Bottom readings varied widely from station to station (4-10 ppm at the surface and 1-6 ppm at the bottom), with the lowest bottom readings closest to LIS (1.3 ppm) and by Mill Pond (2.2 ppm).

Color and Clarity

Runoff from the rainstorm produced lots of floatable debris (papers, caps bottles, corks, cigarette butts, etc., particularly in Glen Cove Creek) and pieces of vegetation. The water color was judged to be a normal green. Secchi depth range was 1-1.5 m.

Observations

Wildlife

Comb jellies were noted at some stations in quantities too numerous to count, and a large school of baitfish were by the dock at CSHH #8, and 1 blue-claw crab near the dock at Tappen Marina. Also noted were 1 blue heron, 7 ducks, over 5 dozen Canada geese, 1 osprey 12, swans, 2 terns, 3 black-headed gulls, and 1 rat jumping from the dock at CSHH #8 on to the rope that led to the top of the seawall.

Human

A few people were fishing off of the fishing piers at Tappen Beach and Bar Beach and 8 powerboats were seen on the harbor. There were 8 barges anchored off of the Pt. Washington gravel operation, and the 5 Gladsky Marine barges with cranes were off of the KeySpan/National Grid property. There was excavation of the hillside on the west shore of the harbor at a large house across from CSHH #2.

JULY 30

The weather was clear, water surface was calm, and the wind was from the SE at only about 2 kts. There had been no rainfall over the previous 48 hours, but the total accumulation for the week was 50 mm. The tide was incoming, with 1.5 hours to the next high tide at about 10 AM. Because of the high tide, we were able to do a full survey at upper- and lower-harbor stations.

Temperature and DO

Air temperature ranged from about 25°C to 32°C during the monitoring period. Water temperature was about 24°C at the surface throughout the harbor and 22°C to 24°C at the bottom. DO readings were at supersaturated levels throughout most of the upper harbor (as high as 12 ppm) and bottom DO readings ranged widely from 1 ppm to 8 ppm, with the lowest readings occurring closest to LIS at CSHH #2 and 3.

Color and Clarity

Water color varied from brown to green in different parts of the harbor. Tappen Marina was very brown and murky, and the lower harbor was very green and soupy looking with lots of vegetation and foam patches; there were also lots of white feathers on the surface, which may have been from birds going after schools of fish. A plankton sample was taken from CSHH #7. Secchi depth ranged from 0.25 m at CSHH #7 to 1.25 m at CHSS #1 and #2.

Observations

Wildlife

Comb jellies were present and too numerous to count, and 4 dead horseshoe crabs were seen floating at the surface in different parts of the harbor. Also noted were 20 cormorants, 1 blue heron, 3 ducks, 6 egrets, 18 Canada geese, 1 belted kingfisher, 9 ospreys (3 were on the blue sailboat, including 1 fledge ready to fly), 10 swans (including 3 cygnets), and 3 terns.

Human

Five Gladsky marine barges and cranes were near the KeySpan/National Grid property; tugs and barges were at the Hinfin property. Two fishermen were in a small boat off Mott's Cove catching bluefish; 2 kayakers were in the lower harbor; 2 other boats with fishermen were in the harbor; 4 sailboats were leaving the harbor; and 16 small sailboats were off of Sea Cliff, Dockhill Park.

JULY 16

The weather was clear, the wind was from the NE at about 8 kts, with small waves in the middle of the harbor. There was 13 mm of rainfall over the previous 48 hours, and the total accumulation for the week was 28 mm. The tide was incoming, with 2 hours to the next high tide at about 11 AM. Because of the high tide, we were able to do a full survey at upper- and lower-harbor stations.

Temperature and DO

Air temperature ranged from about 23°C to 30°C during the monitoring period. Water temperature was varied among stations: about 21-23°C at the surface and 18-23°C at the bottom, with the highest temperatures in the lower harbor at CSHH #7. DO readings were at 3-9 ppm at the surface and 1-7 ppm at the bottom, with the lowest levels occurring at CSHH #1 (1.2 ppm) and #13 (1.7 ppm).

