

Halifax Harbour Water Quality Monitoring Project

Weekly Summary #60

Survey Date: 09 August 2005
Nature of Survey: Coliform Survey
Report File (this document): HHWQMP_report060_050809.doc
Data File: HHWQMP_data060_050809.xls

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

Sample Notes:

H2-1m fecal coliform sample was accidentally broken at the Lab.

At Station F1 the CTD was allowed insufficient stabilization time. The top of this profile, particularly the DO data, is questionable.

QA/QC samples:

Fecal Coliform (CFU/100ml)

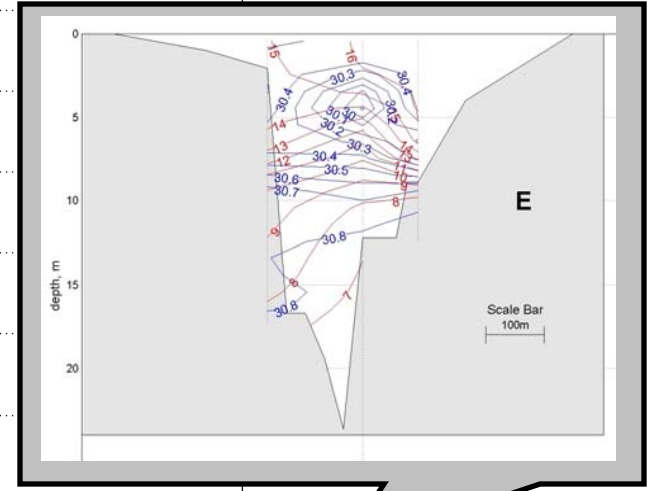
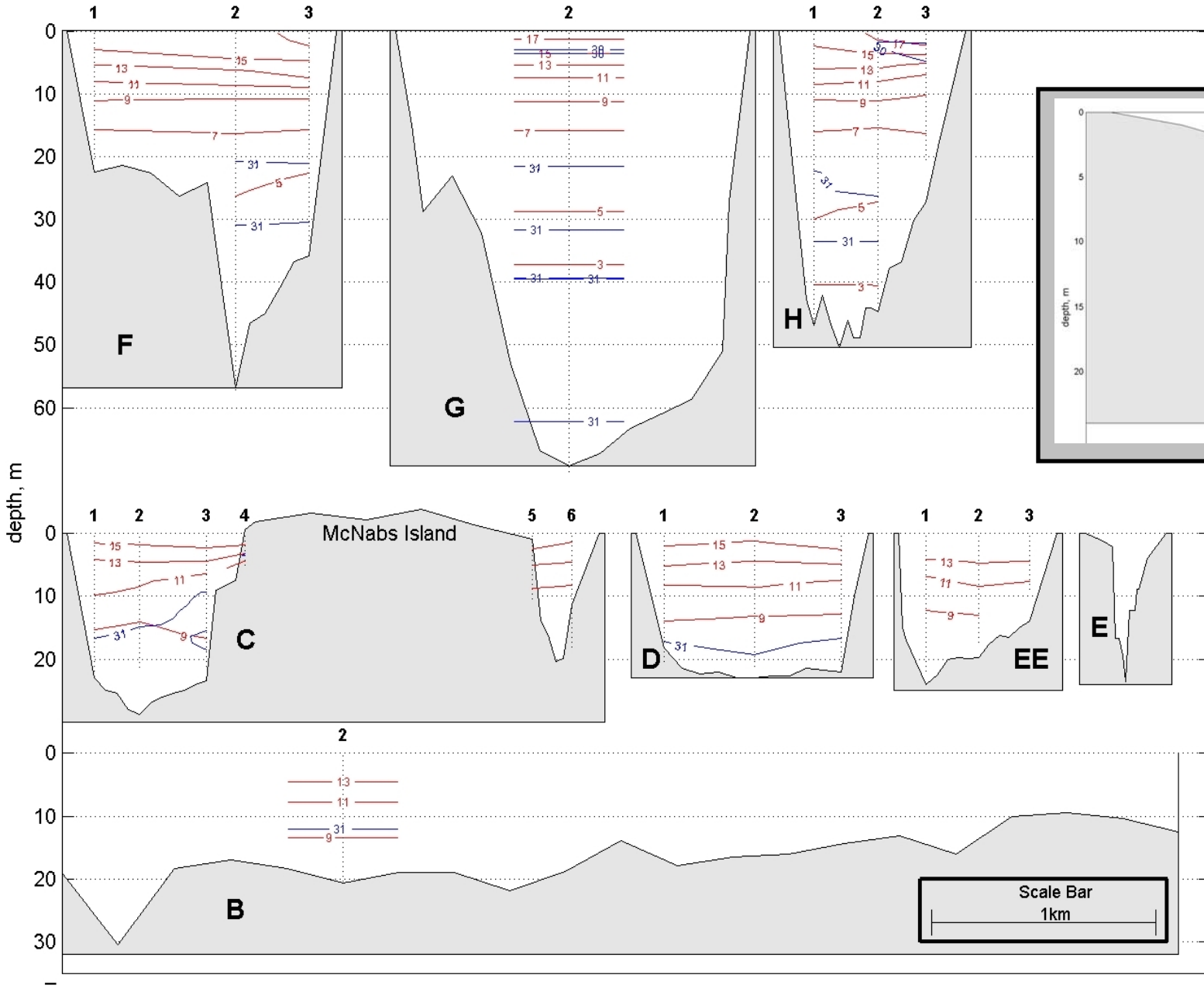
Site	C6-1m	BRB-10m	F2-1m	E3-1m
Reference	2	7	6	21
QA/QC	180	2	9	14

