

Halifax Harbour Water Quality Monitoring Project

Weekly Summary #59

Survey Date: 03 Aug 2005
Nature of Survey: Complete Survey
Report File (this document): HHWQMP_report059_050803.doc
Data File: HHWQMP_data059_050803.xls

Data Return:
 Profile: 100%
 Bacteria: 98%
 Chemical: 100%
Overall: 99%

Sample Notes:

BYC-1m fecal coliform sample broken in lab.

QA/QC samples:

Chemical Analysis		H2-1m	
		reference sample	QA/QC
Detectable Parameter	units		
Ammonia (as N)	mg/L	<0.05	<0.05
Total Suspended Solids	mg/L	13	12
Boron	ug/L	3300	3700
Lithium	ug/L	160	160
Strontium	ug/L	6100	6400
Titanium	ug/L	50	53
Uranium	ug/L	3.1	3.3

Fecal Coliform (CFU/100ml)

Site	F3-1m	EE1-10m	C2-1m	H2-1m
Reference	30	1400	0	0
QA/QC	28	2200	0	9

Regulated parameters with all samples below detection (<EQL):

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

Detectable non regulated metals:

Metal	EQL (µg/L)	Number >EQL	Mean (µg/L)	Range (µg/L)
Boron	500	15	3420	3100-3700
Lithium	20	15	153	130-170
Strontium	50	15	6213	6000-6400
Titanium	20	15	50	44-56
Uranium	1	15	3.3	3-3.7

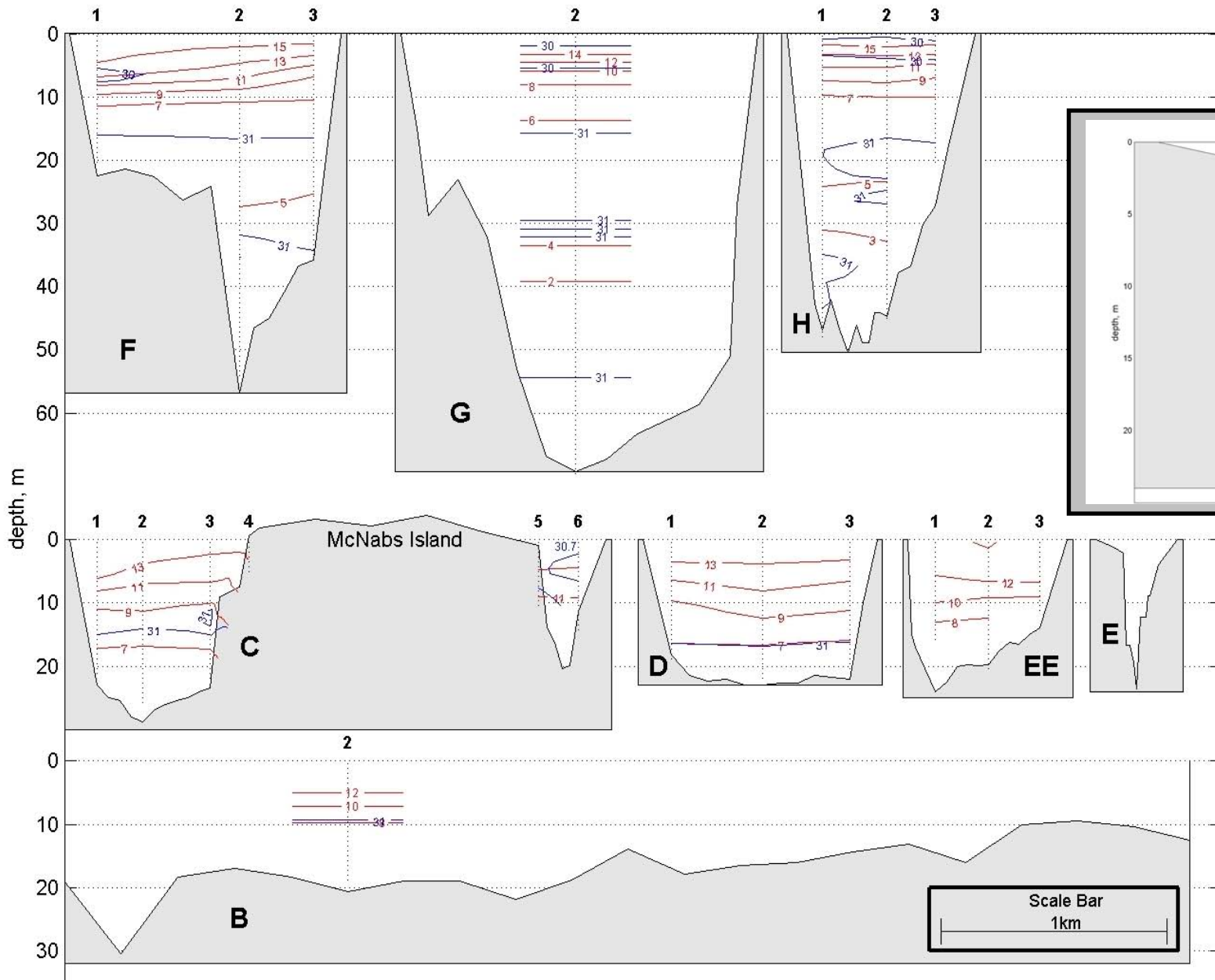
Comments:

Manganese: Two sites (D2-10m at 21ug/L, and F2-1m at 32 ug/L) had detectable levels of manganese. These are both below the guideline of 100ug/L.

