

Halifax Harbour Water Quality Monitoring Project

Weekly Summary #52

Survey Date: 14 June 2005
Nature of Survey: Coliform Survey
Report File (this document): HHWQMP_report052_050614.doc
Data File: HHWQMP_data0052_050614.xls

Data Return:
Profile: 90%
Bacteria: 93%
Chemical: na
Overall: 91%

Sample Notes:

Stations B2 and HC were missed due to high winds.

The CTD sensor track was partially plugged at station H3, resulting in bad data. This data is included in the graphics but has been deleted from the data file.

QA/QC samples:

Fecal Coliform (CFU/100ml)

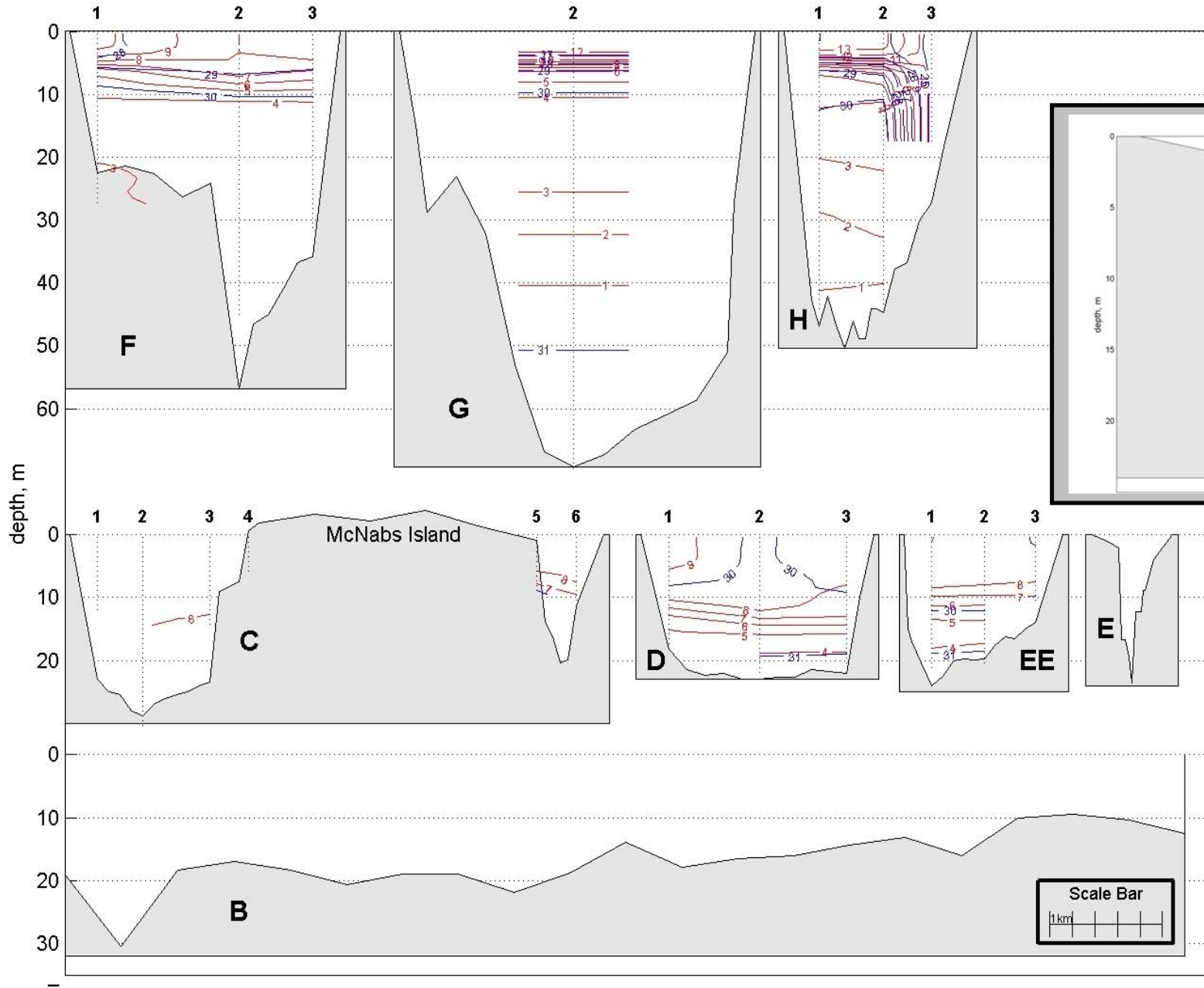
Site	SYC-10M	C2-1M	BRB-10M	RNSYS-1M
Reference	8	0	2	120
QA/QC	3	2	3	130

