

STATION	LATITUDE DD	LONGITUDE DD
E-12	40.8487	-73.8045
A1	40.8013	-73.8268
A2M	40.7992	-73.7913
8-403	40.7778	-73.7608
8-405	40.7888	-73.7582
A3	40.8433	-73.7590
9-409	40.8240	-73.7175
9-412	40.8200	-73.7135
9-413	40.8041	-73.7133
A4	40.8725	-73.7343
A5	40.8923	-73.6853
B1S	40.9403	-73.6667
B2	40.9343	-73.6520
B3M	40.9187	-73.6403
B4	40.9054	-73.6360
DI1	40.8883	-73.7748
DI2	40.8930	-73.7642
H-A3	40.9207	-73.7187
H-B	40.9080	-73.7090
H-C	40.8590	-73.6717
H-C1	40.8853	-73.6903
H-D	40.8402	-73.6572

As part of the Long Island Sound Study’s ongoing water quality monitoring program, IEC started its 30th consecutive summer of weekly ambient monitoring surveys in western Long Island Sound and the upper East River on Tuesday, June 30th, 2020

Throughout summer 2020, IEC staff will perform 12 weekly surveys to each of 22 stations in the far western Long Island Sound to assess seasonal hypoxic conditions. Hypoxia occurs when dissolved oxygen (“DO”) concentrations become low. Marine organisms need oxygen to live and low oxygen concentrations can have serious consequences for a marine ecosystem. The 12 surveys include weekly *in situ* measurements of water temperature, salinity, dissolved oxygen, pH, and Secchi disk depth. Measurements at each station are taken one meter below the surface, at mid-depth, and one meter above the bottom. Biweekly (beginning 8/6), surveys will include collection of additional samples for parameters relevant to hypoxia at 11 of the 22 stations (stations listed in **bold** on table, upper right). These samples will be analyzed for nutrients, Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), and chlorophyll *a*, in addition to the suite of *in situ* parameters listed above.

Interstate Environmental
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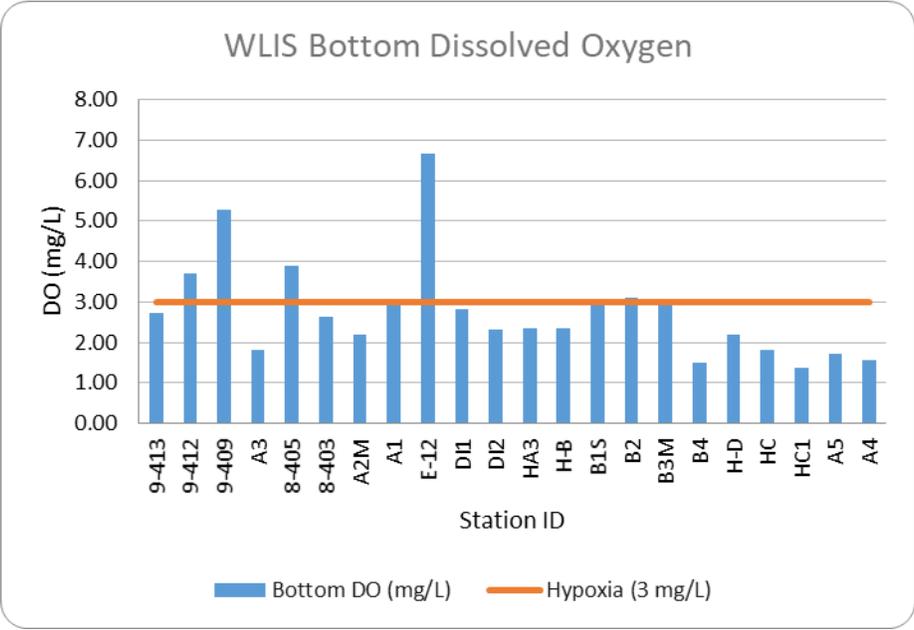
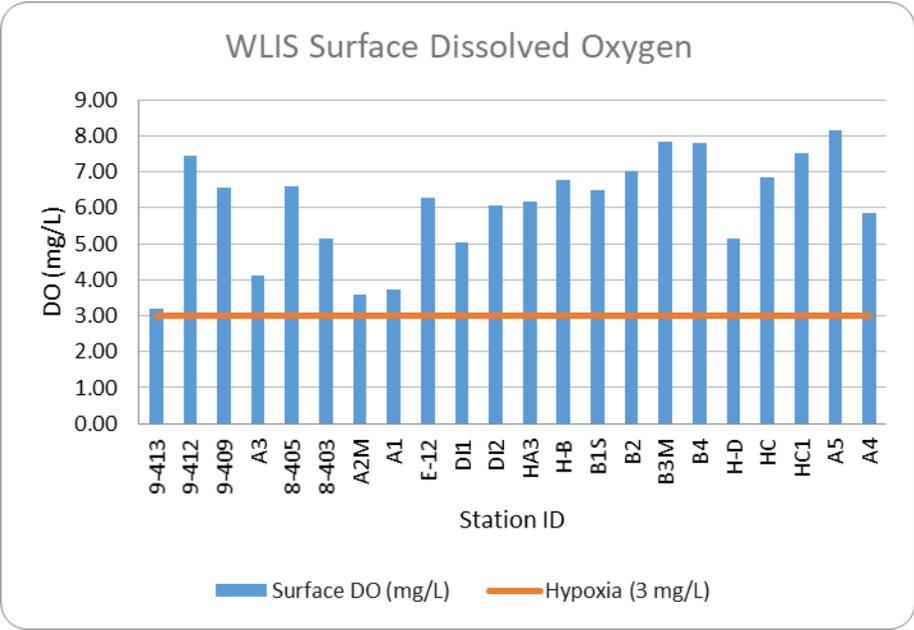
Nutrient parameters that will be analyzed include Ammonia, Nitrate+Nitrite, Particulate Nitrogen, Orthophosphate/DIP, Total Dissolved Phosphorus, Particulate Phosphorus, Dissolved Organic Carbon, Particulate Carbon, Dissolved Silica, and Biogenic Silica.

