

Halifax Harbour Water Quality Monitoring Project

Weekly Summary #64

Survey Date: 06 September 2005
Nature of Survey: Coliform Survey
Report File (this document): HHWQMP_report064_050906.doc
Data File: HHWQMP_data064_050906.xls

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

Sample Notes:

Due to low water levels, station PC was relocated to 44° 36.705' W, 63° 34.034' N.

QA/QC samples:

Fecal Coliform (CFU/100ml)

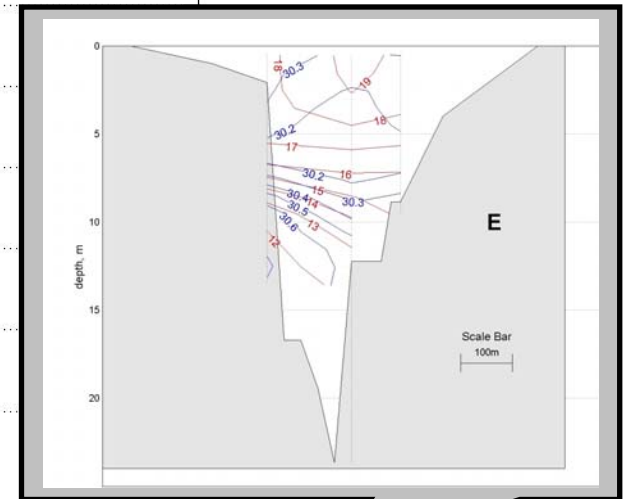
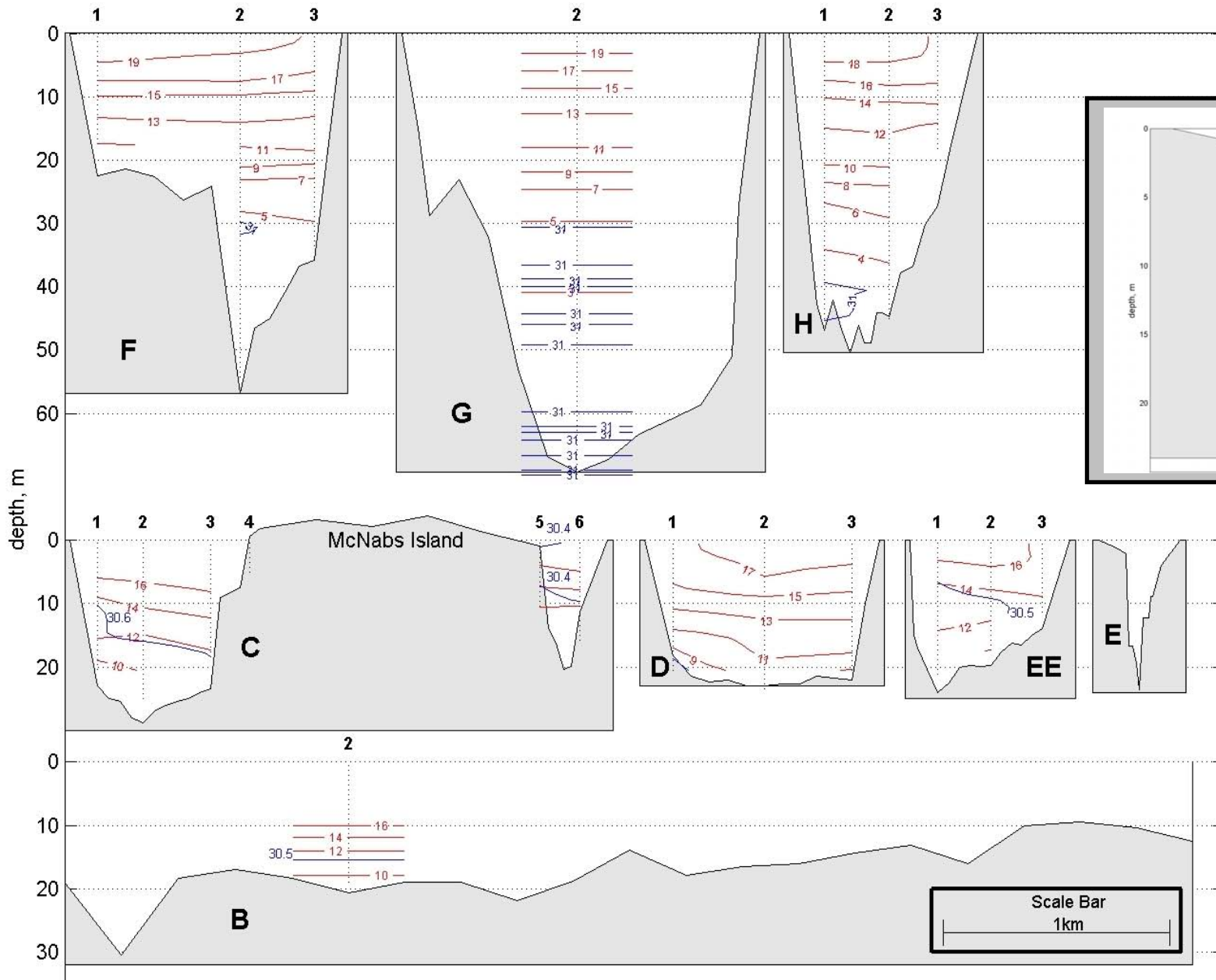
Site	F1-1m	D3-10m	C2-1m	H2-10m
Reference	3	31	1	68
QA/QC	8	37	3	89