Comments:

Dissolved Oxygen: As usual the DO is below the class SB guideline in the Basin bottom water. This week the DO drops below the 7 mg/L guideline in water deeper than 30 - 35 and the minimum, at 70 m, is approximately 4.7 mg/L. The surface water is quite uniform throughout the Harbour with DO levels of approximately 7.5 – 8.5 mg/L, with lower values at the surface and profile maximums generally near, or below, 10m.

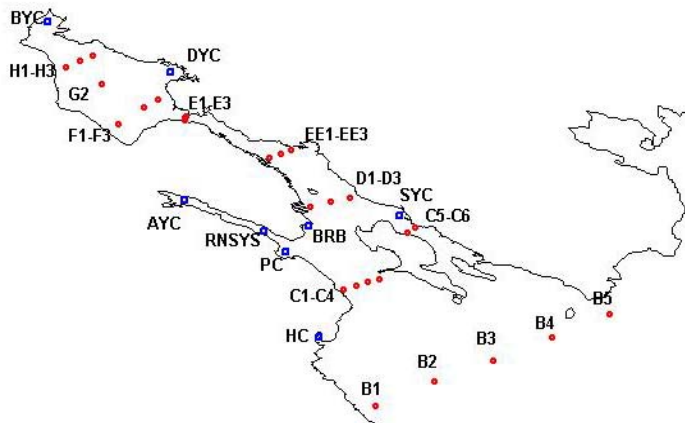
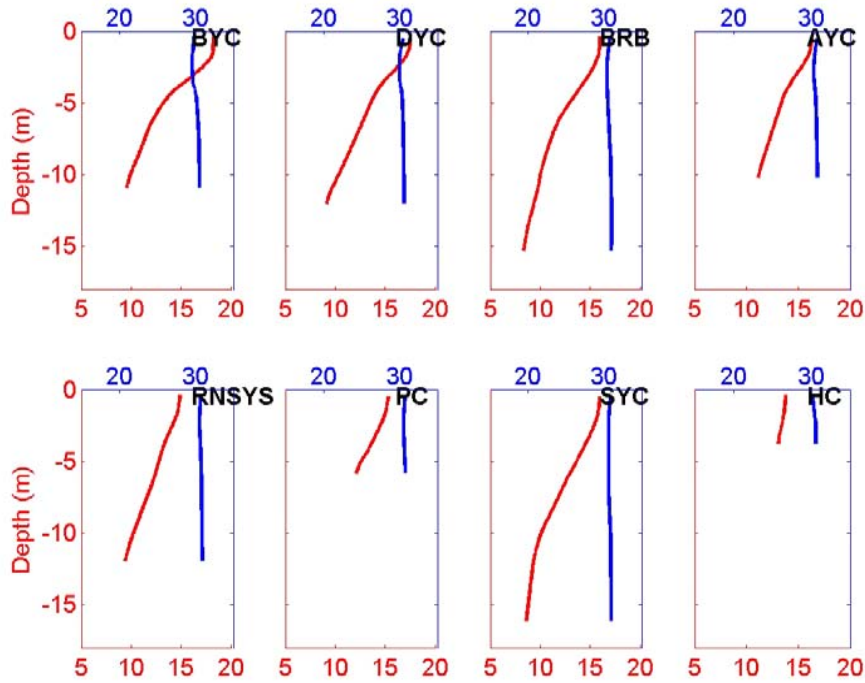
Chlorophyll: There is a fluorescence maximum of 20-25 mg/m³ at a depth of 20-25 m throughout the Basin. In the Inner Harbour the values are lower and increase with depth. Near-bottom values are about 8 mg/m³. In the Outer Harbour at sections B and C, the values drop to 2 mg/m³ or lower.