Proposed Summer Schedule		
Date	Survey Number	Parameters
6/30/2020	1	<i>In situ</i> parameters only
7/7/2020	2	<i>In situ</i> parameters only
7/14/2020	3	<i>In situ</i> parameters only
7/20/2020	4	<i>In situ</i> parameters only
7/28/2020	5	<i>In situ</i> parameters only
8/6/2020	6	<i>In situ</i> , nutrients, chlorophyll a, BOD, TSS
8/12/2020	7	<i>In situ</i> parameters only
8/19/2020	8	<i>In situ</i> , nutrients, chlorophyll a, BOD, TSS
8/26/2020	9	<i>In situ</i> parameters only
9/1/2020	10	<i>In situ</i> , nutrients, chlorophyll a, BOD, TSS
9/9/2020	11	<i>In situ</i> parameters only
9/15/2020	12	<i>In situ</i> , nutrients, chlorophyll a, BOD, TSS



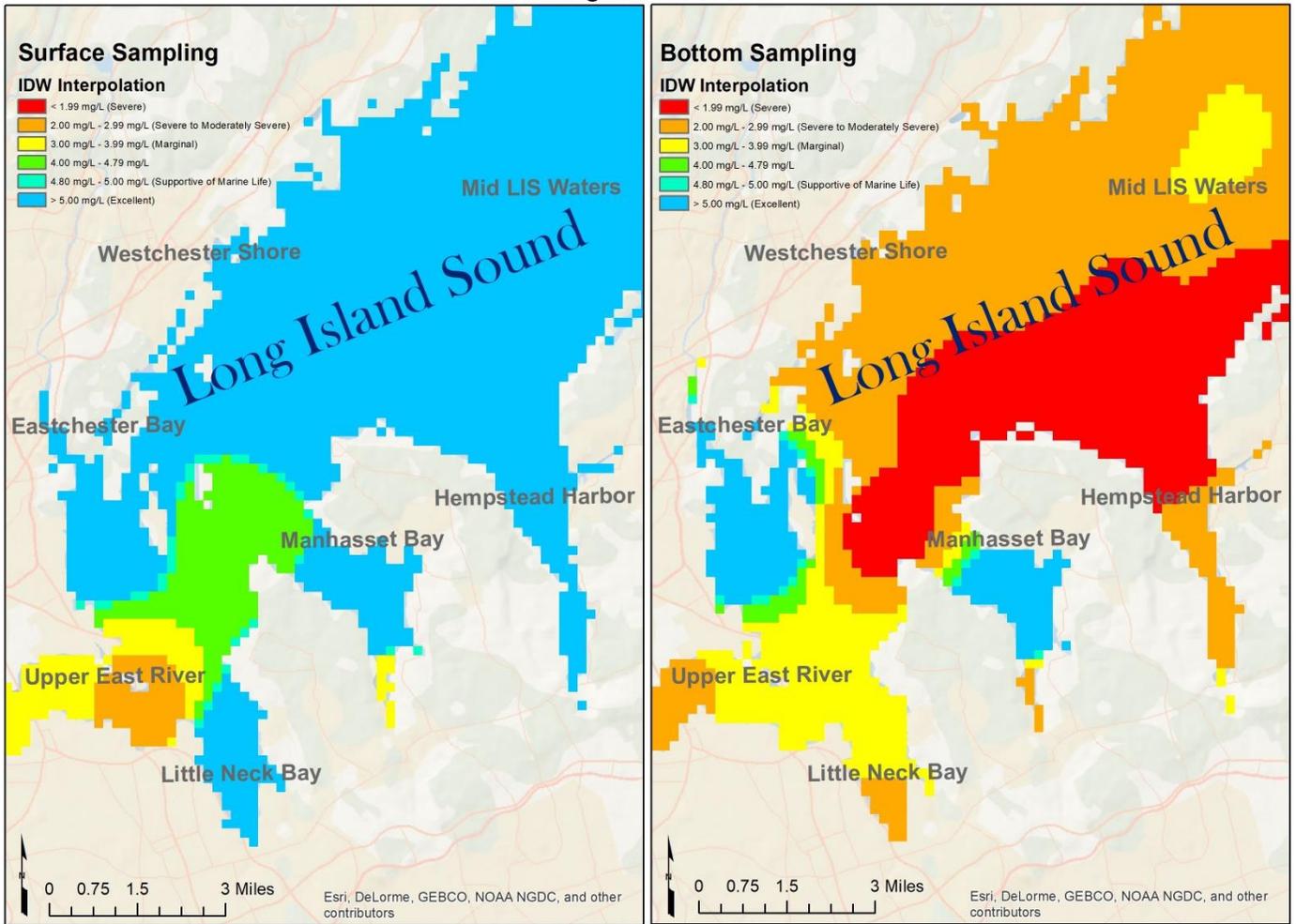
SURVEY # 7 AT A GLANCE 08/12/2020

Hypoxia (DO <3.00 mg/L)	17 stations exhibited hypoxia. 9-413, A3, 8-403, A2M, A1, DI1, DI2, HA3, H-B, B1S, B3M, B4, H-D, HC, HC1, A5, A4
Lowest surface DO concentration	3.19 mg/L (Station 9-413)
Lowest bottom DO concentration	1.38 mg/L (Station HC-1)
Average surface DO concentration	6.07 mg/L
Average bottom DO concentration	2.76 mg/L
Average surface water temperature	23.16 °C
Average bottom water temperature	21.35 °C
Average water column ΔT	1.81 °C
Average surface salinity	26.15 ppt
Average bottom salinity	26.72 ppt



The Long Island Sound Study defines hypoxia as DO values which are below a concentration of 3.00 mg/L.

Interstate Environmental Commission Western Long Island Sound Sampling
August 12, 2020