Dissolved Oxygen: The deeper water of Bedford Basin (>40m) has DiO values below the applicable class SB guideline of 7.0 mg/L. The deep water minimum is the same as last week at about 5.2 mg/L. Outside the basin the DO is generally between 8 and 9 mg/L with a maximum at approximately 10m, corresponding to a fluorescence maximum.

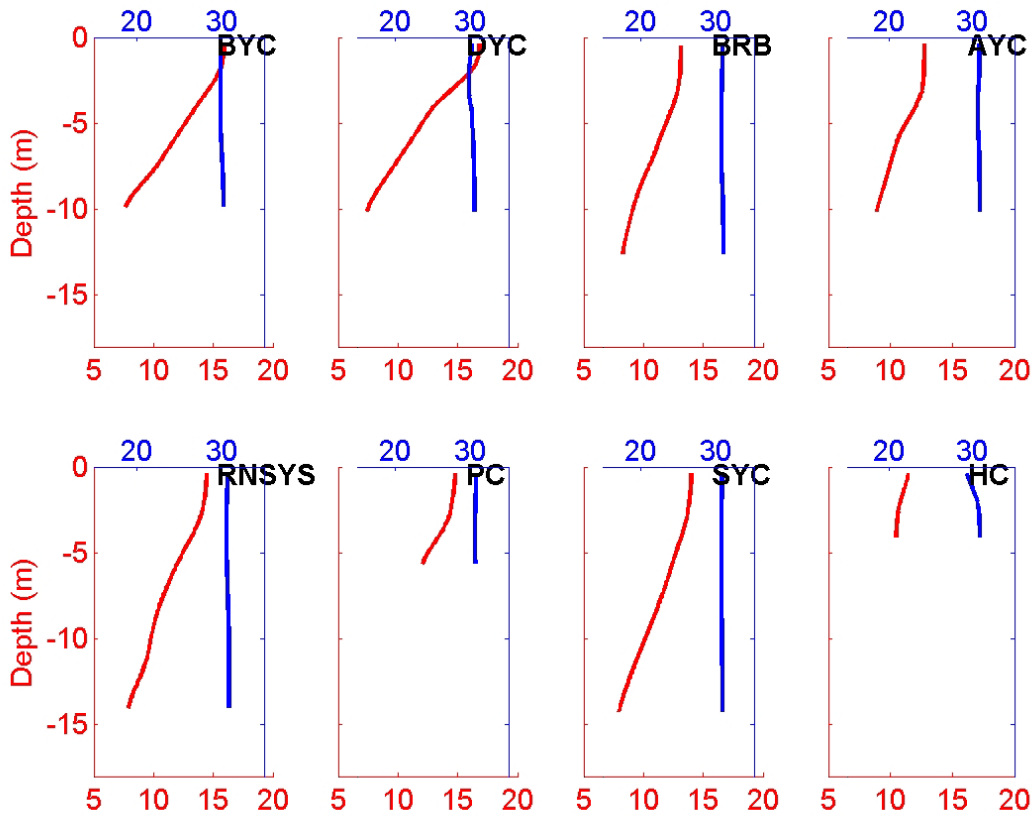
Chlorophyll: There is a fluorescence maximum of about 13-17 mg/m³, about double that of last week, at a depth of about 12 m throughout the Inner Harbour and Basin. This maximum is reduced in magnitude and occurs deeper in the water column at section C and is not evident at section B.

General: Similar to last week, salinity is quite uniform throughout the Harbour. This reflects the lack of freshwater input in the intervening week. The water temperature has increased (2-3 degrees) at all stations at all depths. The exception is Bedford Basin where the water deeper than 40m remains below 2°C. The bacteria concentrations overall are low, with highest values clumped together in the Inner Harbour. This condition is consistent with periods of high bacterial decay rate (sunshine and temperature) and little estuarine and/or wind driven circulation. The highest coliform value (92,000 cfu/100mL) is just down the Harbour from the Peace Pavillion outfall and is consistent with the falling tide and light down-Harbour winds at the time of sampling.