Color and Clarity

Water color varied from normal green to abnormal brown, looking like thick, soupy brown in Tappen Marina and Mott's Cove—**plankton samples were taken at both of these locations.** Seaweed was in various parts of the harbor, particularly Mott's Cove. Secchi depth ranged widely from 0.75 m to 2.25 m.

Observations

Wildlife

Comb jellies were present and too numerous to count—both sea walnuts and sea gooseberries. Also noted were 12 cormorants, 1 blue heron, 2 adult ducks and 9 ducklings, 9 egrets, 2 falcons (near the KeySpan/National Grid plant), about 6.5 dozen Canada geese, 5 adult ospreys and 2 chicks in the nest on the blue sailboat, 11 adult swans and 3 cygnets.

Fishing Report

On July 16, Pete Sattler from the Interstate Environmental Commission had reported his fishing and diving observations:

Fishing for blues and striped bass strong. Fluke slow and hard to meet min length in NY (20.5") or CT (19.5"). Scuba diving observations for July 12 off the coast of Westchester and mid-Sound near Execution Lighthouse: few short lobster with some keepers; lots of blackfish, porgies, flounder (to 15") and small fluke; visibility (horizontal) to 20'.

Hempstead Harbor angler Pete Emmerich agreed for the most part with Pete Sattler's observations but had a different view regarding the situation with fluke; the following is his observations for July 16:

Fishing is good.

Bass seemed to have moved on, although we had a good season. They are around for sharpies who know what hours to fish, depth and water temp. I spoke to a buddy this week who had 7 large bass, but the hot fishing is in deep water off Rye Beach.

Hot blue fishing with bass in western Sound out of Manhasset Harbor. I have a Charter Captain friend who has been cleaning up on blue fish.

I disagree with the fluke assessment. We are blessed again this year that the fluke are all over the Western Sound and deep in Hempstead Harbor. I came into the marina last night and was followed by 4 guys in a boat who caught 7 fluke in 1.5 hours, 4 were keepers over 20.5 inches. Yes, there are many throw backs, but I have seen many 5-pound fish this year. Also we have caught many Sea Robins, we saw almost none last year.

The fact that there are so many blackfish gets me nuts that we can't fish for them, but I am optimistic about our chances in October. Blacks are resident fish, so I really would like a more precise location and water depth where all those blacks were seen.

Human

Five Gladsky Marine barges and cranes were near the KeySpan/National Grid property and the large crane was in the Gladsky marina; cranes and barges were by the Hinfin property; about 20 barges tied off by the Pt. Washington gravel operation and a tug was pushing a barge in to the harbor; a tug was pushing a barge into Glen Cove Creek. There were 4 powerboats, 8 Sunfish sailing just south of the Glen Cove breakwater and about 20 Sunfish off of Sea Cliff, Dockhill Park.

JULY 9

The weather was clear, the wind was from the S at about 9 kts, creating only ripples on the water surface in the middle of the harbor. There had been no rainfall over the preceding 48 hours and only 13 mm of rainfall for the

total accumulation for the week. The tide was outgoing, with 9 hours to the next high tide at about 5:20 PM. Because of the low tide, only upper harbor stations were surveyed.

Temperature and DO

Air temperature ranged from about 25°C to 28°C during the monitoring period. Water temperature was about 21-22°C at the surface and 19-20°C at the bottom. **Surprisingly, water temperature a Mill Pond was at about 19°C at the surface and 20°C at the bottom, but there was a large flow of water visible from the large county storm pipe that probably influenced the water temperature. The salinity was also much lower in this area: 21 ppt at the surface and just under 25 ppt at the bottom.** DO readings ranged from about 5 ppm to a supersaturated level of 10 ppm at the surface and 4-7 ppm at the bottom.

Color and Clarity

Water color was a normal green throughout the harbor. Secchi depth ranged widely from 1 m to 2 m.