Map by: Jessica Bonamusa

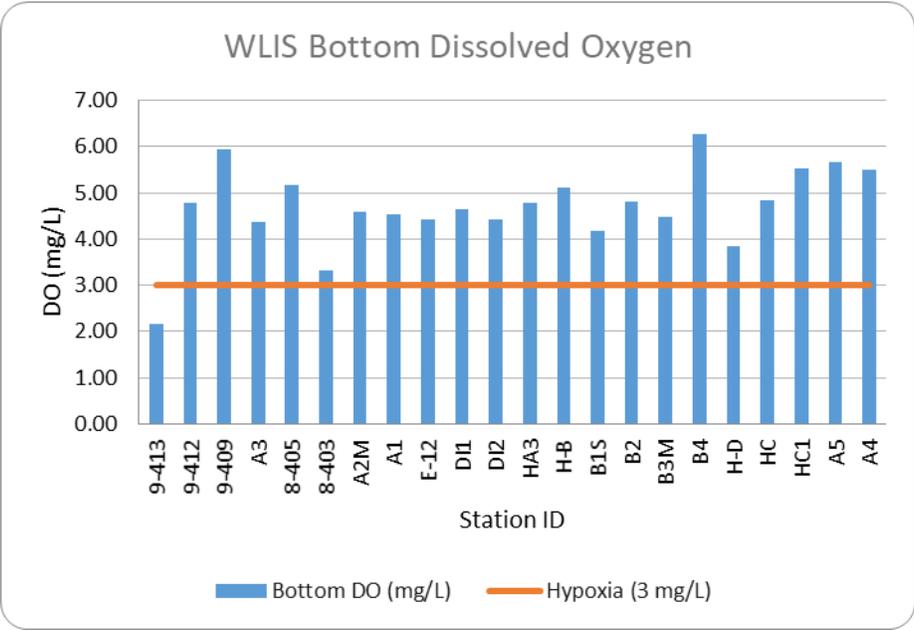
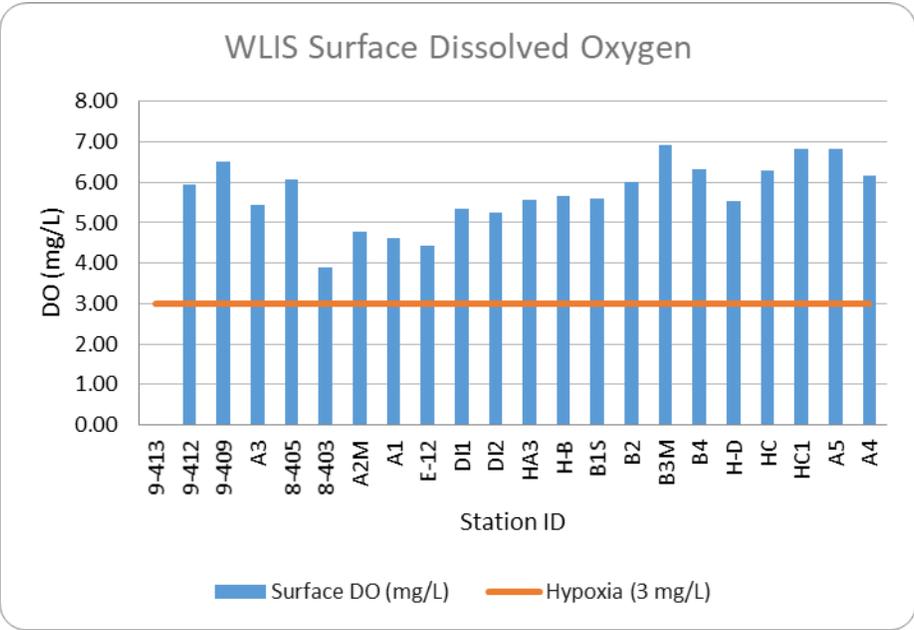
Interstate Environmental Commission

Map Made: 8/31/20

SURVEY # 8 AT A GLANCE 08/18/2020

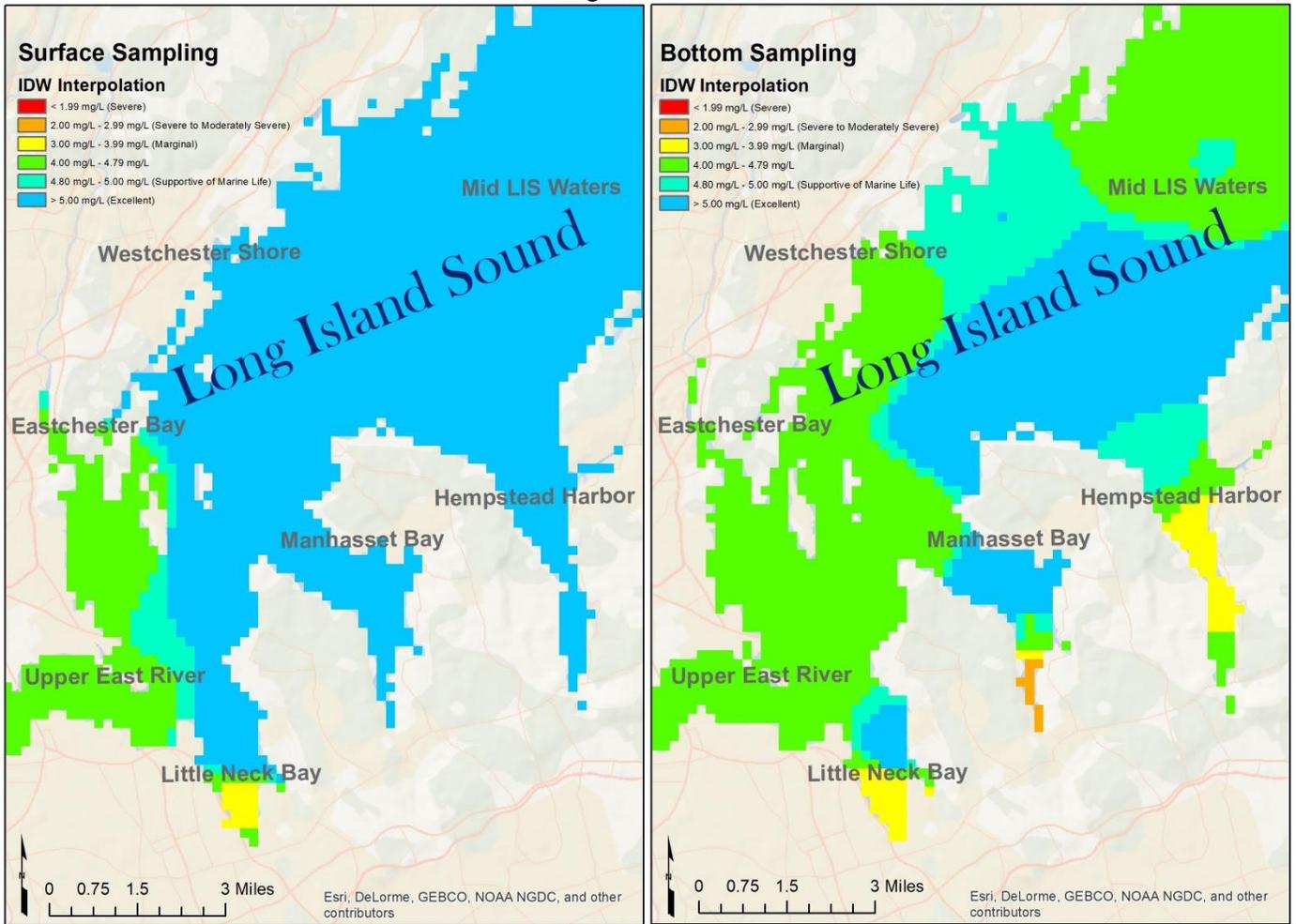
Hypoxia (DO <3.00 mg/L)	One station (9-413) exhibited hypoxia.
Lowest surface DO concentration	3.90 mg/L (8-403)
Lowest bottom DO concentration	2.16 mg/L (9-413)
Average surface DO concentration	5.71 mg/L
Average bottom DO concentration	4.70 mg/L
Average surface water temperature	22.21 mg/L
Average bottom water temperature	22.09 mg/L
Average water column ΔT	0.13 °C
Average surface salinity	26.30 ppt

Average bottom salinity	26.62 ppt
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The Long Island Sound Study defines hypoxia as DO values which are below a concentration of 3.00 mg/L.