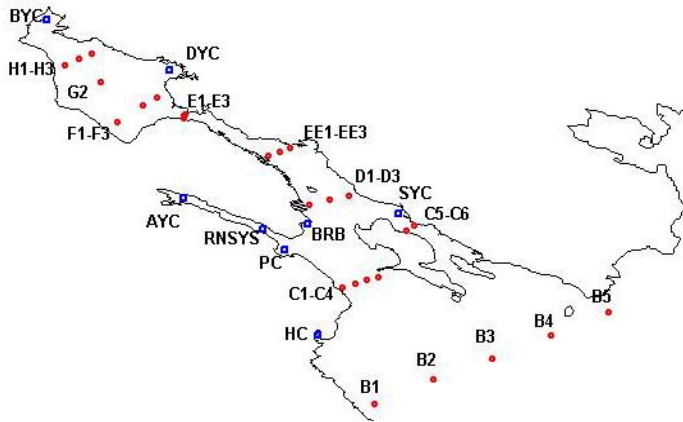
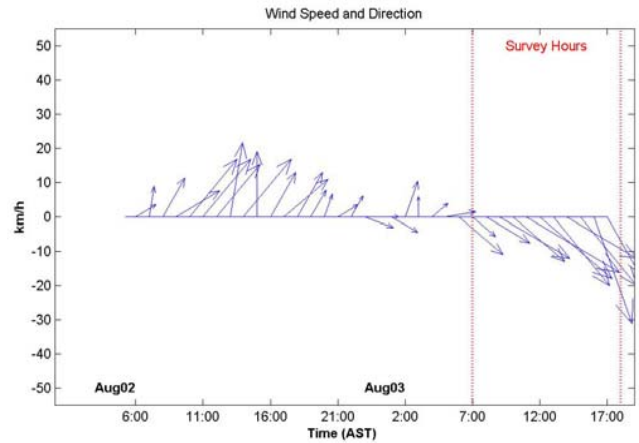
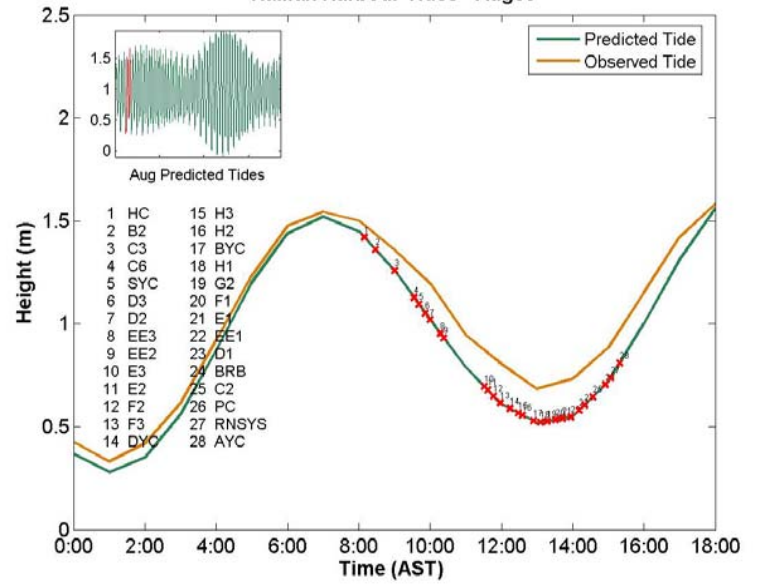


Unless otherwise labeled:
 - salinity contour interval is 1 PSU
 - temperature contour interval is 2°C.

