

Halifax Harbour Water Quality Monitoring Project Weekly Summary #5

Survey Date: 22 July 2004
Nature of Survey: Complete Survey
Report File (this document): HHWQMP_report005_040722.doc
Data File: HHWQMP_data005_040722.xls

Data Return:
 Profile: 100%
 Bacteria: 100%
 Chemical: 100%
Overall: 100%

Data Notes:
 Dissolved Oxygen profiles and Chlorophyll-a profiles were collected, but are not displayed graphically. This data however is included in the data file, and is summarized below.

QA/QC samples:

Complete Analysis		D2 - 1m		H2- 10m	
Parameter	units	reference	QA/QC	reference	duplicate
Fecal Coliform	CFU/ml	0	0	0	n/a
Ammonia (as N)	mg/L	<0.05	<0.05	0.06	< 0.05
Total Suspended Solids	mg/L	2.8	1.2	< 2	n/a
Boron	ug/L	3800	4300	4300	4400
Lithium	ug/L	170	170	180	200
Strontium	ug/L	6600	6600	6700	6800
Titanium	ug/L	76	83	81	83
Uranium	ug/L	3.2	3.0	2.9	2.9

Fecal Coliform (CFU/ml)

Site	DYC-1m	C3-1m	EE3-1m	F3-1m	BRB-1m
Reference	0	0	3	0	0
QA/QC	0	0	5	0	0

Regulated parameters with all samples below EQL (non-detectible):

Parameter	EQL(µg/L)	Parameter	EQL(µg/L)	Parameter	EQL(mg/L)
Cadmium	3	Nickel	20	Oil and Grease	5
Chromium	20	Zinc	50	CBOD ₅	5
Copper	20				
Lead	5				

Detectible non regulated metals

Metal	EQL (µg/L)	Number >EQL	Mean (µg/L)	Range (µg/L)
Boron	500	14	4125	3500-4600
Lithium	20	14	178	150-200
Strontium	50	14	6540	6200-6900
Titanium	20	14	79	69-84
Uranium	1	14	3.2	2.8-3.8