Interstate Environmental Commission Western Long Island Sound Sampling
August 18, 2020



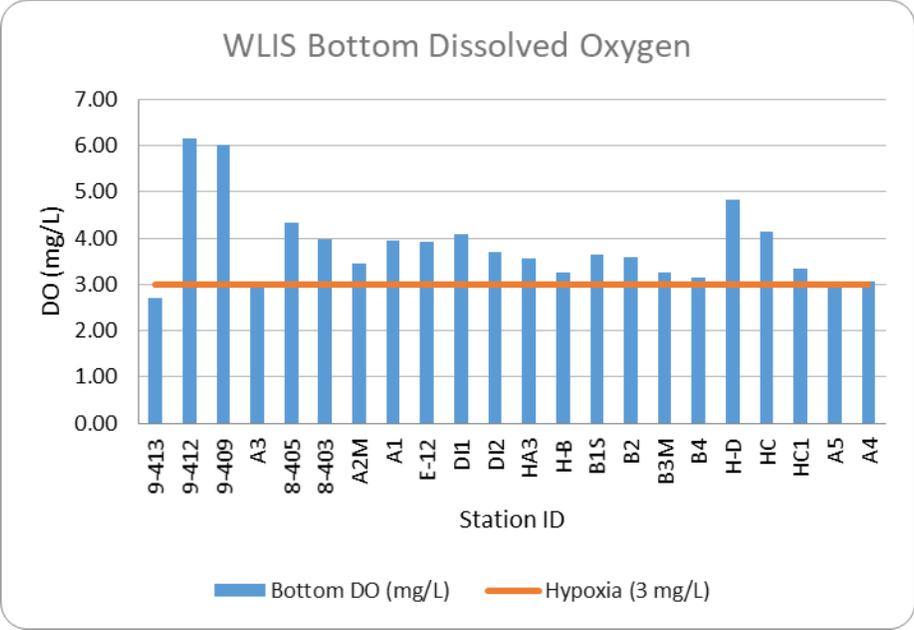
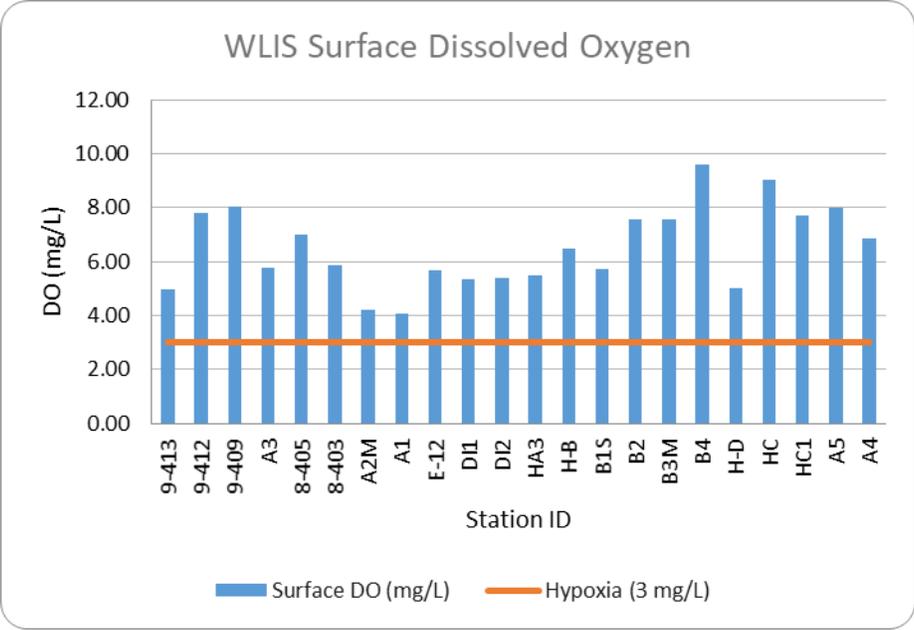
Map by: Jessica Bonamusa