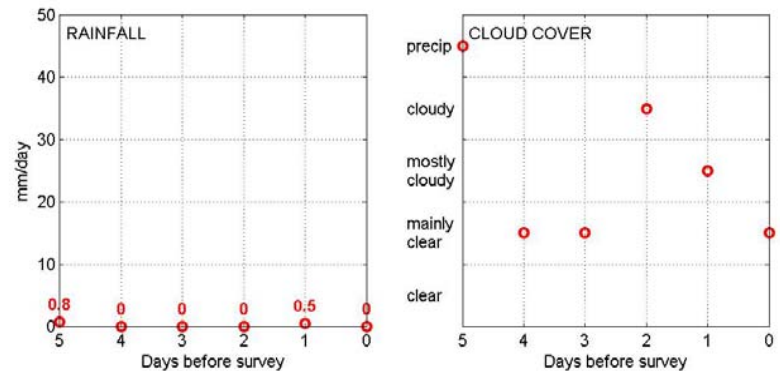
Yacht Clubs

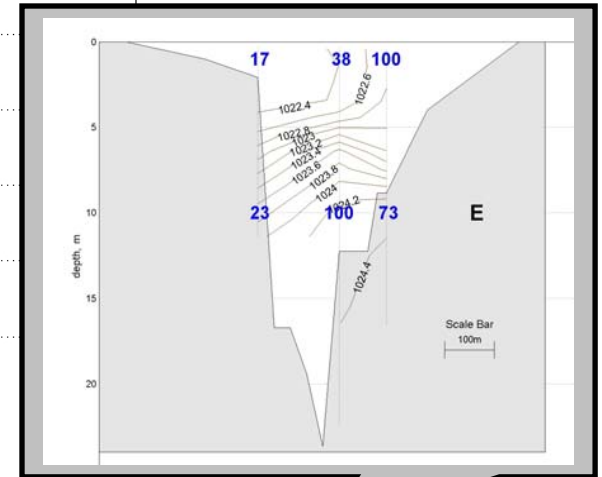
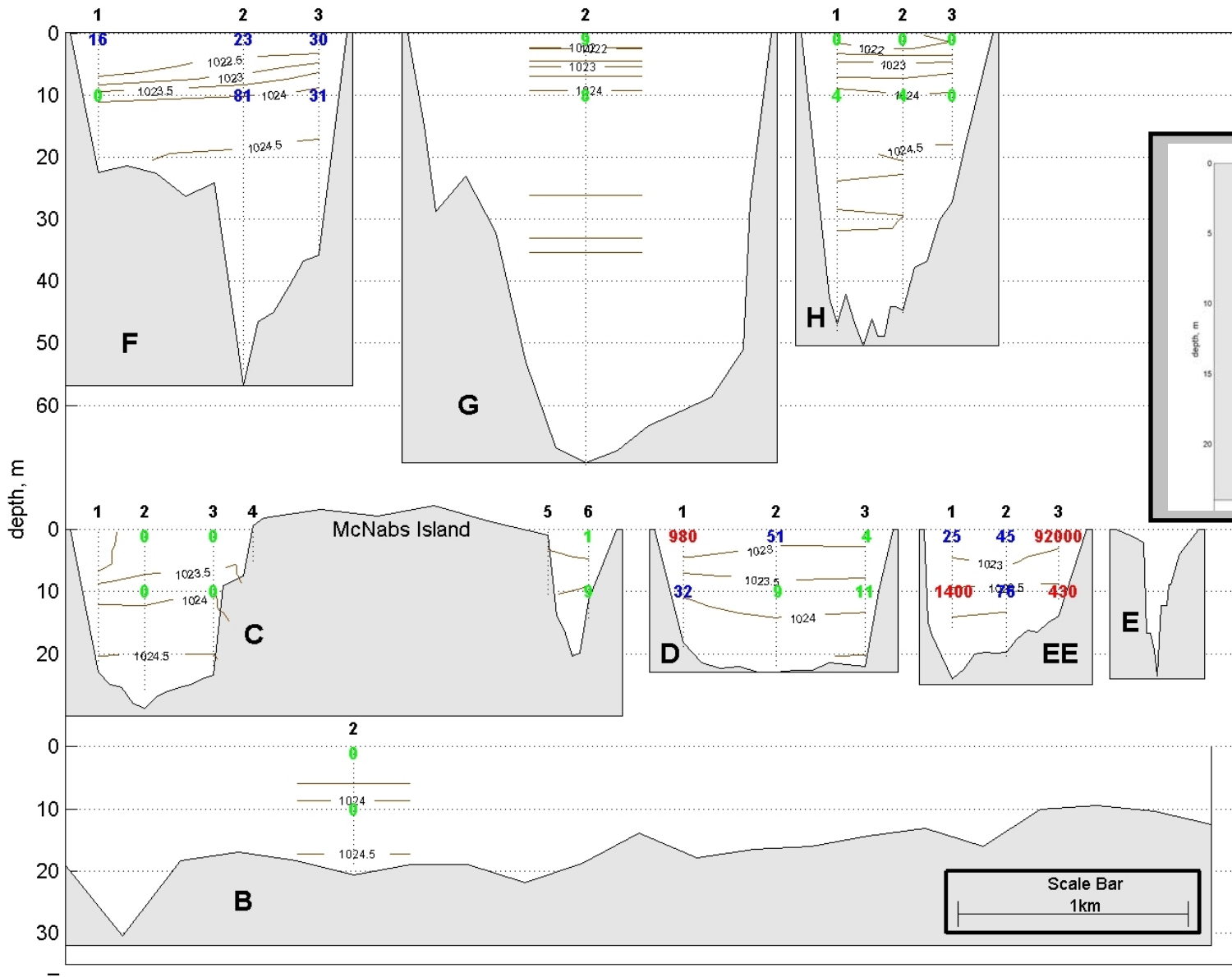


Halifax Harbour Tides - Aug03



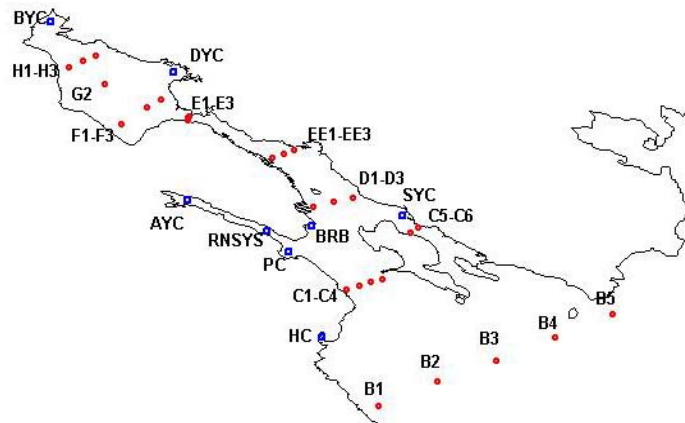
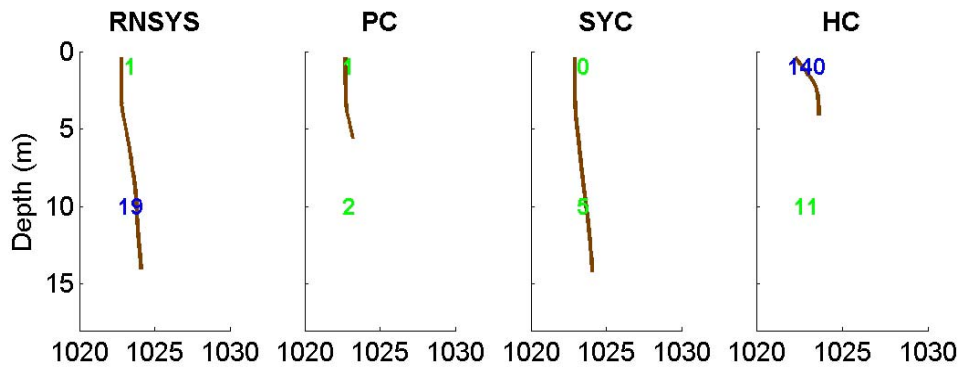
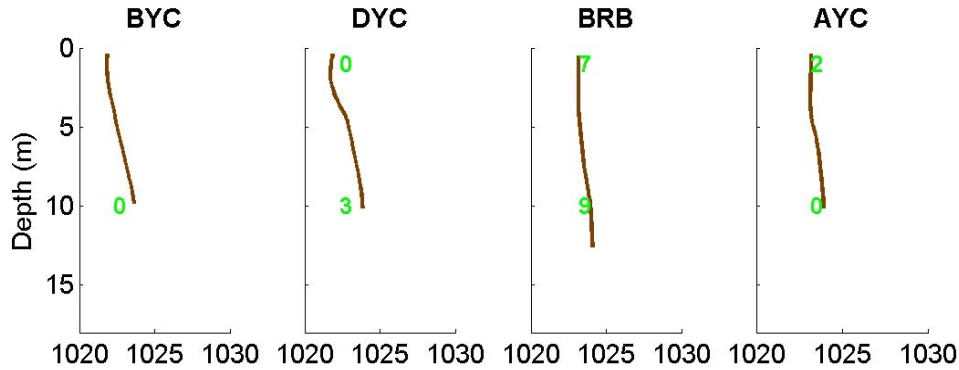
Salinity in PSU Temperature in °C