General: Salinity stratification is low, with a similar or smaller volume of fresh water than last week. Water temperatures have again increased (1-2 °C) over the past week. This increase is mostly over the whole water column, except in the deep Basin where the temperature has changed very little. Surface temperatures are now 14 °C at the B section, increasing to 17 °C at the head of the Basin. Due to the increased temperature, the overall water density is slightly lower than last week, but the density stratification has only very slightly increased. In general, fecal coliform values are very low, with the highest values occurring in the vicinity of outfalls in the Inner Harbour. This is likely the result of conditions similar to last week, *ie.* high bacteria decay rates due to sunshine and warm water, and low Harbour flushing rates due to relatively light variable winds and lack of rainfall in the previous few days.



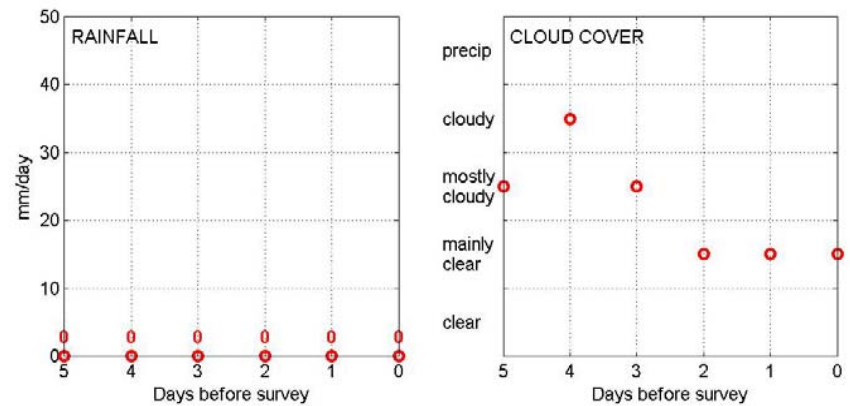
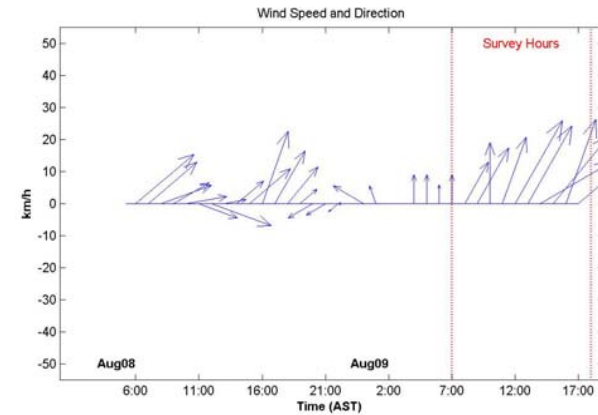
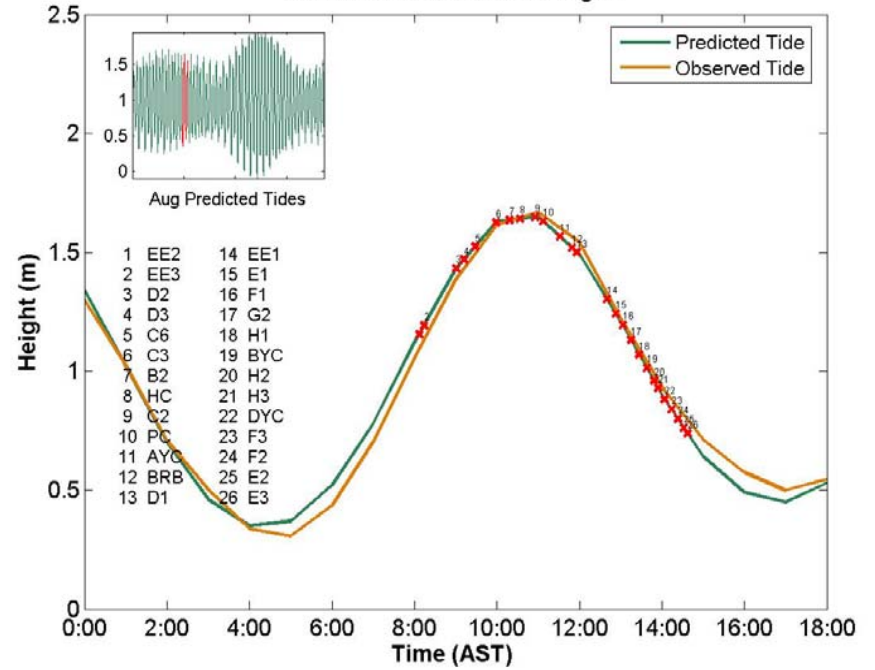
Unless otherwise labeled:
- salinity contour interval is 1 PSU
- temperature contour interval is 2°C.