Interstate Environmental Commission

Map Made: 9/18/20

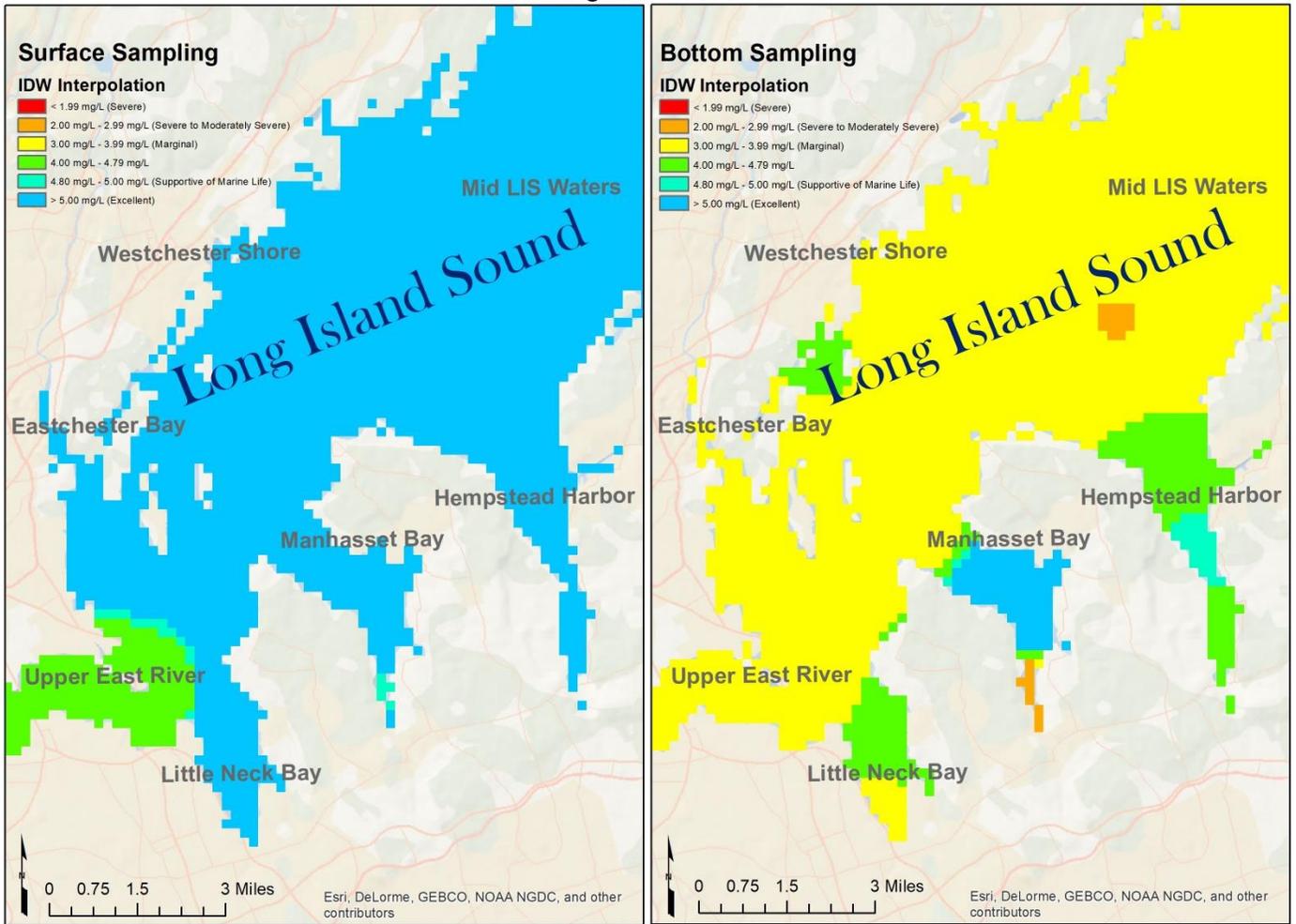
SURVEY # 9 AT A GLANCE 08/25/2020

Hypoxia (DO <3.00 mg/L)	Two sites (9-413 and A5) exhibited hypoxia.
Lowest surface DO concentration	4.07 mg/L (Station A1)
Lowest bottom DO concentration	9-413 (Inner Manhasset Bay)
Average surface DO concentration	6.51 mg/L
Average bottom DO concentration	3.83 mg/L
Average surface water temperature	23.22° C
Average bottom water temperature	22.32° C
Average water column ΔT	0.89 °C
Average surface salinity	26.59 ppt
Average bottom salinity	26.87 ppt



The Long Island Sound Study defines hypoxia as DO values which are below a concentration of 3.00 mg/L.

Interstate Environmental Commission Western Long Island Sound Sampling
August 25, 2020



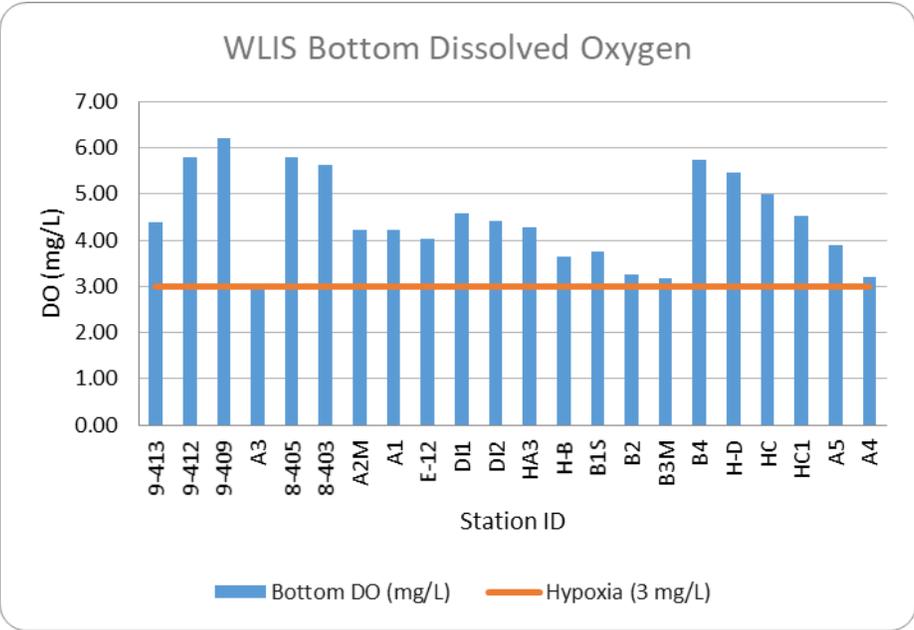
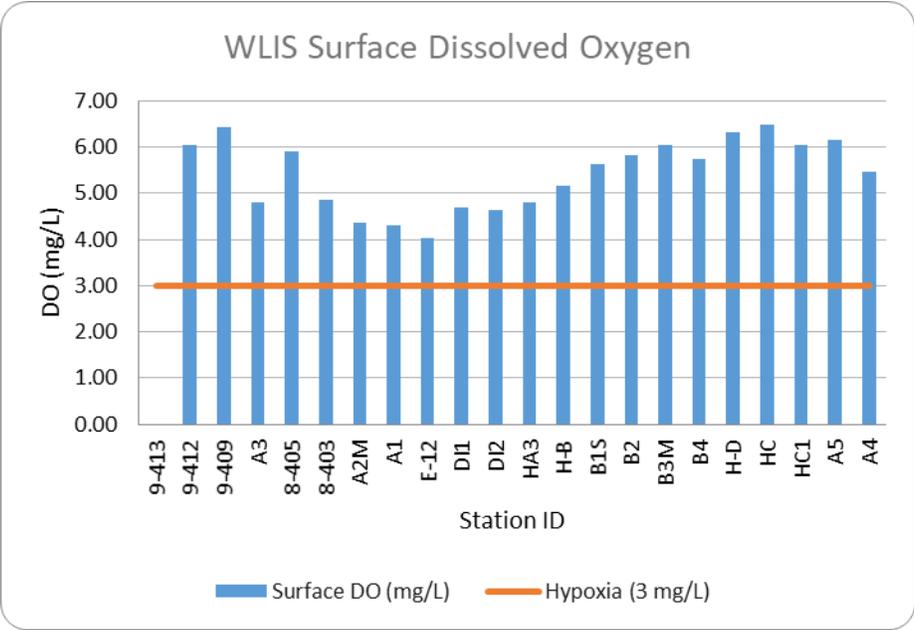
Map by: Jessica Bonamusa