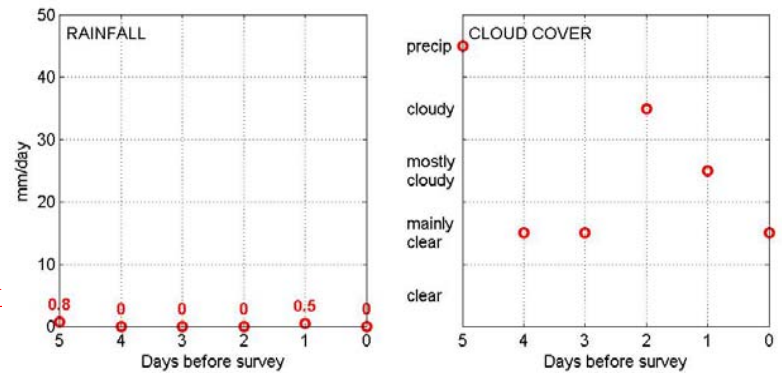
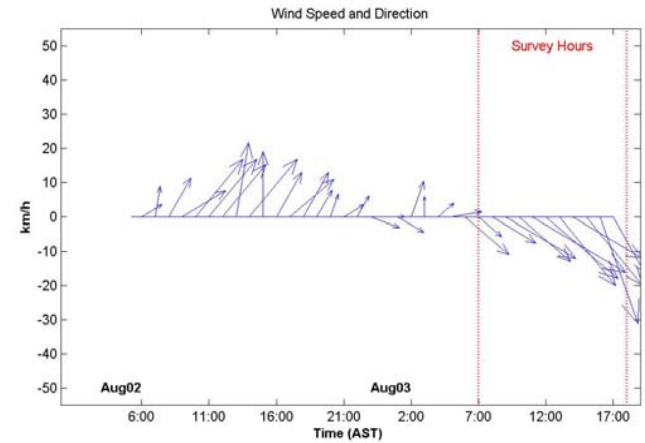
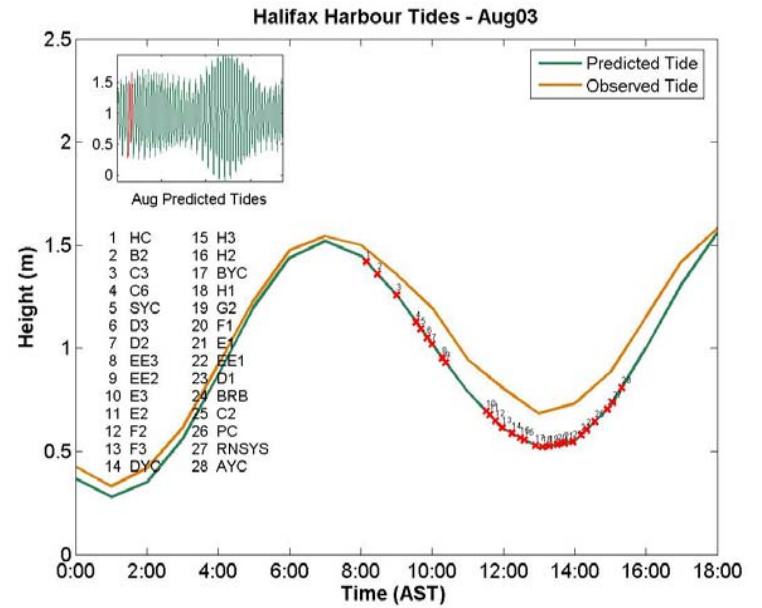
Unless otherwise labeled:
 - **density** contour interval is 0.5 kg/m³