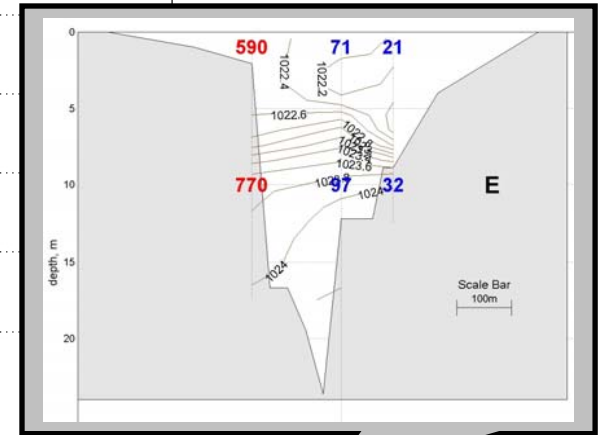
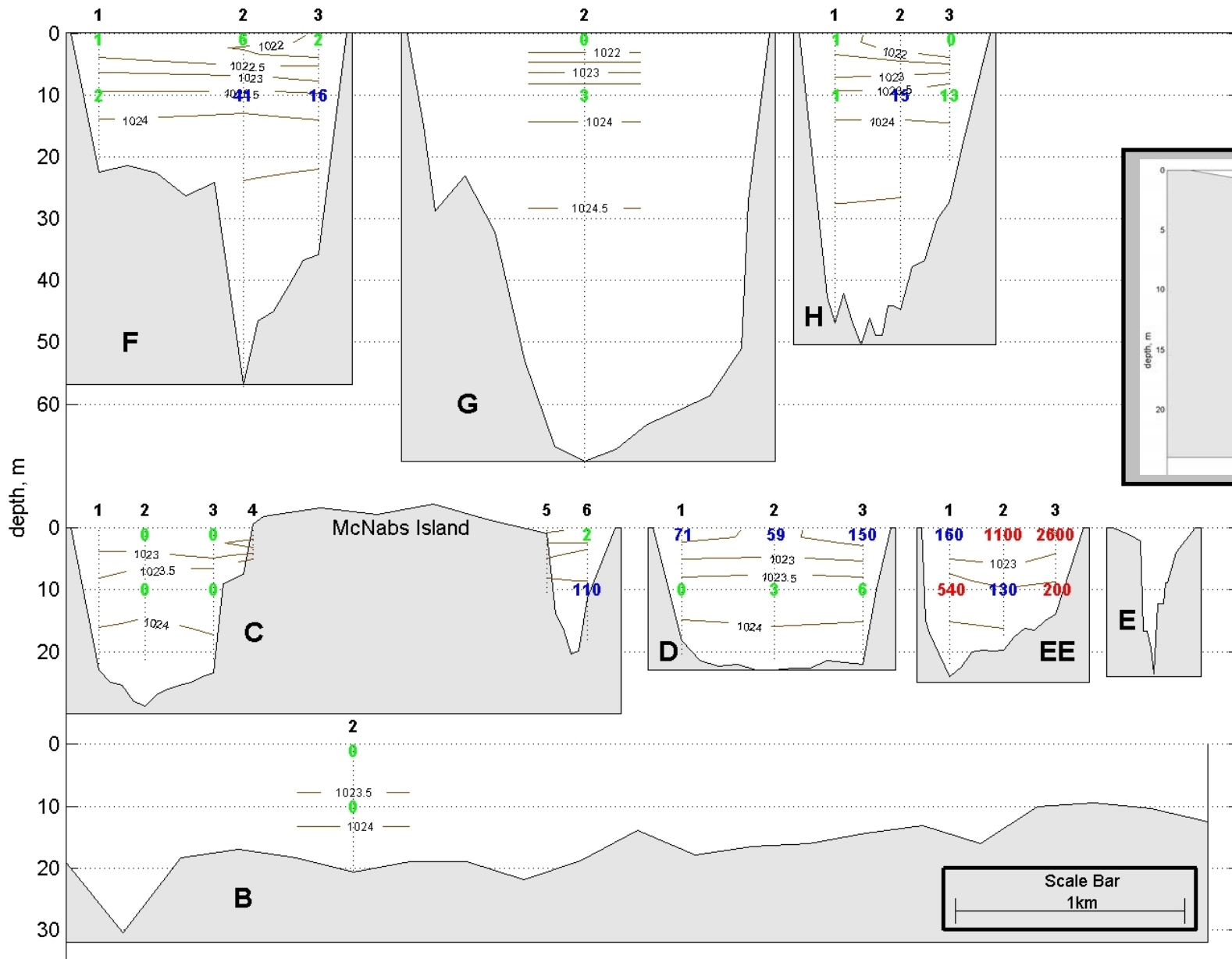
Yacht Clubs