Comments:

Dissolved Oxygen: Similar to last week, the data suggests that Harbour bottom water (>approx 10m) has DO levels of <7 mg/L. This is below the guidelines in class SB areas, i.e. Bedford Basin, the NW Arm, Eastern Passage and section C. At Station B2, which has an SA classification, the entire water column appears to be below the 8 mg/L guideline. At this station the bottom water has higher DO levels (> 7 mg/L) than the surface water, perhaps suggesting a shelf source of oxygenated bottom water. The DO data is not ground truthed (see DO discussions in QR #1,2,3).

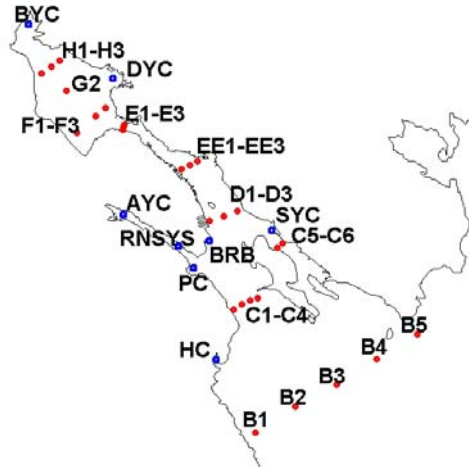
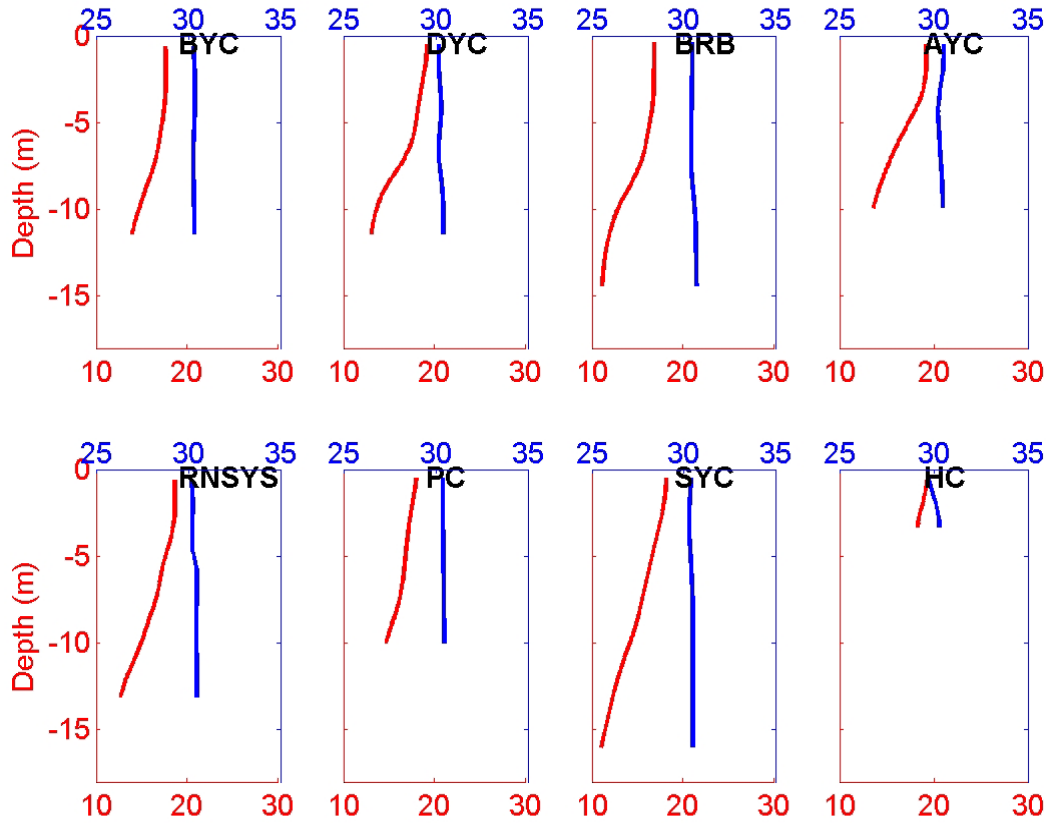
Chlorophyll: The fluorescence values this week are somewhat higher than last week and quite patchy. There is a maximum of 14-20 mg/m³ at 5-10 m throughout the Basin with peaks at stations BYC (34 mg/m³ at 6.6m) and F3 (46 mg/m³ at 7.9 m). The values are similar in Eastern Passage, approximately 20 mg/m³ at similar depth, but are slightly lower in the inner Harbour out to section C (9-18 mg/m³ at 5-10m). There appears to be a local bloom in the NW Arm. The values are highest at the head of the Arm: AYC (70 mg/m³ at 7m), and decrease further out of the Arm: RNSYS (30 mg/m³ at 9.4 m) and PC (24 mg/m³ at 7m). At B2 the chlorophyll is still slightly elevated with a maximum of 4.6 mg/m³ at a depth of approximately 16 m.