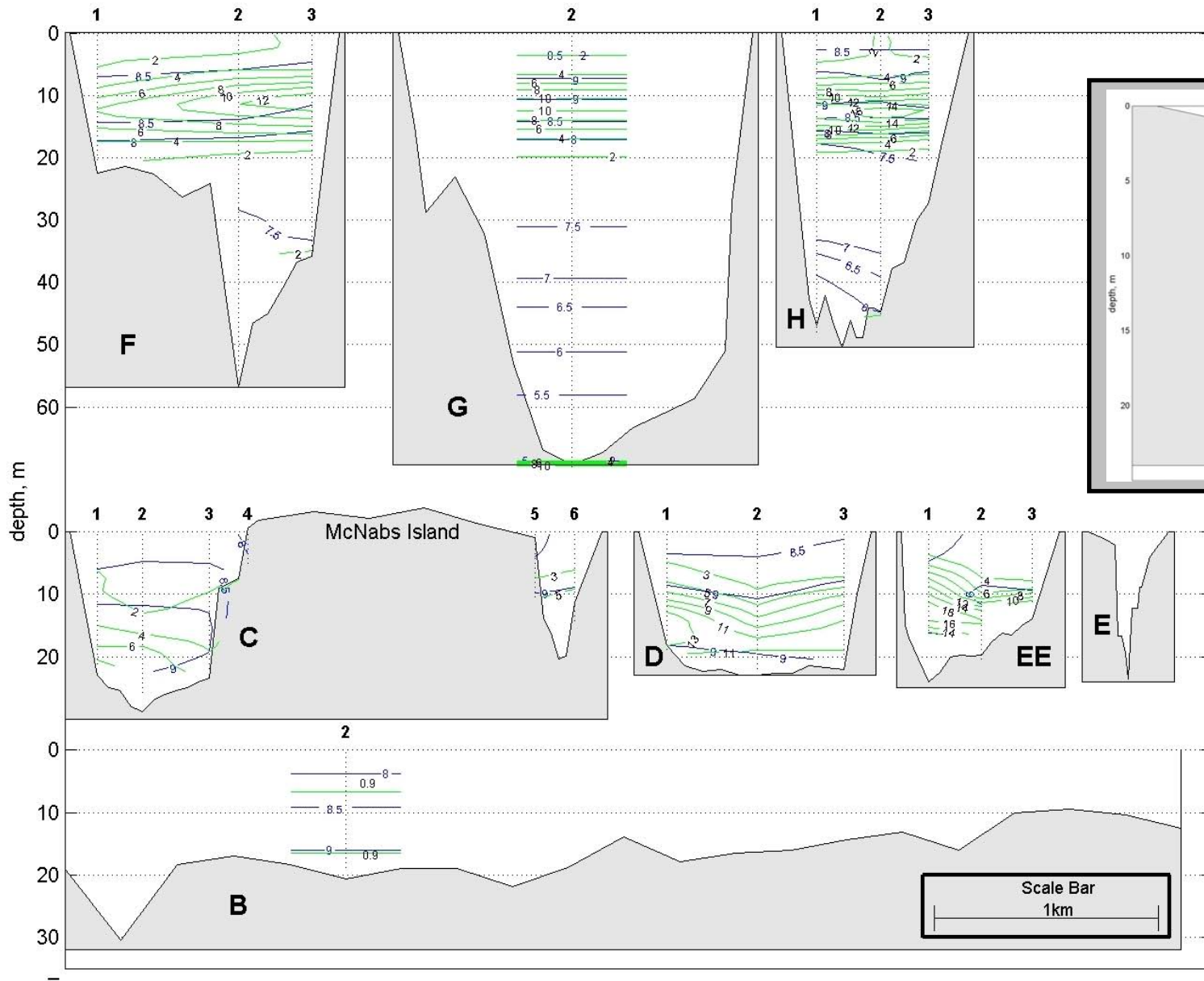
Yacht Clubs



Potential Density in kg/m^3

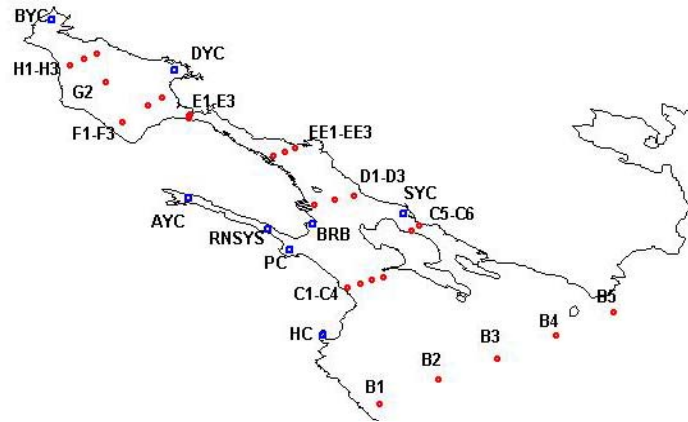
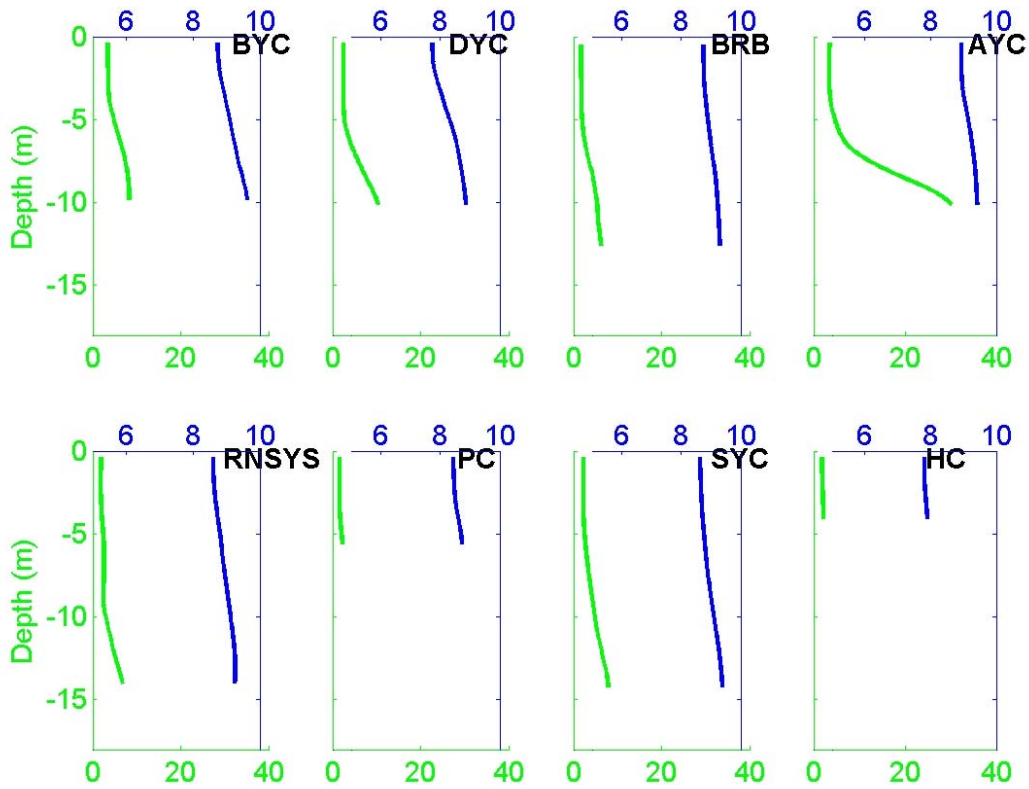
Fecal coliform: above swimming limit (200 cfu/100mL)
 above shellfish limit (14 cfu/100mL)