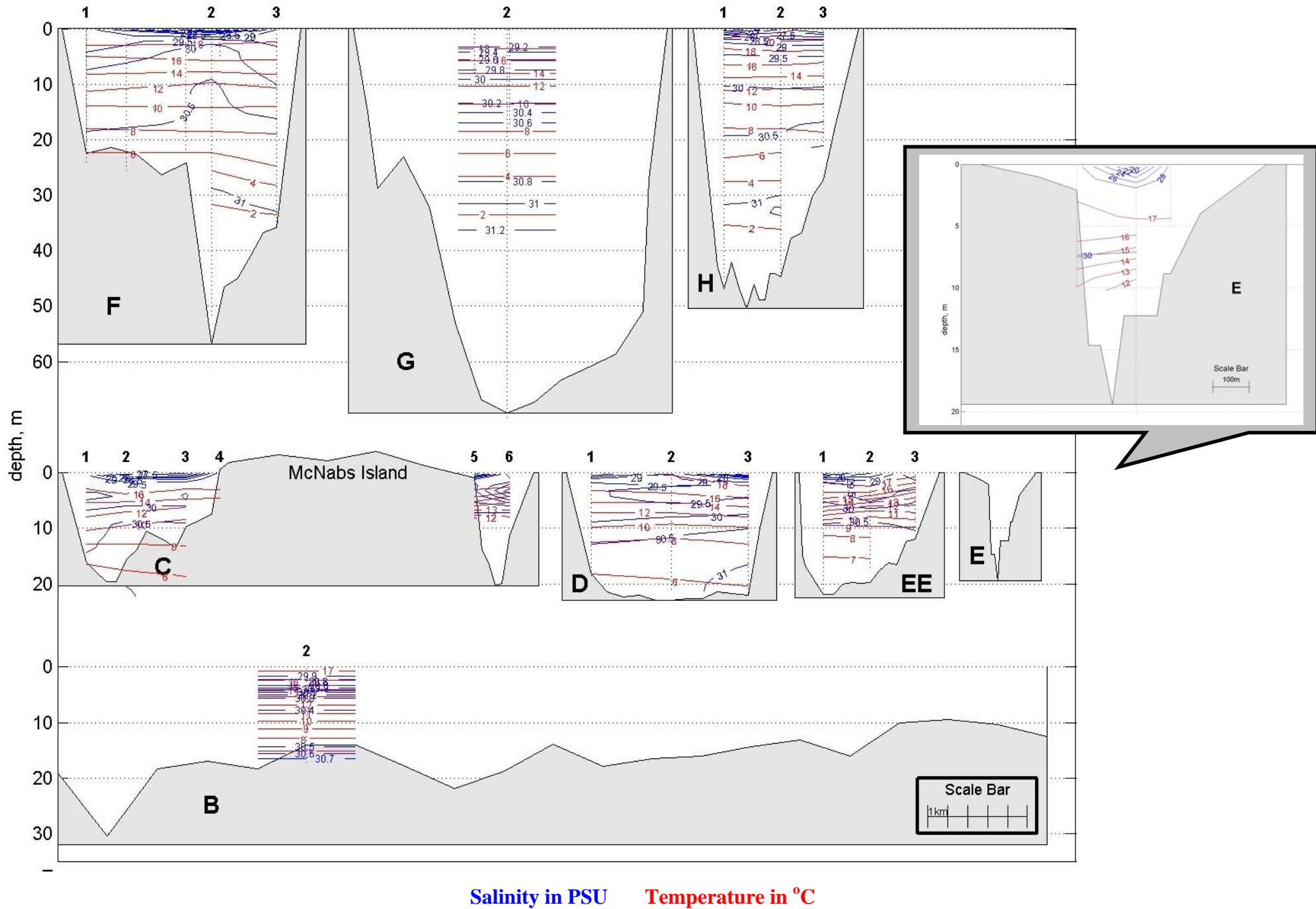
Comments:

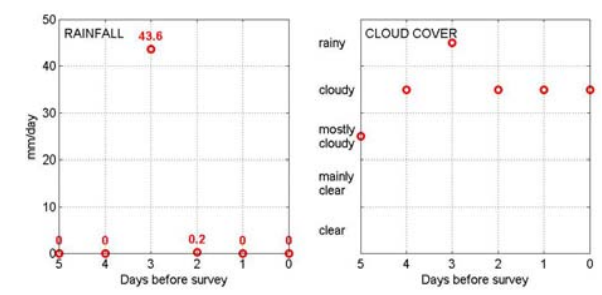
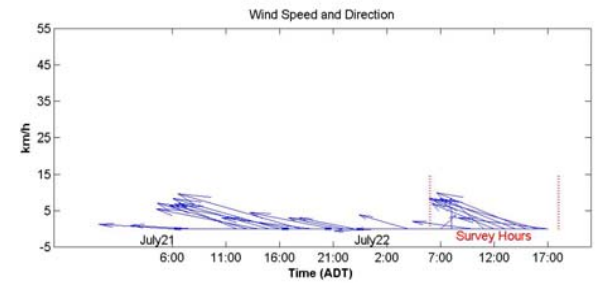
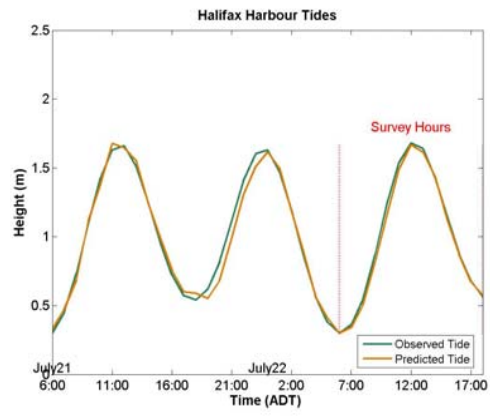