Interstate Environmental Commission

Map Made: 9/18/20

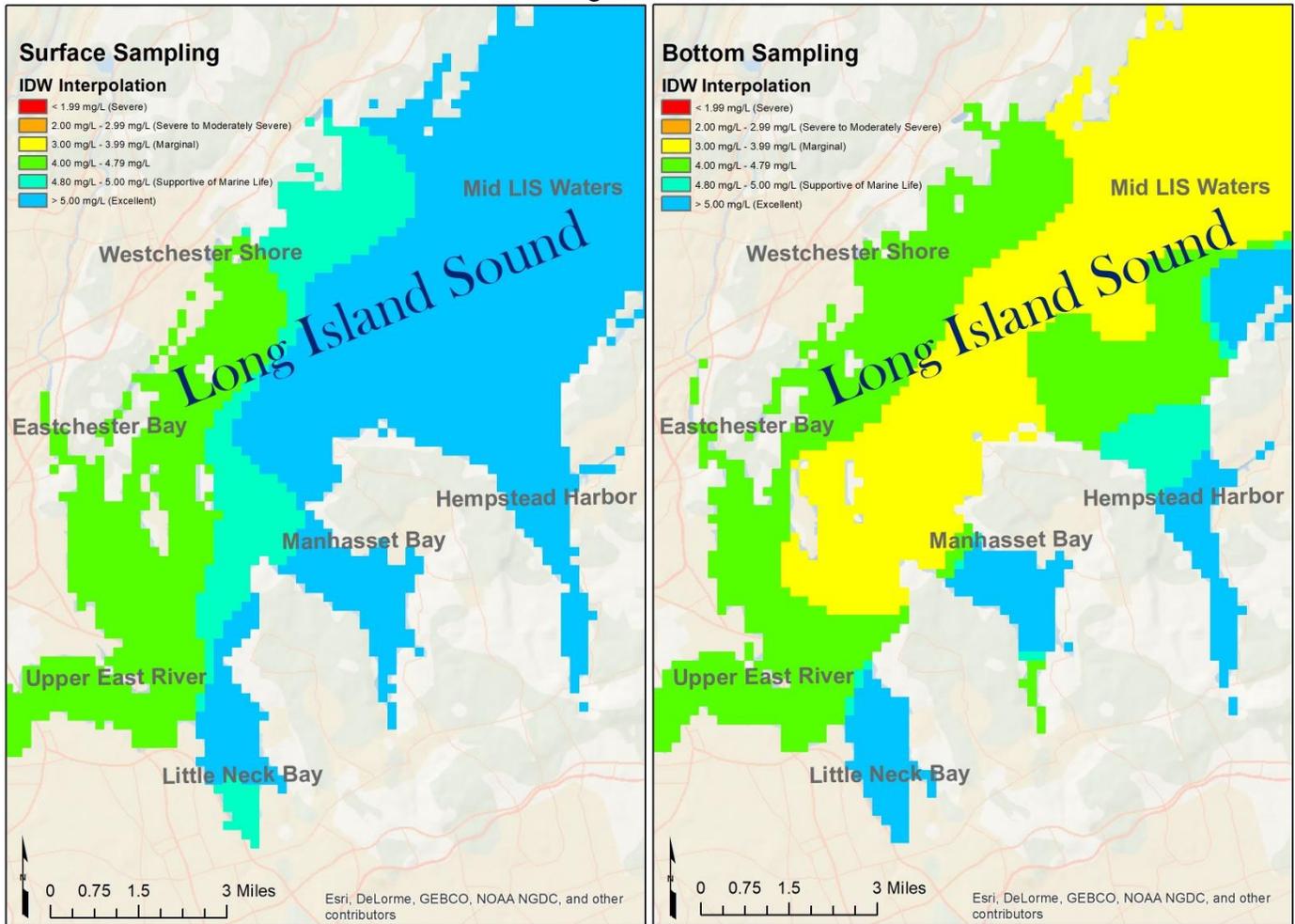
SURVEY # 10 AT A GLANCE 08/31/2020

Hypoxia (DO <3.00 mg/L)	No stations exhibited hypoxia.
Lowest surface DO concentration	4.04 mg/L (Station E12, Eastchester Bay)
Lowest bottom DO concentration	3.06 mg/L (Station A3)
Average surface DO concentration	5.42 mg/L
Average bottom DO concentration	4.46 mg/L
Average surface water temperature	22.04° C
Average bottom water temperature	22.13° C
Average water column ΔT	0.05° C
Average surface salinity	26.55 ppt
Average bottom salinity	26.93 ppt



The Long Island Sound Study defines hypoxia as DO values which are below a concentration of 3.00 mg/L.

Interstate Environmental Commission Western Long Island Sound Sampling
August 31, 2020



Map by: Jessica Bonamusa

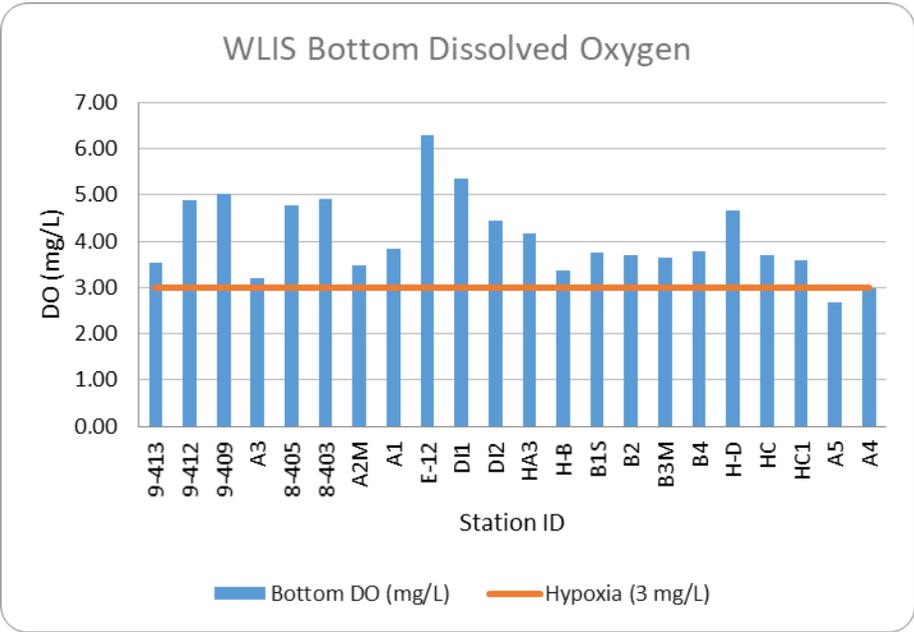
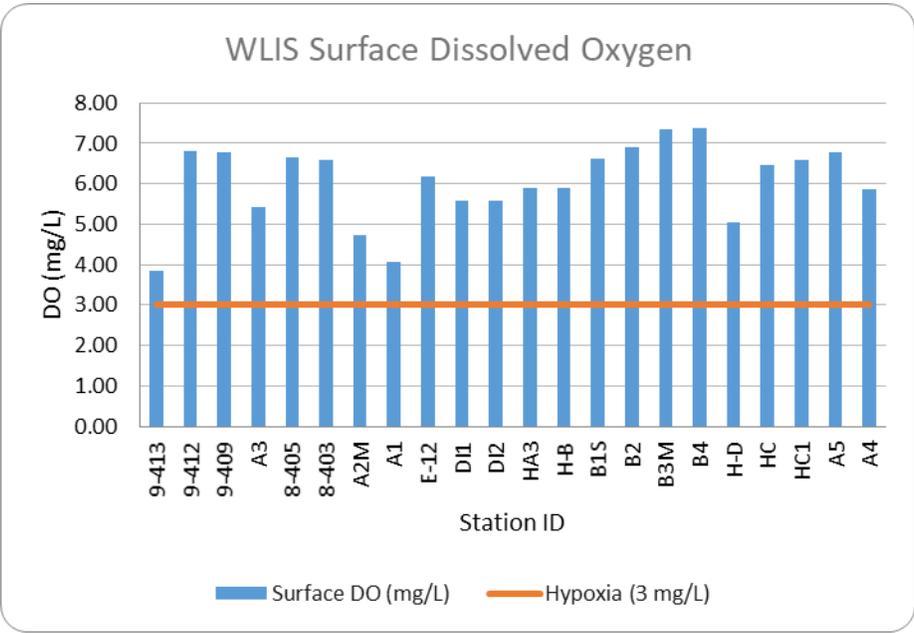
Interstate Environmental Commission