Salinity in PSU Temperature in °C

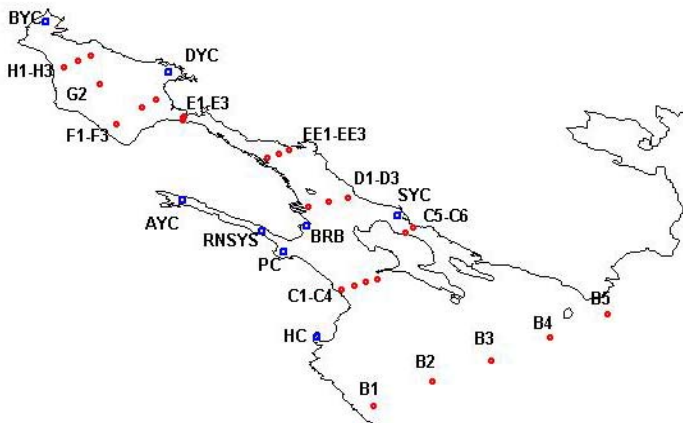
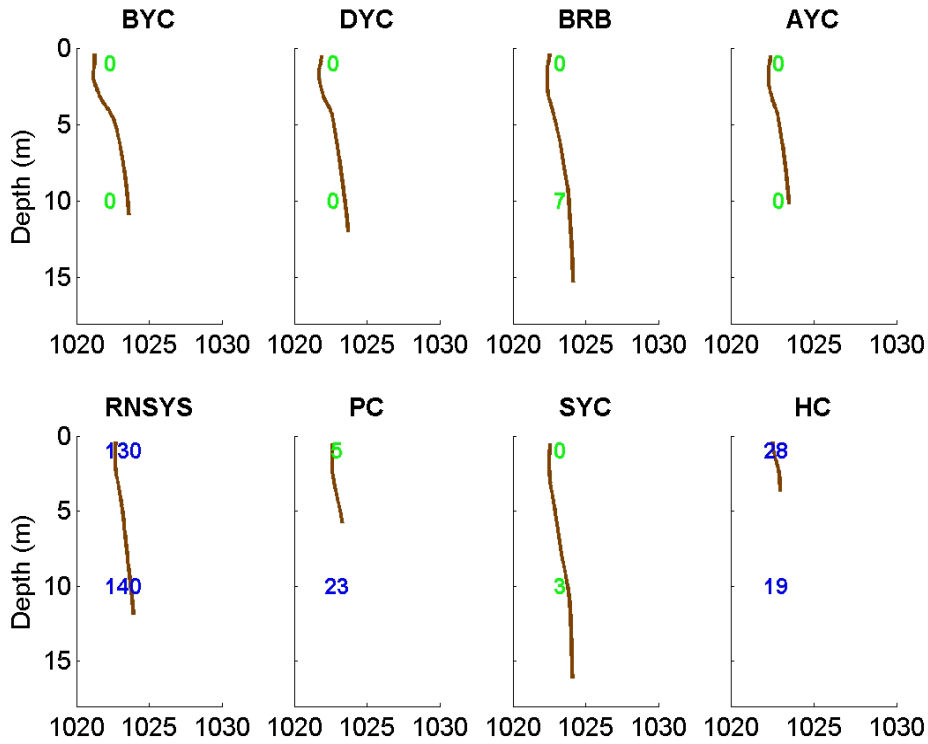
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