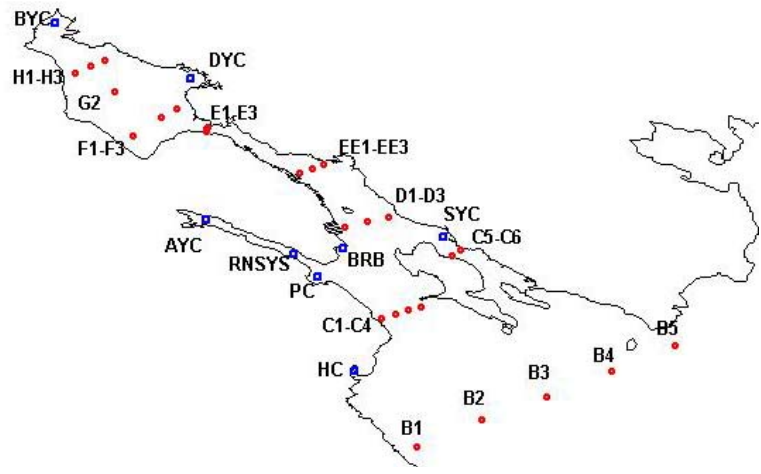
Manganese: There were 2 samples where Manganese was detected. These were site H2 -10m (42 µg/L) and site E2 -10m (25 µg/L). The limit for Manganese is 100 µg/L.

