

Water-Monitoring Report, October 3, 2008

Below is a copy of the sampling report update for Hempstead Harbor through October 2 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.

As mentioned previously, we have added a new field in the attached spreadsheet to record NTUs for turbidity levels, in addition to our Secchi readings. 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. **On September 17, we started taking two turbidity readings at each designated station—one reading at a half meter below the surface, and one reading at the same depth as our Secchi reading for the station; the two NTU readings are included on the attached data sheet and separated by a slash, as in "2.10/2.19"(half-meter below surface/Secchi depth).**

OCTOBER 2

Our usual Wednesday monitoring was postponed to the following day because of rain, but on Thursday, low tide prevented us from working in the lower harbor and high winds and waves prevented us from reaching our northern-most station, closest to the sound. At the start of the monitoring period, it was partly cloudy, and winds ranged from W-NW 15-18 kts with about two-foot waves at CSHH #3—just west of Glen Cove Creek. 23.5 mm of rain fell in early morning on Wednesday with another 9 mm falling in the evening; total rainfall for the preceding week was 84.5 mm.

Temperature and DO

Air temperature was much lower than in the preceding week—at about 15°C during the sampling period—lowering water temperature to 19-20°C at surface and closer to 20°C at the bottom. Temperature and wind helped improve bottom DO levels: 5-7 ppm at CSHH #, 3, 13. But DO levels throughout the water column at CSHH #3 were at about 9.5 ppm; because of relative high pH levels in this area—8.02 throughout the water column—we suspected an algal bloom was occurring.

Color and Clarity

Water color was judged to be a normal green, with a high level of suspended particles noted at CSHH #8. Secchi depths ranged between 1.0 m and 1.2 m (turbidity-meter levels were 1.21-2.74 NTUs at a half meter below the surface and 2.82-3.41 NTUs at the Secchi depths. Water color in Glen Cove Creek was more in line with rest of the harbor—the opaque green was not observed—and NTUs readings for CSHH #13 were more in line with other stations.

Observations

Wildlife

Large schools of baitfish and tiny shrimp too numerous to count were seen from the main dock at Tappen Marina as were slipper shells on the sea wall around the marina—just at the low tide mark and below. No comb jellies were noted—possibly because of the wave action on the water. It was surprising to see a new a large new set of tiny blue mussels on the seawall along the creek at CSHH #8-11. The birds that were observed included 11 cormorants, 2 ducks, 7 Canada geese, 1 belted kingfisher, and 11 swans.

Human

Six Gladsky Marine barges were on a mooring off of the KeySpan/National Grid property, and 2 of the barges had crane; 16 barges were on moorings off of the Pt. Washington gravel operation and two tugs were along the shore. Two barges were in Glen Cove Creek—one very large—at the Rason plant. Only 2 powerboats were noted. Floatable debris was noted along the dock and seawall at CSHH # 8 and at the head of the creek at CSHH #13—beverage bottles and cans and two tennis balls.



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													
10/2/08	19.58	20.08	25.27	25.69	6.73	5.04	7.63	7.45	14.6	1.2	2.74/2.82	2.566	8:30
9/24/08	20.75	21.09	25.87	26.5	9.65	5.86	8.1	7.7	19.3	1.0	2.79/2.46	5.0	8:45
9/17/08	22.11	22.31	24.77	25.14	4.52	4.22	7.6	7.5	19.2	1.5	2.26/2.66	2.9	8:34
9/10/08	23.03	23.23	25.09	25.18	5.70	5.33	7.5	7.6	20.3	1.5	2.34	4.6	8:30
9/3/08	23.46	23.32	24.88	25.32	6.28	4.02	7.8	7.5	24.0	0.75	3.31	2.7	8:45
8/27/08	22.29	22.57	25.49	25.88	9.40	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													
10/2/08	ABANDONED STATION BECAUSE OF WIND AND WAVES.												
9/24/08	20.47	20.52	26.32	26.68	8.79	7.37	8.1	7.8	18.8	1.60	1.94/1.78	7.3	10:15
9/17/08	21.95	22.22	25.79	26.11	5.79	3.32	7.8	7.6	20.2	2.00	1.52/1.14	6.6	9:05
9/10/08	23.22	23.23	25.42	25.51	7.37	6.53	8.0	7.9	19.9	1.50	2.78	7.4	9:00
9/3/08	23.07	22.80	25.72	26.21	5.96	4.13	7.7	7.5	23.8	1.50	2.20	6.3	9:10
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													
10/2/08	19.93	19.97	25.80	25.81	9.45	9.45	8.0	8.0	16.0	1.00		2.7	9:10
9/24/08	21.02	20.82	25.77	26.66	9.33	6.62	8.0	7.7	19.5	1.20		4.6	10:43
9/17/08	22.21	22.47	25.43	25.88	5.64	4.81	7.7	7.6	20.0	1.80		3.9	9:35
9/10/08	22.94	23.25	24.56	25.44	7.44	6.03	8.0	7.8	20.2	1.00		4.8	9:25
9/3/08	23.43	23.33	25.21	25.74	8.53	5.49	8.1	7.7	26.1	0.80		2.8	9:37
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													
10/2/08	18.60	20.69	20.70	25.74	8.51	7.38	7.84	7.7	14.9	1.00	2.48/3.24	2.3	9:45



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					
9/24/08	21.01	21.32	25.62	26.50	9.58	4.61	8.1	7.5	18.7	1.00	1.96/1.58	3.3	11:05
9/17/08	22.50	22.52	23.65	25.65	4.92	4.09	7.60	7.6	19.3	1.90	2.10/2.19	2.9	10:05
9/10/08	23.32	23.56	20.25	25.41	5.90	4.06	7.8	7.6	20.1	1.25	2.76	3.2	9:45
9/3/08	24.04	23.27	24.48	25.78	8.37	3.40	8.0	7.5	25.1	0.75	4.13	2.6	10:00
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
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

10/2/08	18.80	20.07	16.26	23.90	8.49	6.20	7.37	7.37	15.3	1.10	2.21/3.41	1.2	10:02
9/24/08	21.35	21.39	25.68	26.29	7.36	4.78	7.71	7.43	20.8	1.00	3.08/3.42	2.0	11:30
9/17/08	22.80	22.73	25.03	25.62	3.16	2.13	7.4	7.4	21.3	2.00	2.37/3.51	3.6	10:25
9/10/08	23.26	23.61	24.25	25.40	7.38	3.15	7.7	7.3	20.7	1.00	4.05/3.27	3.1	10:00
9/3/08	23.58	23.42	23.54	24.87	7.81	5.52	7.8	7.6	24.1	0.75	4.66	1.3	10:20
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

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