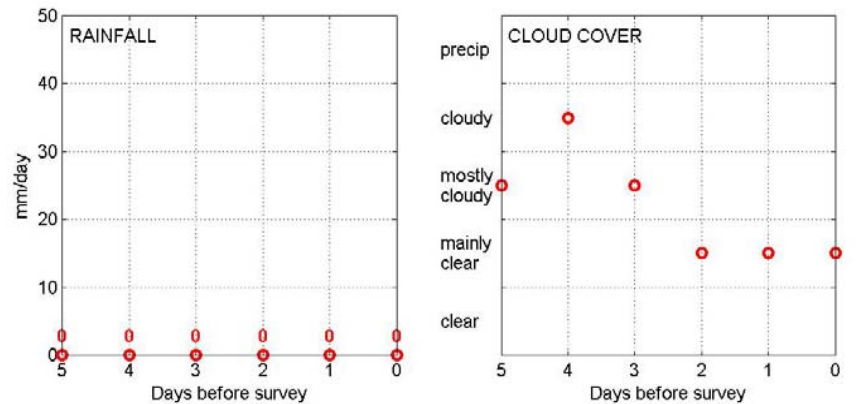
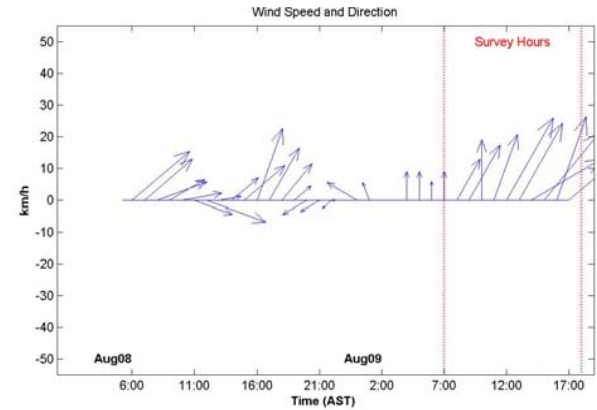
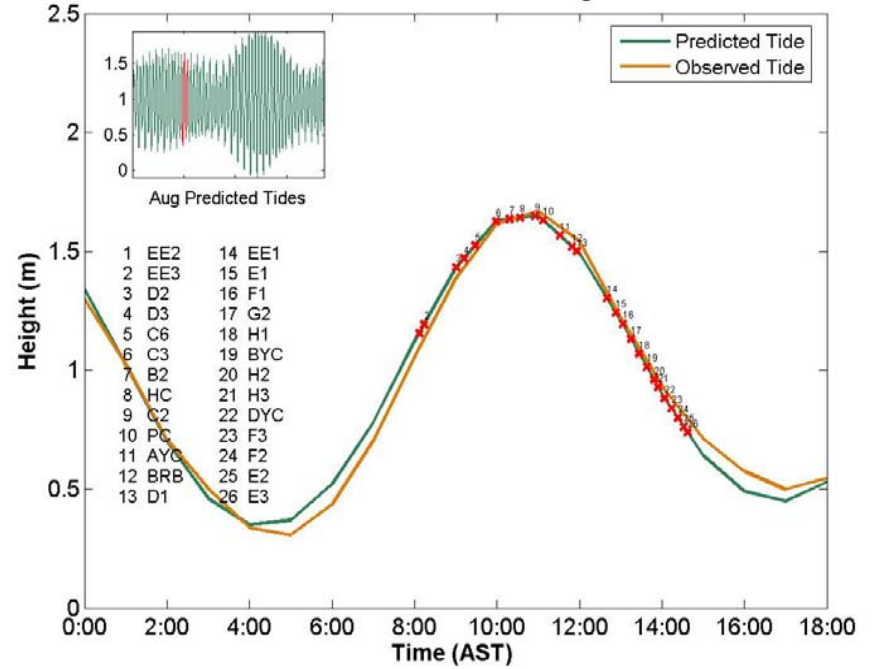
Unless otherwise labeled:
 - **density** contour
 interval is 0.5 kg/m³