General: The Harbour is slightly more stratified than last week. This is due to a combination of salinity and temperature effects. The surface salinity has dropped slightly (ca. 0.1 psu) possibly caused by the moderate rainfall five days previous. Overall, the Harbour has cooled somewhat, but the bottom water temperature has dropped more than the surface water, thereby increasing stratification. This implies an influence of cooler shelf bottom water. The fecal coliform values are generally lower than last week, likely due to the clear and mainly clear weather before the survey. The highest values are located in the inner Harbour near the main sources, except for station F3 along the eastern side of Bedford Basin. The value at station EE3 (1 m), just down the Harbour from the outfall off the Peace Pavillion, is the highest observed (48,000 cfu/100mL). The sample was taken during a falling tide and the field notes indicate that it was taken within the visible plume from this outfall.



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

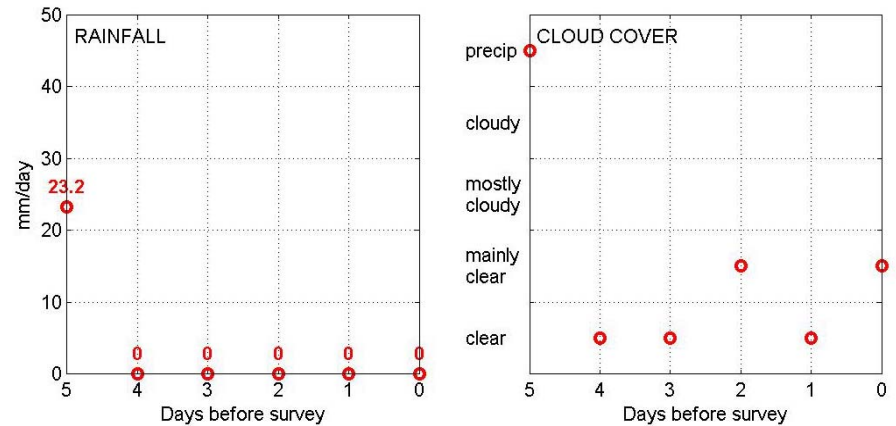
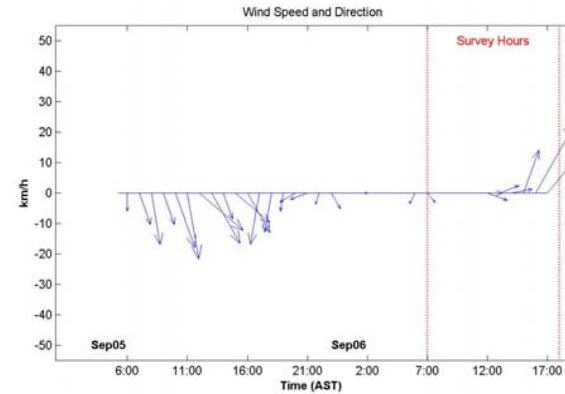
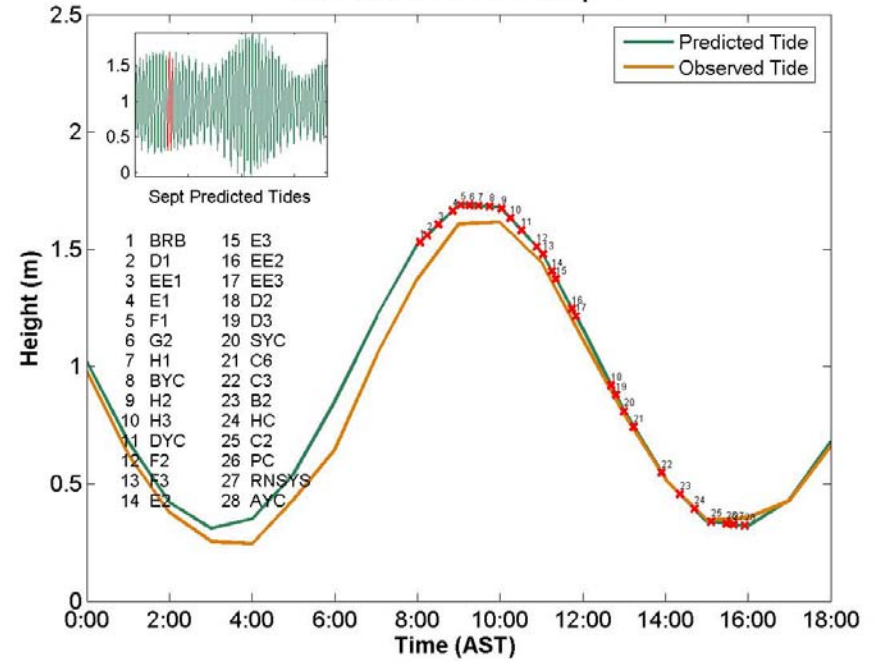
Yacht Clubs