Observations

Wildlife

Comb jellies were present and too numerous to count—both sea walnuts and sea gooseberries. Also noted were 1 cormorant, 12 ducks, 1 egret, about 4 dozen Canada geese, 1 green heron, 2 ospreys, and 11 swans. About a dozen swallows flew over the creek.

Striped Bass Survey

DEC staff were seining in Hempstead Harbor as part of the DEC's annual striped-bass study for the NYS marine district. DEC marine biologist and fish and wildlife technician Jennifer O'Dwyer provided us with a preliminary report on the catch for July 9:

- 2 young menhaden
- 73 young of the year bluefish
- 1827 silversides
- 55 killifish
- 25 young of the year winter flounder
- 1 female horseshoe crab
- 3 tautog
- 1 tomcod
- 2 grubby sculpin
- 8 northern pipefish
- 1 male blue crab
- 6 green crab
- 2 asian shore crab
- 1 older bass that jumped the net and got away, so no measurements or tag

We still got a lot of the small comb jelly, but not too much shrimp. And there wasn't too much algae, mostly ulva with some filamentous green and some red algae.

Human

About 24 barges were tied off by the Pt. Washington gravel operation; 2 barges were loaded with a crane and cement girders. Six powerboats were noted, and two boats were towing small sailboats (6 on one and 7 on the other) and passengers into the harbor. A single rower and 3 crew teams were noted. In Glen Cove Creek, there were two barges—1 filled with gravel on the south side and 1 on the north side with a crane and a boat on the side to rebuild the seal wall. Workers asked us for depth readings in front of the Nassau Ready Mix plant. Gravel at this site is still piled high near the edge of the seawall and sand and salt are still pouring out of the Glen Cove DPW storage facility. A crane with a Bobcat and machine was near Mill Pond to repair the north side of the seawall. The items that had been tagged with mooring balls (old tires, dock pieces, etc.), were removed from Glen Cove Creek.

JULY 2

The weather was hazy to partly cloudy with no wind at the start of the monitoring period, and water surface was calm. The wind later picked up and switched between N and NW at about 2-5 kts. There had been no rainfall over the previous 48 hours, and the total accumulation for the week was only 13.5 mm. The tide was incoming, with 3 hours to the next high tide at about 11:20 AM. Because of the incoming tide, we were able to do a full survey at upper- and lower-harbor stations.

Temperature and DO

Air temperature ranged from about 23°C to 27°C during the monitoring period. Water temperature was about 19-21°C at the surface throughout the harbor and 17-20°C at the bottom. DO readings were at supersaturated levels throughout most of the upper harbor (as high as 10.3 ppm at CSHH #2) and 6-8 ppm in the lower harbor; bottom DO levels were 5-6 ppm throughout most of the harbor but at 7.8 ppm at CSHH #8 (by the STP outfall).

Color and Clarity

Water color was judged a normal green throughout most of the harbor, although it was thick, dark, and murky in Tappen Marina, near Beacon 11, and Mott's Cove. In the lower harbor, there was a substantial amount of pollen, seaweed, and other vegetation on the surface and noticeable pollen on the surface in the upper harbor. Secchi depth ranged from 0.75 m to 1.5 m.

Observations

Wildlife

Numerous gulls and geese were on the TNH Beach Park. Also noted were 6 cormorants, 1 blue heron, 1 duck and 6 ducklings, 9 egrets, 18 additional Canada geese, 11 adult ospreys and 2 chicks in sailboat nest (the chicks were about the size of large chickens), 2 swans and 3 cygnets, and 1 small hawk or falcon on the KeySpan/National Grid building.

Human

A tug and fuel barge were leaving the harbor. Five Gladsky marine barges and a red crane were near the KeySpan/National Grid property; the large crane and barge were in the Gladsky marina. Four Gladsky barges were by the Hinfin property loaded with fireworks; an additional 2 tugs, 3 barges, and 2 cranes were also by the Hinfin property. Twenty-five barges were off of the Pt. Washington gravel operation, and 1 barge with crane, excavator and truck were nearby. A barge with crane and a boat were by the Li Tungsten site to rebuild the seawall; 3 barges and a Bobcat and workers were reinforcing the seawall on the south side of the creek near Mill Pond. Five powerboats, 2 sailboats, 3 kayakers, were noted, and 2 dozen small sailboats (Lasers and Sunfish) were being launched from the Sea Cliff Yacht Club. In Glen Cove Creek, mooring balls had been placed on old tires, dock pieces, an old engine block and washed up boat at Sea Isle.