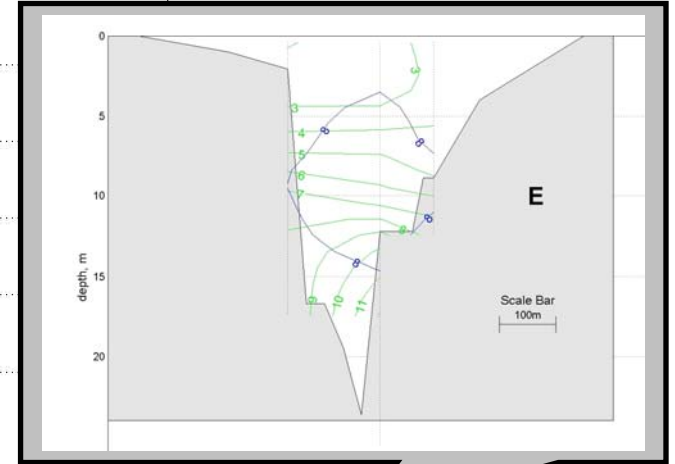
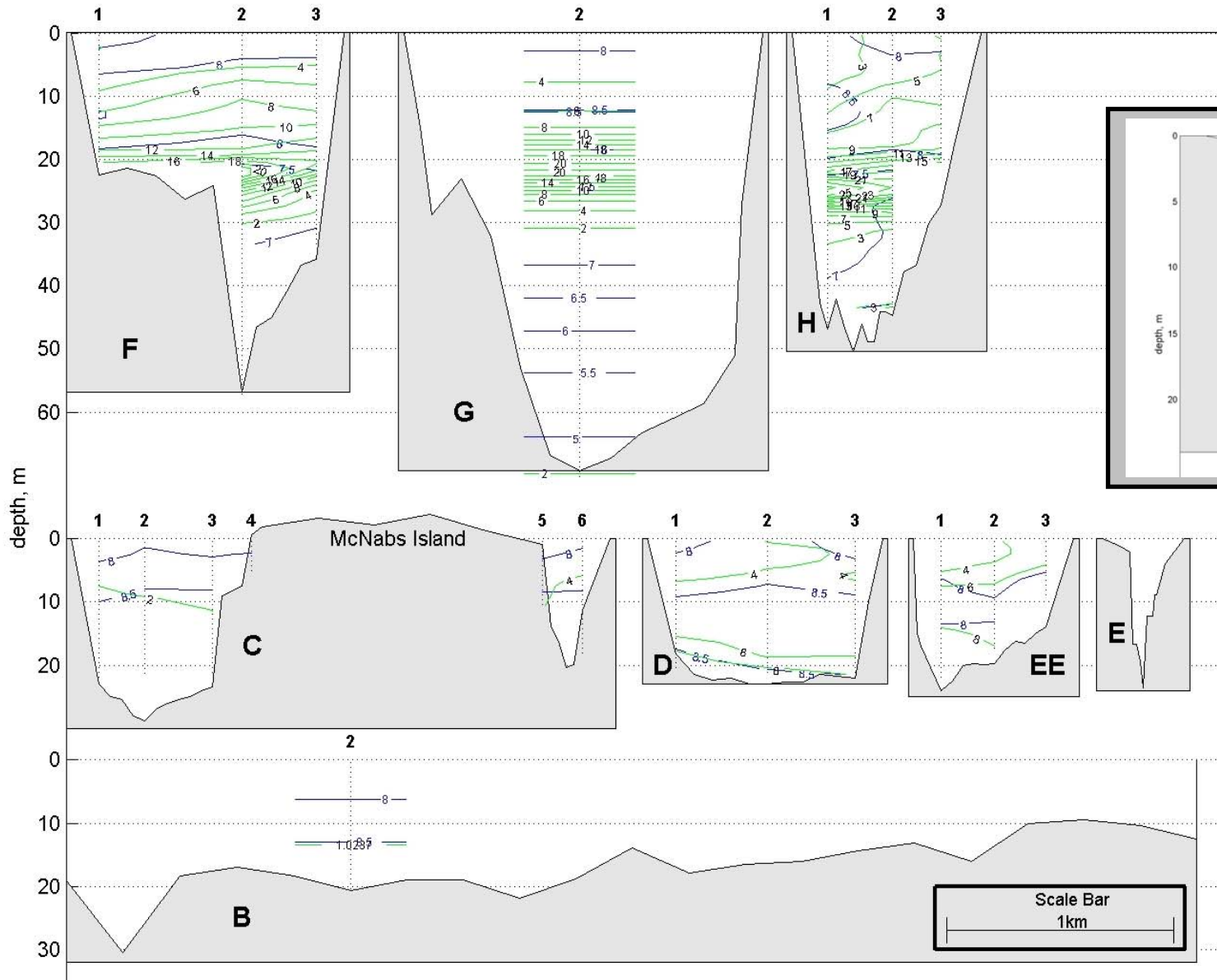
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Potential Density in kg/m³
Fecal coliform: above swimming limit (200 cfu/100mL)
above shellfish limit (14 cfu/100mL)
below limits