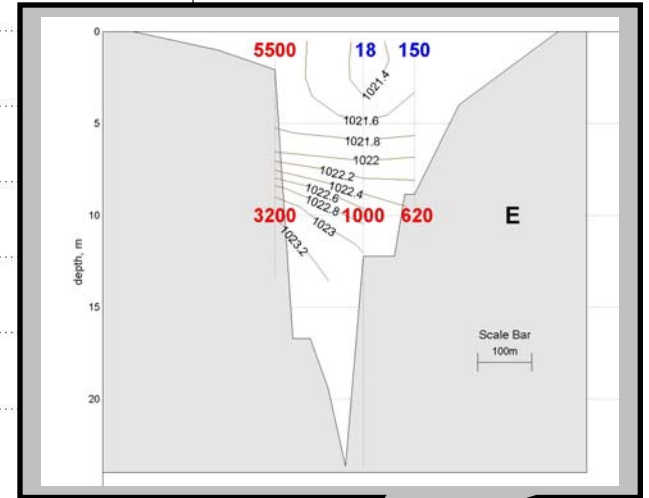
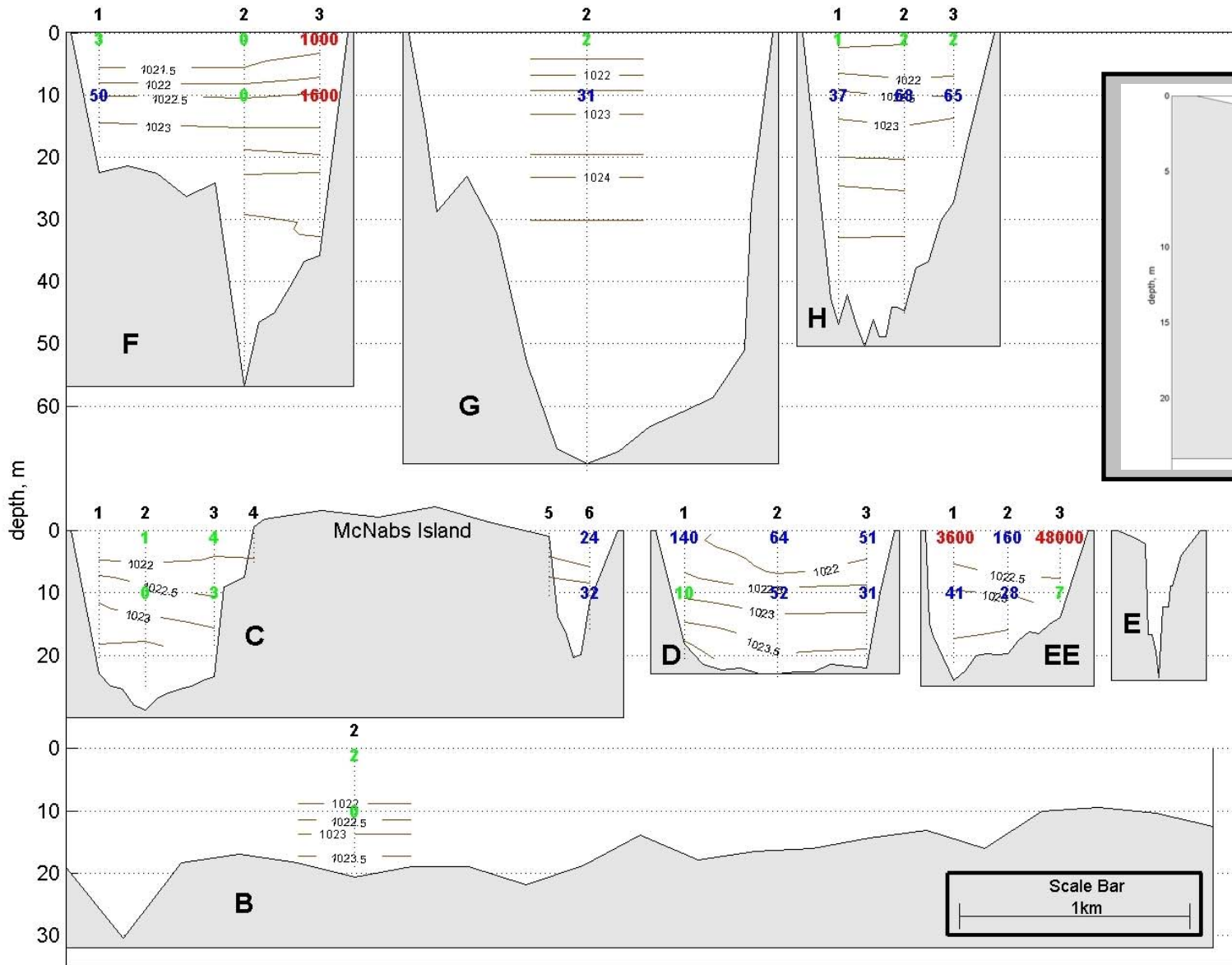


Salinity in PSU Temperature in °C

Weather data collected at the