JUNE 25

The weather was partly cloudy to start with about 50% cloud cover, which cleared to about 5% by midmorning. The wind was out of the W at about 10 kts, but there were only ripples on the surface at midharbor. There had been no rainfall over the previous 48 hours, and the total accumulation for the week was 26 mm. The tide was outgoing, with about 8 hours to the next high tide (5 PM). Because of the low, outgoing tide, only upper harbor stations were surveyed. Because of engine problems with the Environmental Resources boat, a pump-out boat was again used for water sampling.

Temperature and DO

Air temperature ranged from about 22°C to 24°C during the monitoring period. Water temperature was about 18-21°C at the surface throughout the harbor and 16-20°C at the bottom. DO readings were at supersaturated levels at the surface and throughout most of the water column at upper-harbor stations (about 7-13 ppm) and 4-10 ppm at the bottom.

Color and Clarity

Water color was judged a normal brown. Despite the apparent growth phase of an algal bloom, Secchi depth ranged from 1 m to 1.5 m

Observations

Wildlife

Numerous Canada geese were noted at on the TNH Beach Park (about 40) and on Sea Isle (36). Also noted were 1 cormorant, 1 blue heron, 1 egret, 1 osprey, and 4 swans. Nine dead horseshoe crabs were seen floating at the surface pretty close together between CSHH #2 and #3.

Human

A Gladsky Marine crane and 3 barges were near the KeySpan/National Grid property. Fifteen barges were in the north anchor at the Pt. Washington gravel operation and 1 barge with crane was on the south anchor. Two powerboats and the SC yacht club launch were in Glen Cove Creek. Two barges with gravel were being unloaded in Glen Cove Creek. A crane and workboat were rebuilding the seawall on the north side of the creek. A boat had washed up on shore near the entrance of the creek.



CSHH Water-Monitoring Program 2008

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					

CSHH #1 - Beacon 11

8/27/08	22.29	22.57	25.49	25.88	9.4	5.38	8.1	7.7	22.0	0.80	3.87	5.2	8:45
8/20/08	23.07	23.08	24.7	24.92	6.51	5.41	7.8	7.7	19.5	0.75	4.03	2.7	8:35
8/13/08	23.10	22.81	24.16	25.56	8.86	3.77	8.0	7.4	21.7	0.75	3.23	4.2	8:45
8/7/08	24.86	24.54	24.19	24.74	3.83	3.5	7.4	7.3	24.8	1.00	4.20	2.8	8:45
7/30/08	24.15	22.46	25.43	25.86	9.12	4.09	7.9	7.4	25.1	1.25		4.6	8:30
7/16/08	22.53	19.02	25.08	26.08	6.57	1.17	7.6	7.2	22.6	1.80	2.08	4.5	9:00
7/9/08	20.47	20.02	25.39	25.54	5.23	4.52	7.4	7.4	25.1	1.50	3.88	3.1	8:36
7/2/08	19.35	17.74	25.04	25.53	7.82	4.7	7.8	7.4	22.0	1.00	1.10	4.2	8:25
6/25/08	20.03	19.97	24.1	24.18	9.47	9.76	8.1	8.1	22.0	1.00		2.8	8:47
6/19/08	19.71	19.58	23.51	24.29	11.48	7.20	8.2	7.9	16.6	0.75		3.4	8:50
6/11/08	18.89	16.89	24.04	24.33	6.82	5.17	7.6	7.4	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