Map Made: 9/21/20

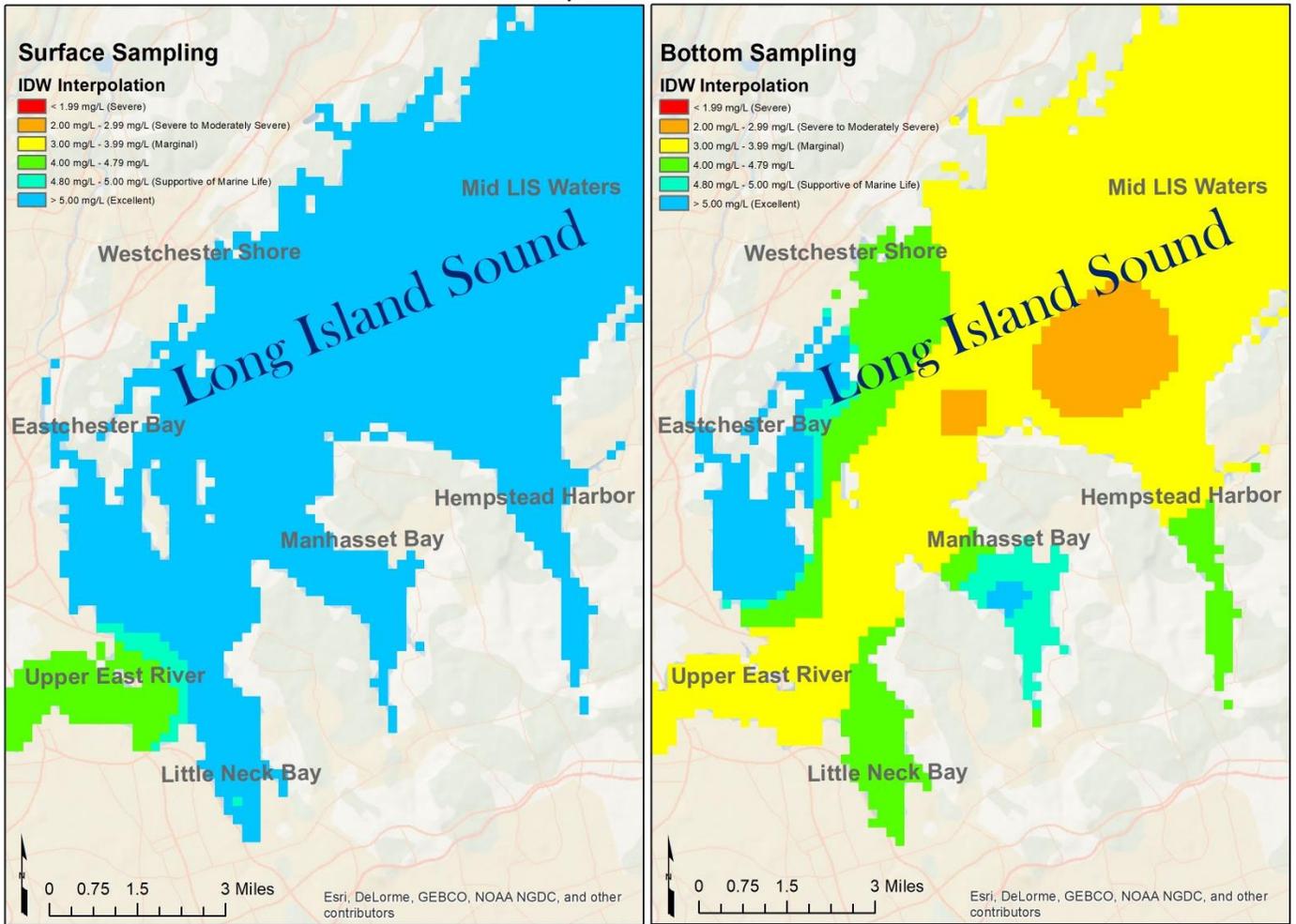
SURVEY # 11 AT A GLANCE 09/08/2020

Hypoxia (DO <3.00 mg/L)	Two stations (A5 and A4) exhibited hypoxia.
Lowest surface DO concentration	3.84 mg/L (Inner Manhasset Bay)
Lowest bottom DO concentration	2.67 mg/L (Station A5)
Average surface DO concentration	6.05 mg/L
Average bottom DO concentration	4.08 mg/L
Average surface water temperature	22.24° C
Average bottom water temperature	22.08° C
Average water column ΔT	0.15° C

Average surface salinity	26.98 ppt
Average bottom salinity	27.57 ppt



Interstate Environmental Commission Western Long Island Sound Sampling
September 8, 2020