Halifax International Airport

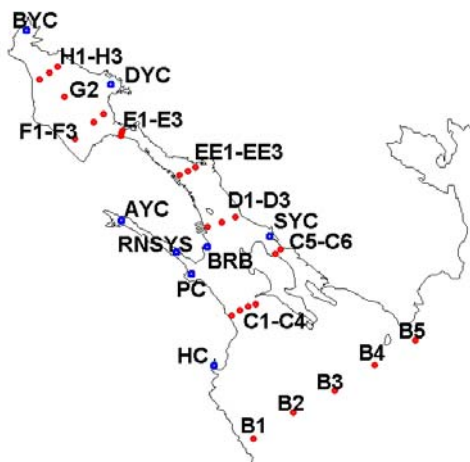
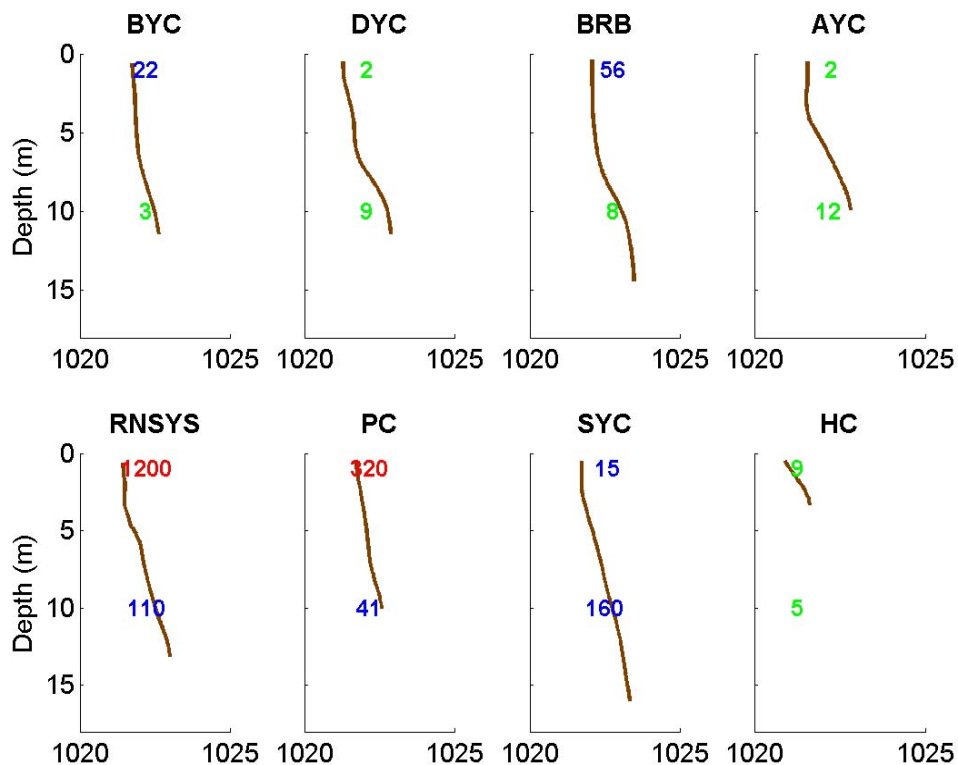
Halifax Harbour Tides - Sep06