Chlorophyll-a: Values varied between 0.4 and 31.2 µg/L. The highest values were at BRB and AYC. Relatively high values were also detected at C1 and D1. Throughout the harbour typical profile maximum was about 20 with depth averaged values of about 8.5. Maximum values occurred generally between 5-10 m. The maximum value at the reference station (B2) was 8.1 µg/L.

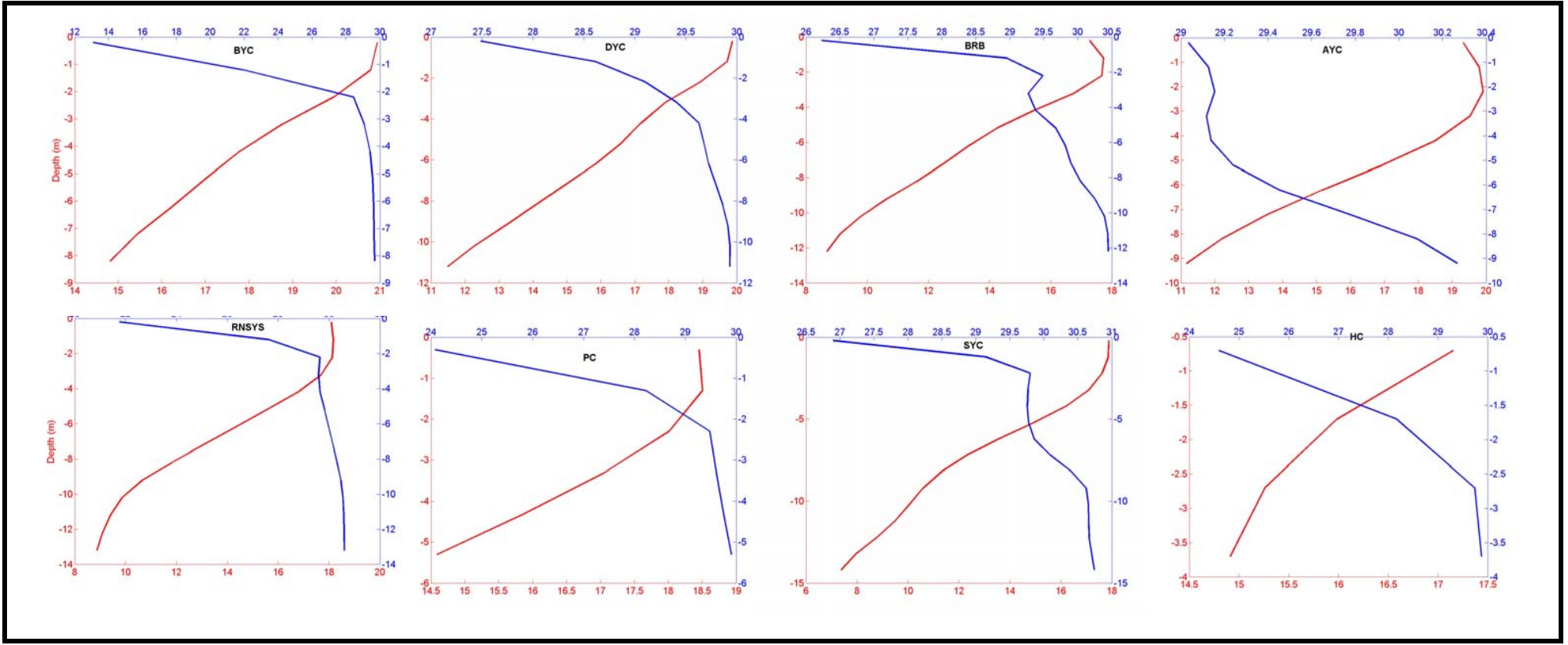
Dissolved Oxygen: The DO criteria was violated in bottom water at AYC (6.4 mg/l), BYC (6.3 mg/l), F2 (6.2 mg/l) and G2 (6.1 mg/l). These sites are all class SB water, which has a DO limit of 7.0 mg/L. In all cases the depth average values meet the criteria. Site F2 was anomalous in that there was a shallow layer of oxygen poor water at the surface. The validity of this observation, taken on its own, is questionable.