 below limits





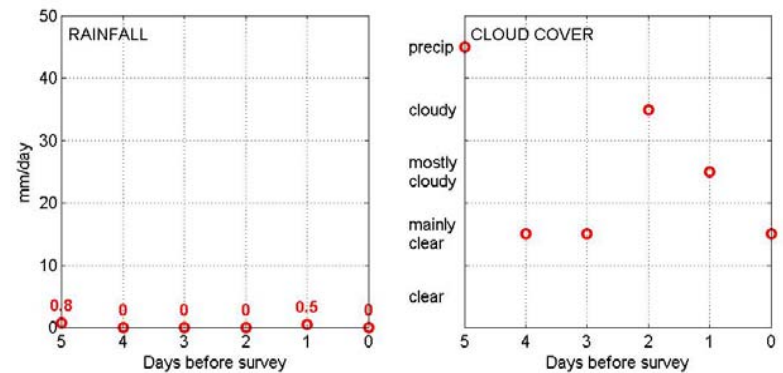
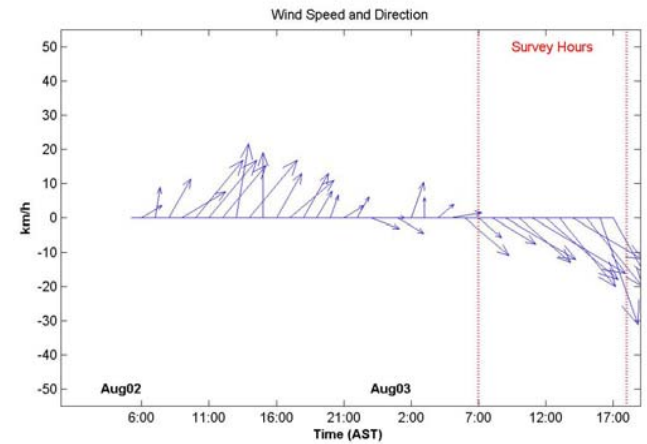
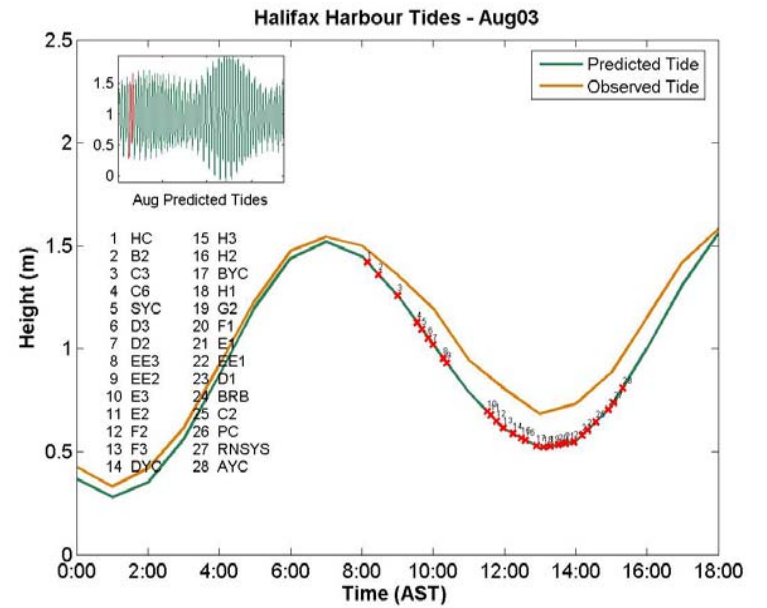
Unless otherwise labeled:
 - **dissolved oxygen** contour interval is 0.05 mg/L
 - **chlorophyll** contour interval is 2 mg/m³.