Map by: Jessica Bonamusa

Interstate Environmental Commission

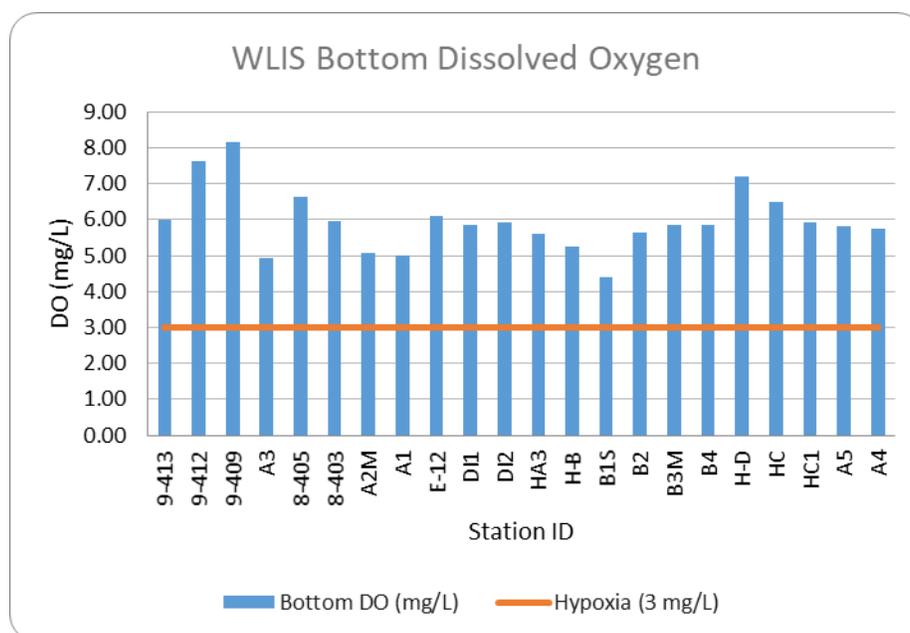
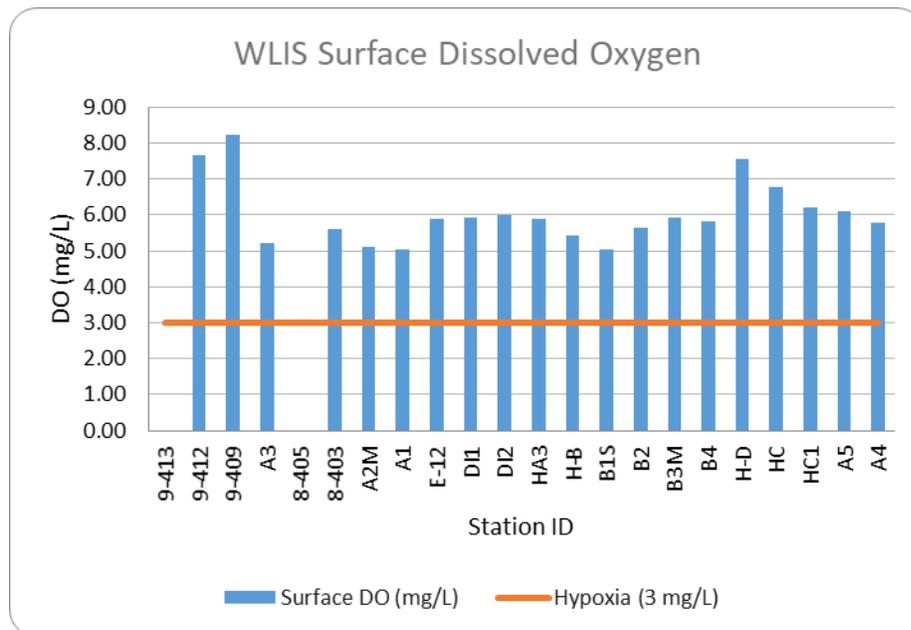
Map Made: 9/30/20

The Long Island Sound Study defines hypoxia as DO values which are below a concentration of 3.00 mg/L.

SURVEY # 12 AT A GLANCE

Hypoxia (DO <3.00 mg/L)	No stations exhibited hypoxia.
Lowest surface DO concentration	5.03 mg/L (Stations A1 and B1S)
Lowest bottom DO concentration	4.39 m/L (Station B1S)
Average surface DO concentration	6.04 mg/L
Average bottom DO concentration	5.96 mg/L
Average surface water temperature	22.22 °C

Average bottom water temperature	22.20 °C
Average water column ΔT	0.09° C
Average surface salinity	26.68 ppt
Average bottom salinity	26.60 ppt

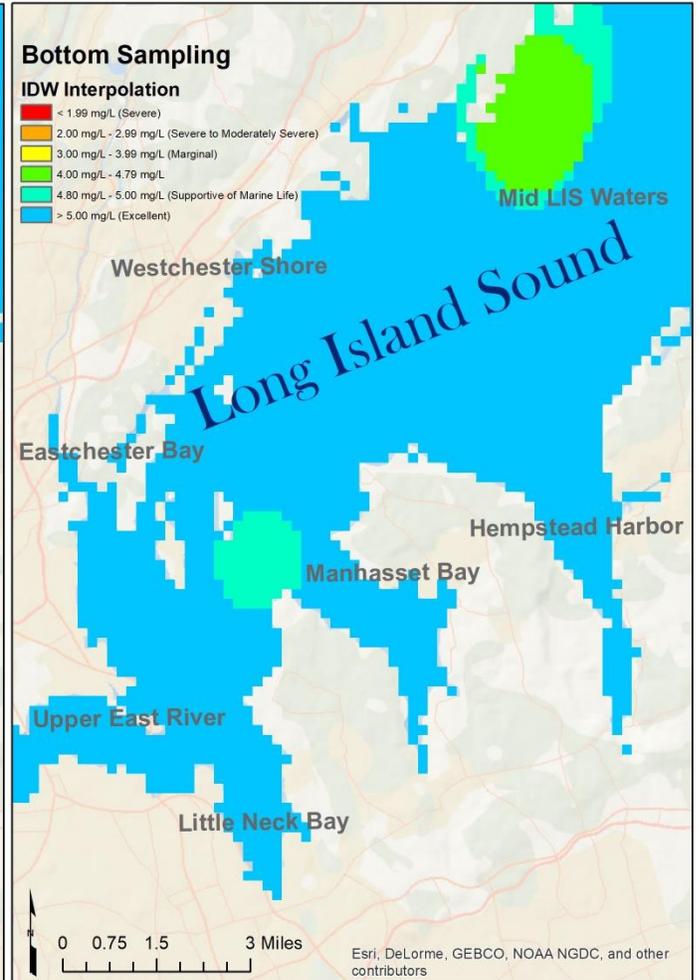


The Long Island Sound Study defines hypoxia as DO values which are below a concentration of 3.00 mg/L.

Interstate Environmental Commission Western Long Island Sound Sampling
September 16, 2020



Map by: Jessica Bonamusa



Interstate Environmental Commission

Map Made: 9/30/20