8/27/08	22.41	22.34	26.11	26.18	6.81	6.01	7.9	7.8	22.4	1.50	1.76	7.8	10:25
8/20/08	Station abandoned because of wind and waves.												
8/13/08	23.07	22.02	25.75	25.87	8.38	5.51	8.0	7.7	25.6	1.50	1.40	8.8	9:18
8/7/08	24.10	21.99	25.64	26.23	10.04	1.28	8.1	7.2	27.4	1.00	2.30	7.7	9:22
7/30/08	23.88	20.70	25.87	26.18	11.80	1.37	8.3	7.2	26.7	0.75	4.60	9.2	10:15
7/16/08	22.40	18.35	25.64	26.15	8.67	2.87	8.0	7.3	24.6	2.00	1.50	8.3	10:36
7/9/08	20.57	18.89	25.81	26.02	8.15	3.94	7.9	7.4	26.1	2.00	1.76	7.6	9:17
7/2/08	19.15	16.82	25.62	25.87	10.28	5.30	8.2	7.5	24.9	1.50		9.5	10:25
6/25/08	19.77	16.04	25.14	25.60	11.01	4.15	8.3	7.4	21.9	1.25		7.4	9:15
6/19/08	20.27	16.84	24.59	25.41	11.57	6.35	8.4	7.8	16.8	2.00		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

8/27/08	22.73	22.37	25.55	26.03	7.36	5.62	7.9	7.7	22.8	1.50		5.0	10:50
8/20/08	22.96	23.16	25.26	25.49	8.14	6.11	8.1	7.9	19.5	1.00		3.8	9:55
8/13/08	23.10	22.98	24.76	25.65	9.72	6.90	8.1	7.9	25.2	1.25		5.1	9:40
8/7/08	24.68	23.96	25.12	25.54	8.67	5.67	8.0	7.6	29.1	1.00		3.3	9:40
7/30/08	24.17	21.71	25.54	26.03	10.48	2.99	8.2	7.3	29.3	1.25	1.57	5.2	10:45
7/16/08	22.92	18.94	25.38	26.04	6.97	2.26	7.7	7.2	25.7	2.25		4.9	11:00
7/9/08	21.22	19.25	24.89	25.82	7.83	4.46	7.7	7.4	26.1	1.50	1.66	3.4	9:45
7/2/08	19.99	17.65	25.43	25.68	10.02	5.59	8.2	7.6	24.2	1.50		5.4	10:50
6/25/08	21.01	19.21	22.78	25.10	8.68	9.90	8.1	8.0	22.4	1.50		3.1	9:45
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	7.7	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

8/27/08	23.02	22.42	23.92	25.75	5.96	5.76	7.6	7.7	22.8	1.25	2.88	4.2	11:05
8/20/08	23.69	23.57	24.64	25.28	8.31	4.64	7.8	7.5	19.7	1.25	2.69	3.1	10:40
8/13/08	22.97	22.91	23.74	25.28	8.73	2.34	8.0	7.4	27.2	1.00	2.17	4.2	10:10
8/7/08	24.41	24.01	24.65	25.52	6.58	5.20	7.7	7.6	26.8	1.25	3.82	2.5	10:18
7/30/08	24.36	22.27	24.91	25.76	11.95	3.16	8.3	7.4	31.7	1.00		4.4	11:10
7/16/08	22.31	20.97	22.95	25.75	6.87	3.67	7.6	7.3	28.8	0.75	2.64	4.6	11:13
7/9/08	21.83	19.99	23.78	25.58	10.37	5.26	7.9	7.4	27.7	1.00	3.65	2.5	10:13
7/2/08	21.01	18.90	23.34	25.47	8.98	7.23	7.9	7.8	27.0	1.00	2.78	4.9	11:15
6/25/08	20.65	19.59	17.99	24.88	10.90	9.75	8.0	8.0	23.9	1.25		2.2	10:16
6/19/08	20.22	20.02	21.85	24.47	11.47	8.90	8.3	8.0	20.1	1.00	4.53	3.8	10:40



CSHH Water-Monitoring Program 2008

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					
6/11/08	20.07	17.63	19.30	24.31	8.25	6.36	7.7	7.5	27.4	1.25	4.97	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 #13 - 60' West of the Mill Pond Weir