Yacht Clubs

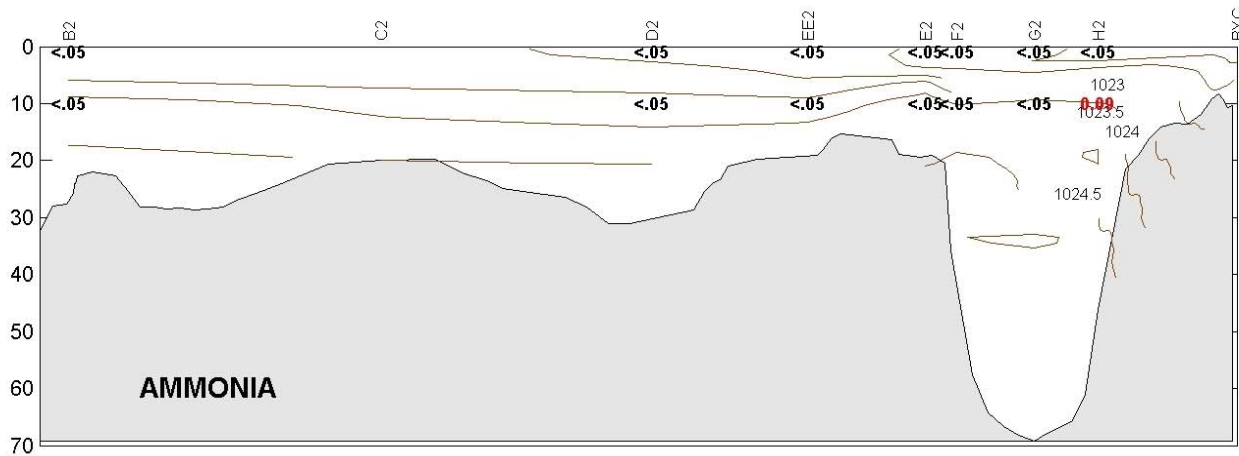
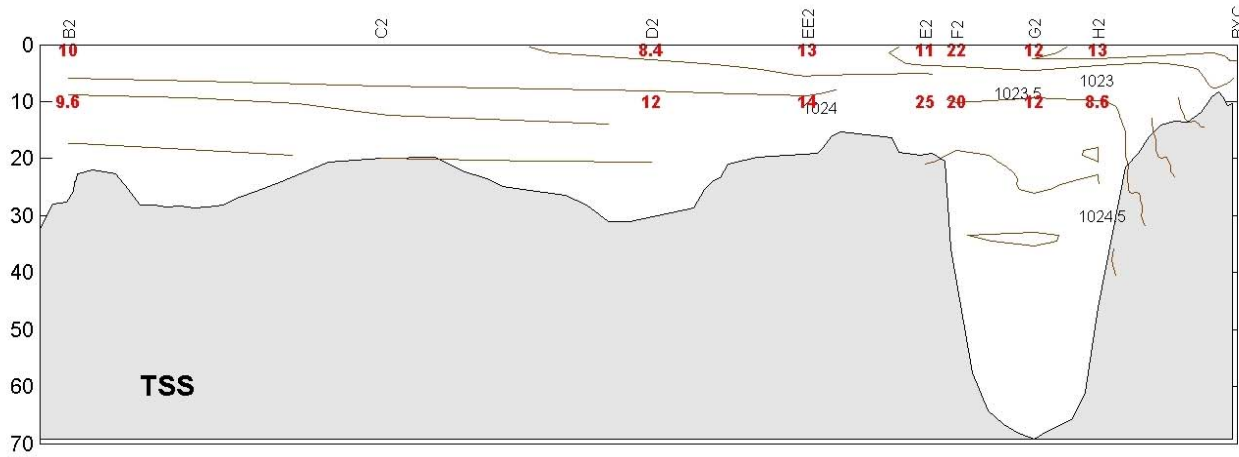


DO in mg/L

Chlorophyll in mg/m³



CHEMISTRY



Potential Density in kg/m^3

Ammonia in mg/L

TSS in mg/L