Longitudinal section plots (last page): Density contour labels are missing

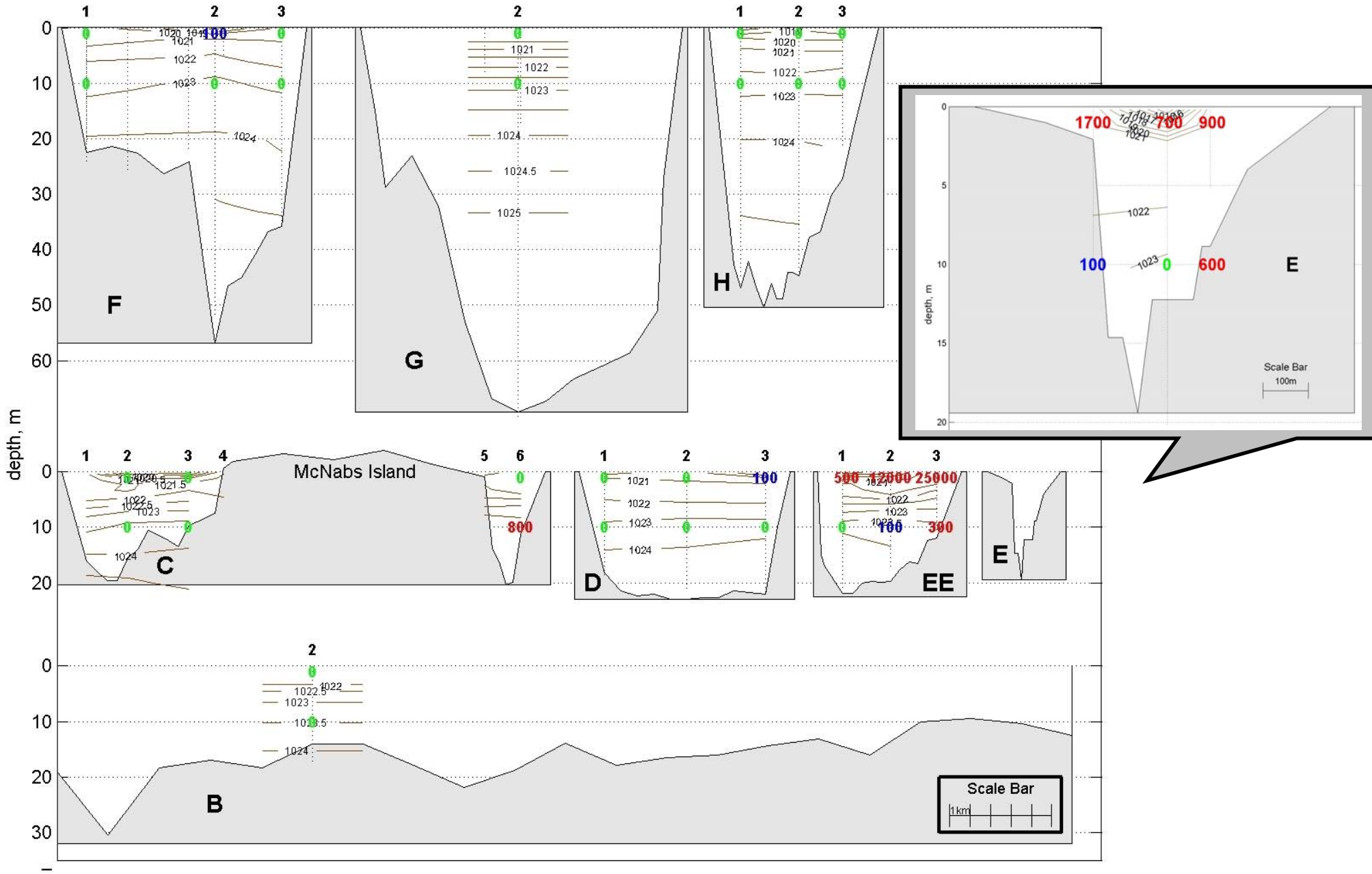




Yacht Clubs



Salinity in PSU Temperature in °C

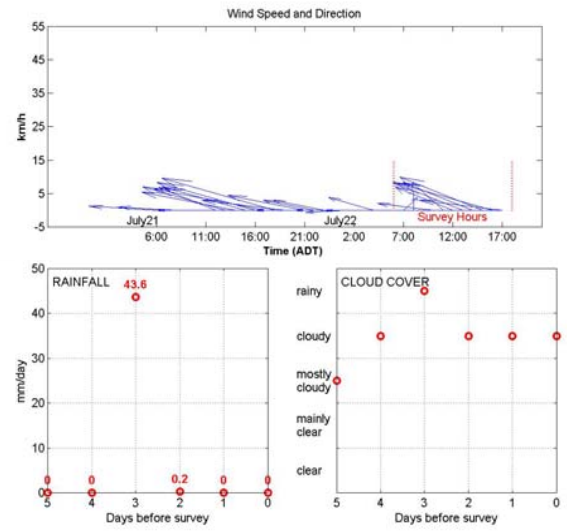
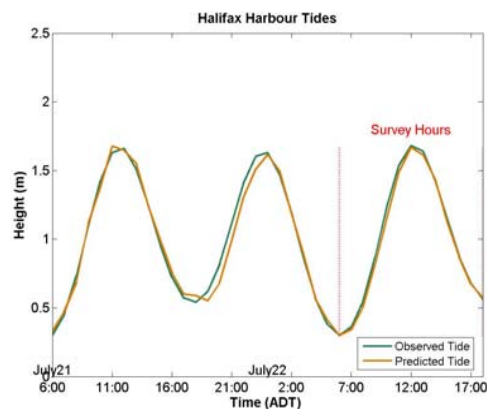
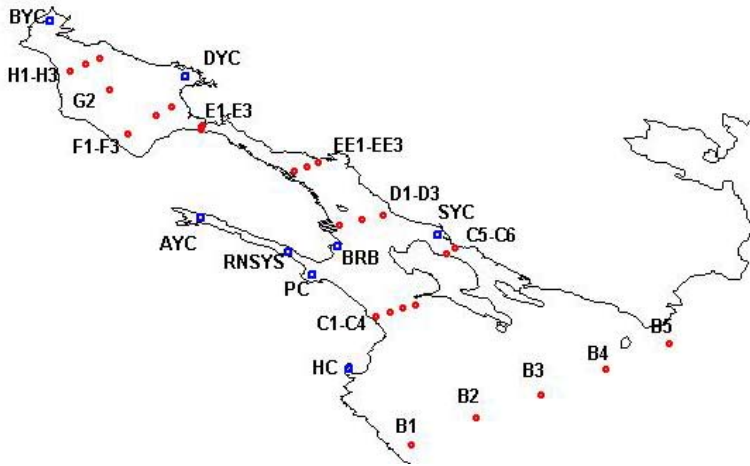