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

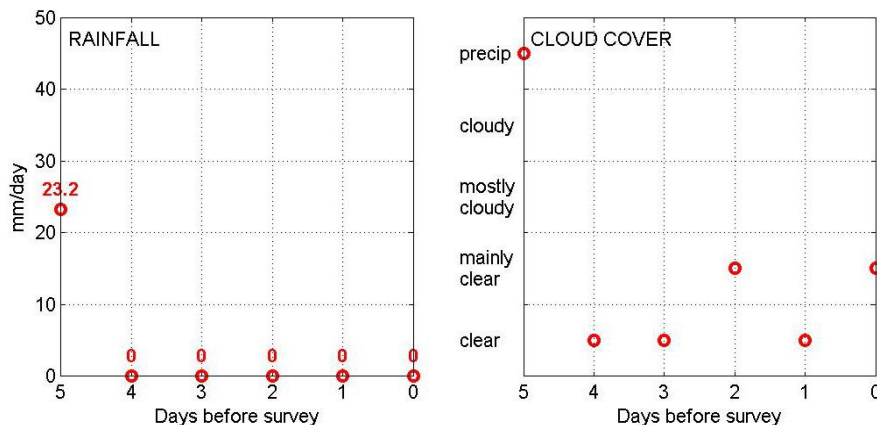
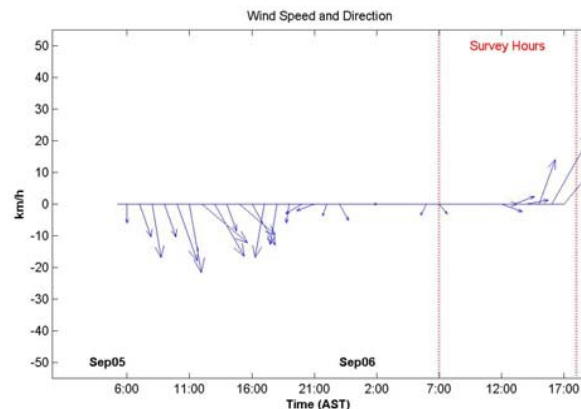
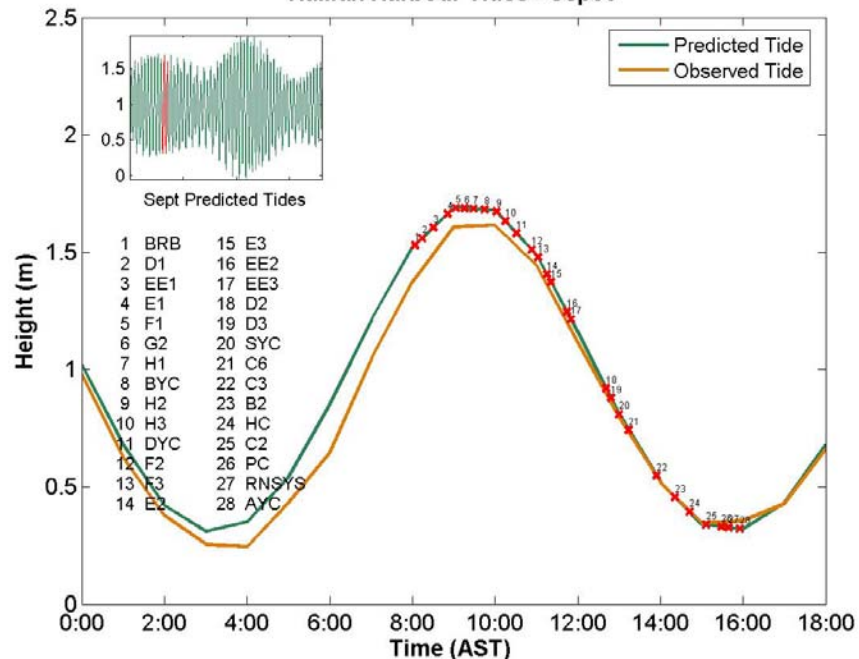
Yacht Clubs