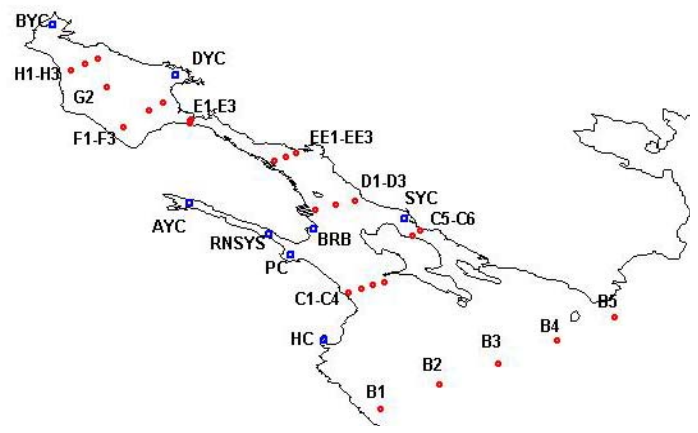
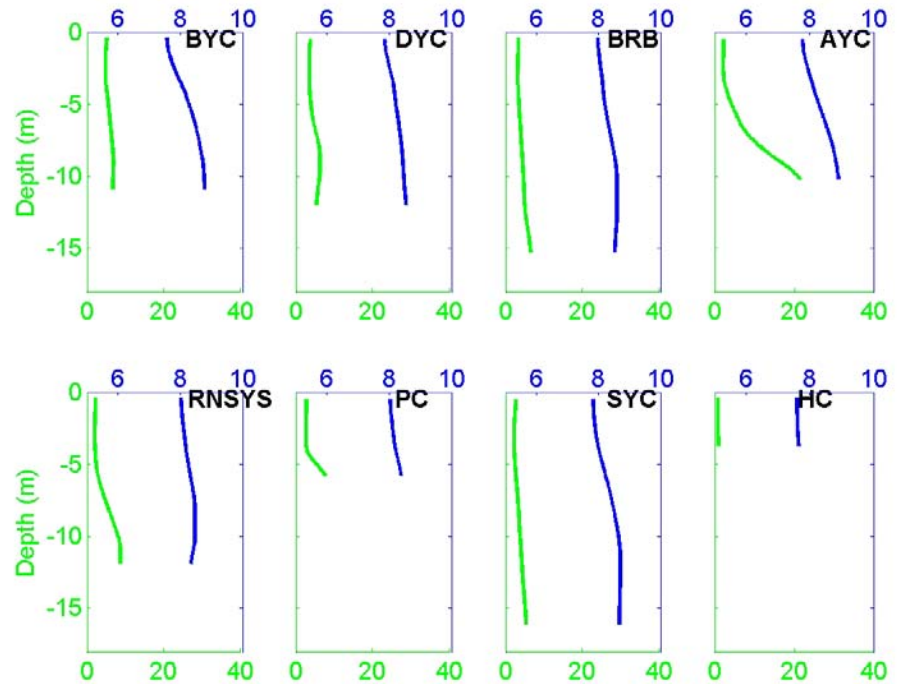
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Unless otherwise labeled:
 - **dissolved oxygen** contour interval is 0.5 mg/L
 - **chlorophyll** contour interval is 2 mg/m³.

Yacht Clubs



DO in mg/L

Chlorophyll in mg/m³

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