Density in kg/m^3

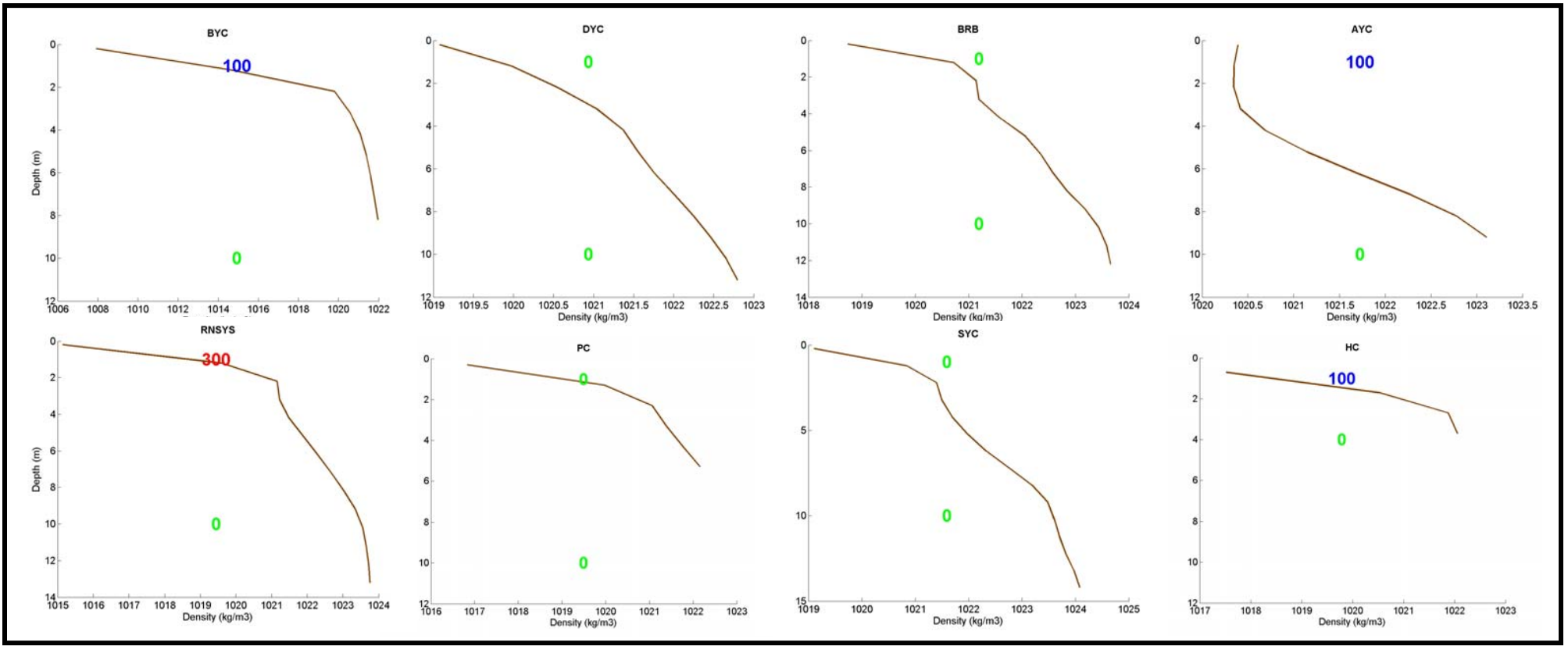
Fecal coliform: below limits

above shellfish limit (14 cfu/100mL)