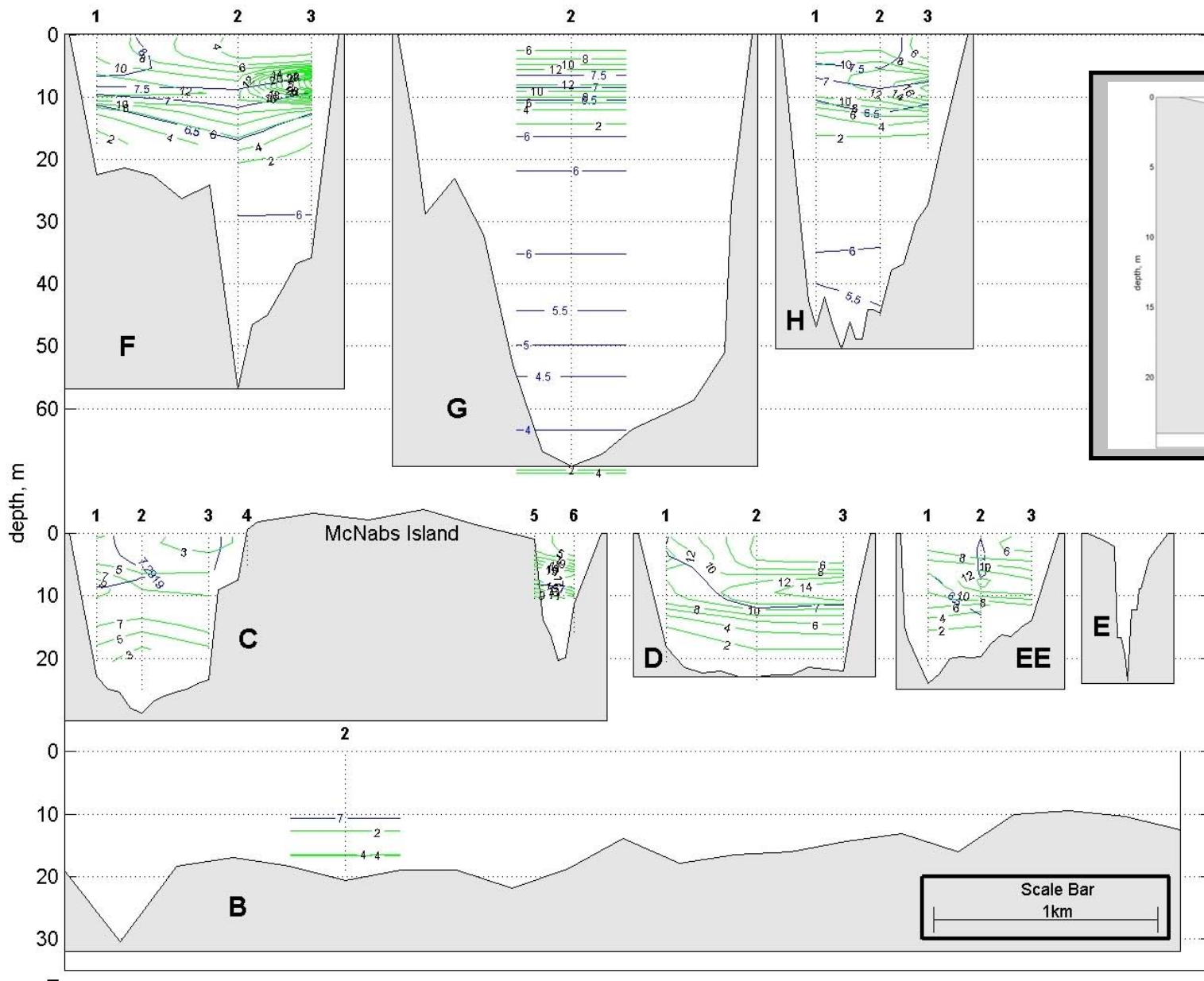


Weather data collected at the Halifax International Airport

Potential density in kg/m^3 Fecal coliform: **above swimming limit (200 cfu/100mL)**
above shellfish limit (14 cfu/100mL)
 below limits