8/27/08	22.88	22.78	24.81	25.73	5.35	4.55	7.5	7.5	23.3	1.25	2.35	2.7	11:30
8/20/08	23.44	23.44	24.58	24.94	3.10	2.08	7.5	7.3	21.1	1.25	4.53	3.5	11:05
8/13/08	23.06	23.01	23.86	24.7	5.95	4.59	7.6	7.5	27.4	1.30	2.68	3.1	10:30
8/7/08	24.18	23.49	24.69	25.30	3.95	2.23	7.5	7.3	28.3	1.50	3.94	2.3	10:35
7/30/08	24.10	23.52	24.86	25.51	10.69	6.24	8.0	7.6	31.7	1.00		3.6	11:30
7/16/08	22.65	20.47	24.65	25.61	8.66	1.66	7.8	7.1	29.6	1.00	3.78	4.4	11:41
7/9/08	18.58	20.27	21.07	24.77	8.44	7.21	7.5	7.4	27.7	1.00	3.45	1.1	10:30
7/2/08	20.53	18.78	16.27	25.35	9.75	4.81	7.9	7.4	26.6	1.00		3.9	11:35
6/25/08	18.31	18.68	4.60	24.83	13.06	6.70	7.9	7.5	23.9	-----		2.4	10:30
6/19/08	19.86	18.96	21.67	24.21	11.92	4.82	8.1	7.4	20.4	1.00		4.1	11:00
6/11/08	20.25	17.16	17.30	24.18	14.40	2.91	8.4	7.2	27.1	1.00		2.9	11:15

CSHH #4 - Bar Beach Spit

8/27/08	22.52	22.51	25.55	25.60	6.86	6.46	7.9	7.8	21.6	0.80		2.0	10:05
7/30/08	24.19	23.66	25.37	25.64	10.41	7.87	8.1	7.8	27.2	0.60		2.3	8:50
7/16/08	22.13	19.80	25.31	25.92	5.46	1.70	7.5	7.2	22.7	1.50		5.9	9:16
7/2/08	19.32	17.97	25.06	25.49	7.55	4.67	7.8	7.5	23.3	0.75		6.4	8:45

CSHH #5 - Mott's Cove

8/27/08	22.49	22.49	25.12	25.45	8.74	6.55	8.0	7.9	21.0	0.75		1.9	9:50
7/30/08	23.87	23.72	25.09	25.46	6.64	5.72	7.6	7.6	27.4	0.75		1.8	9:10
7/16/08	21.33	21.22	25.31	25.52	2.99	2.98	7.3	7.2	23.0	1.25		1.6	9:35
7/2/08	19.00	18.93	25.06	25.09	5.59	5.58	7.5	7.5	23.6	0.75		1.5	9:05

CSHH #6 - East of Former Incinerator Site

8/27/08	22.51	22.44	24.90	25.14	9.57	7.66	8.1	8.0	22.3	0.75		2.1	9:35
7/30/08	24.61	24.17	25.08	25.40	7.84	5.90	7.7	7.6	28.0	0.75		2.1	9:30
7/16/08	23.08	22.10	24.74	25.27	5.73	4.16	7.4	7.3	24.2	1.00		1.9	9:53
7/2/08	19.20	19.09	25.10	25.12	6.36	5.81	7.6	7.6	24.6	1.00		2.6	9:28

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

8/27/08	21.93	22.44	23.76	24.75	9.97	8.33	8.1	8.0	21.0	0.50	6.35	1.9	9:15
7/30/08	24.73	24.65	24.79	24.98	8.22	5.41	7.8	7.5	28.6	0.25	5.70	1.4	9:45
7/16/08	23.41	23.15	24.40	24.59	7.30	6.84	7.6	7.6	23.8	0.75		1.6	10:05
7/2/08	20.35	20.06	24.45	24.62	7.00	6.44	7.6	7.6	24.6	1.00	4.94	1.5	9:40

x