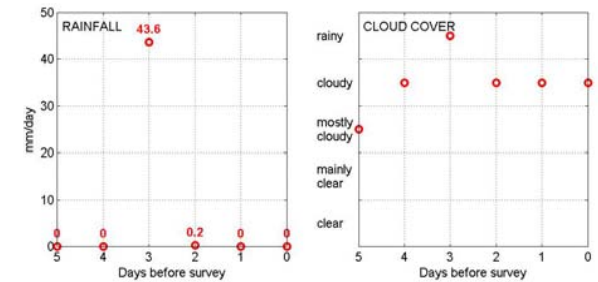
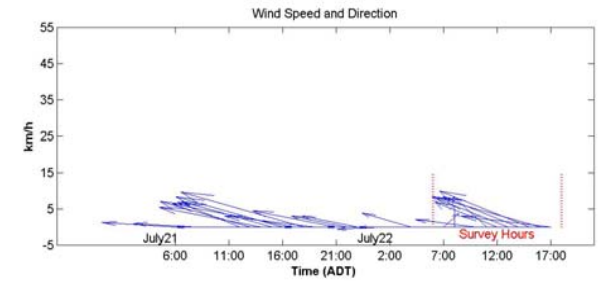
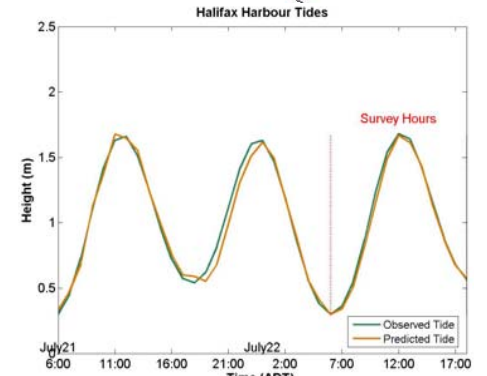
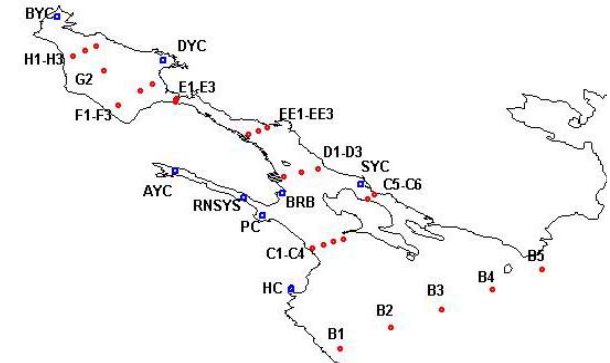
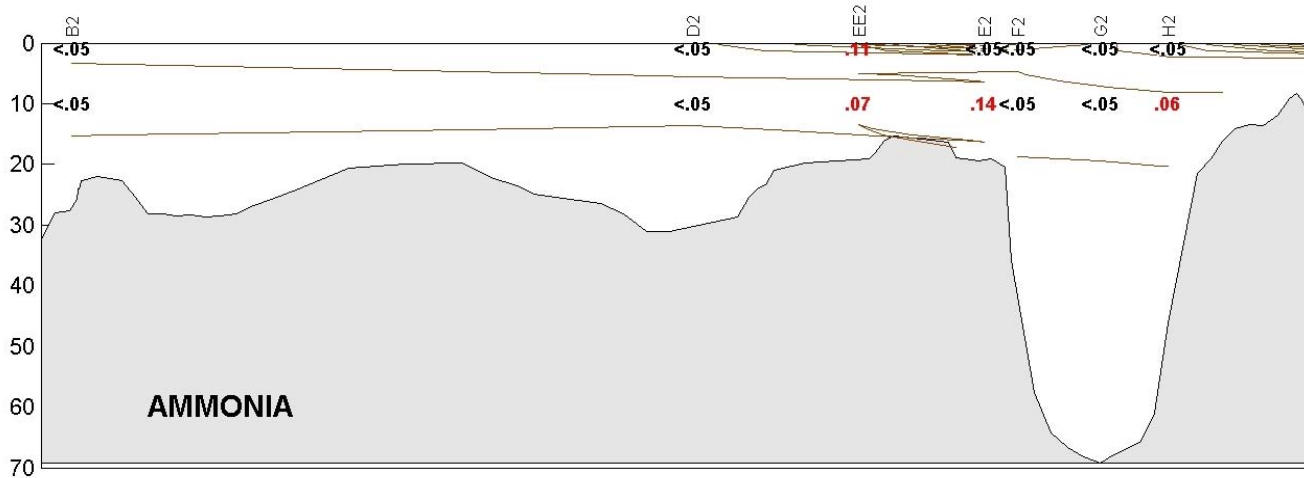
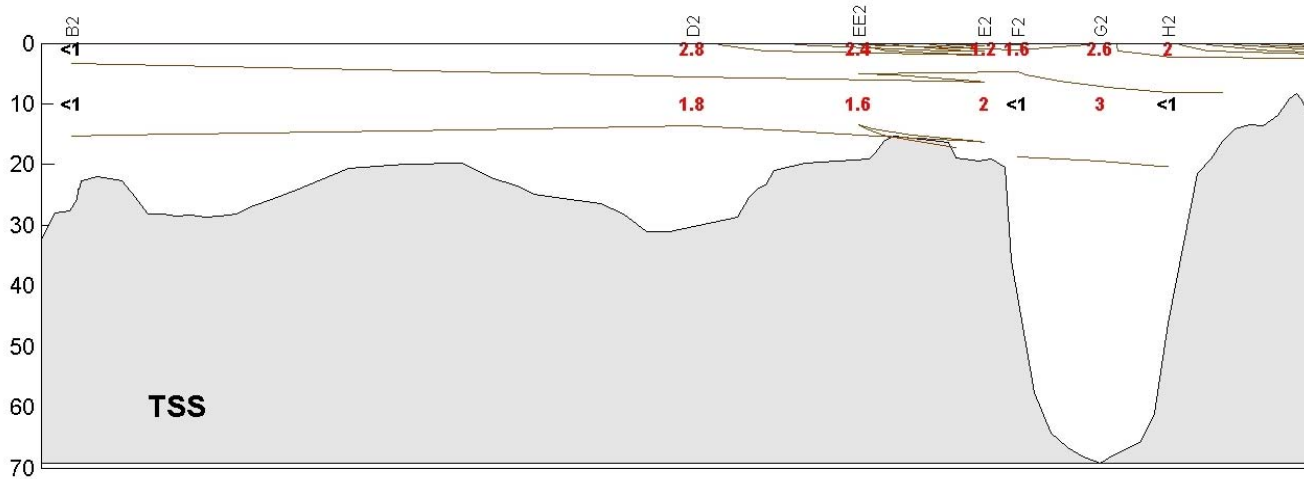
above swimming limit (200 cfu/100mL)



Yacht Clubs



Density in kg/m³ **Fecal coliform: below limits**
above shellfish limit (14 cfu/100mL)
above swimming limit (200 cfu/100mL)



Density in kg/m³

Ammonia in mg/L

TSS in mg/L