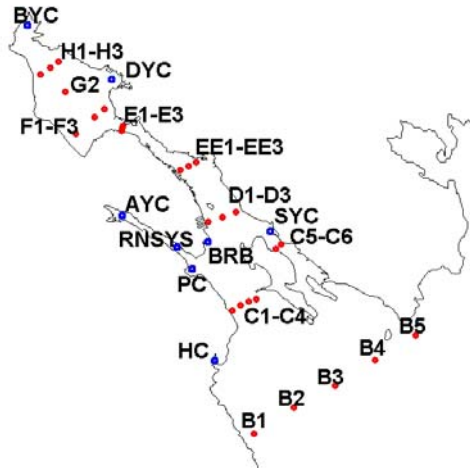
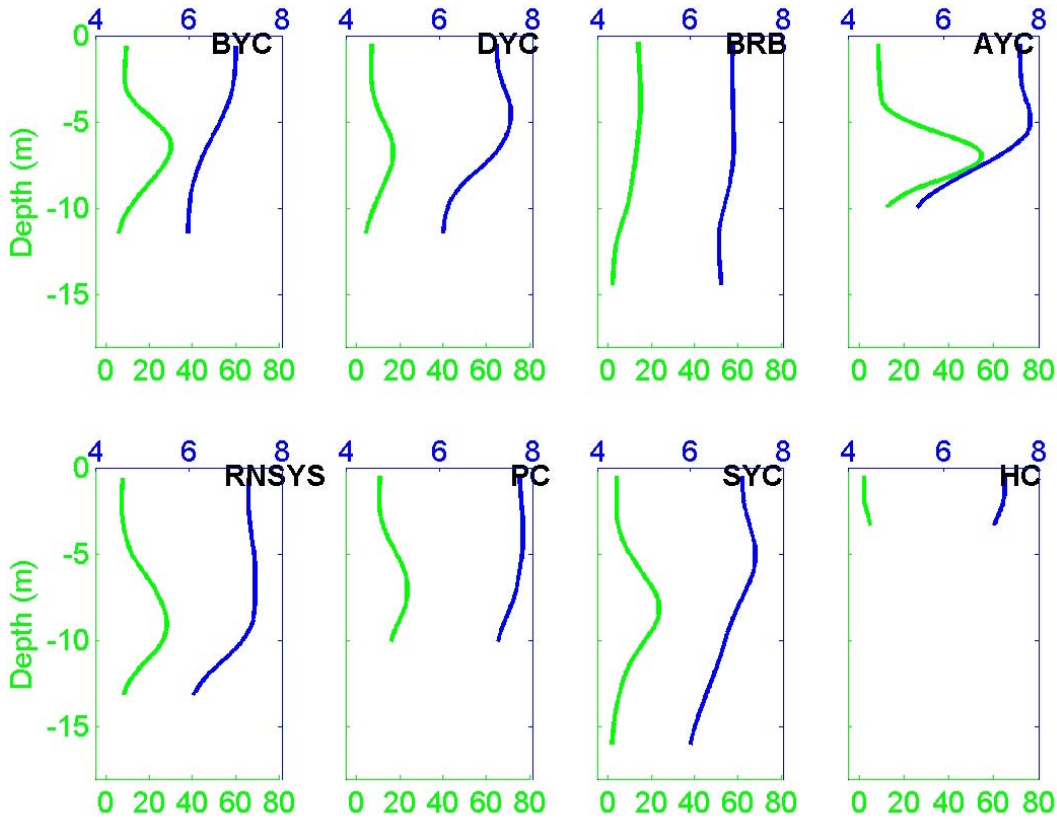
Halifax Harbour Tides - Sep06





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

Weather data collected at the Halifax International Airport

Halifax Harbour Tides - Sep06