Comments:

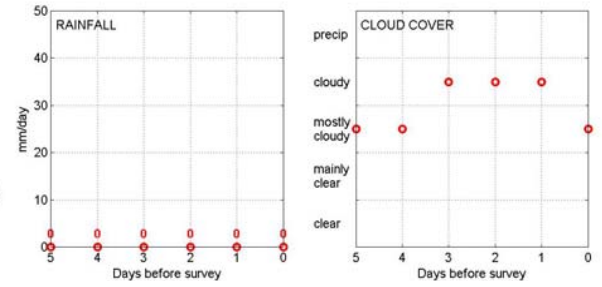
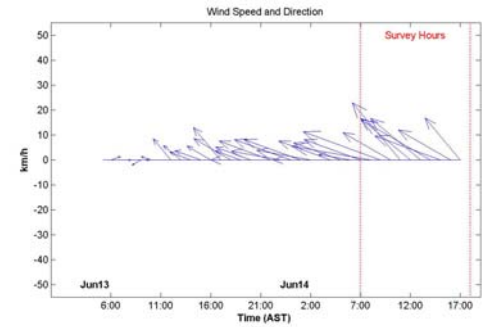
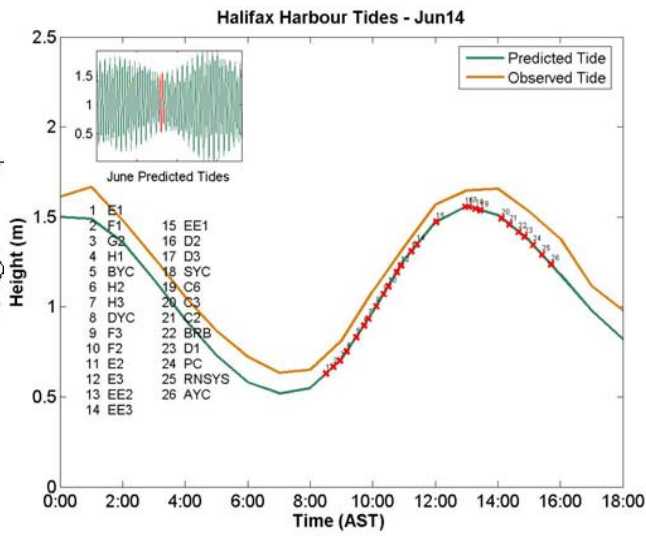
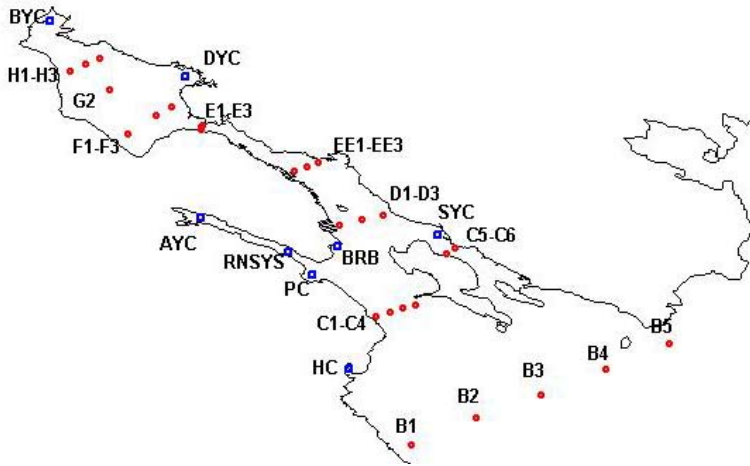
Dissolved Oxygen: The only location where dissolved oxygen levels are below applicable guidelines is in the deepest water of Bedford Basin where the levels are just under 6 mg/L, which compares with the SB guideline of 7 mg/L.

Chlorophyll: The fluorescence values are quite high in the middle Harbour to the head of the Basin. The profile maximum values range from about 25-45 mg/m³ at a depth of 7-10m. Further out the harbour (sections D and E) the profile maximums drop to about 10 mg/m³ at a depth of about 20m.

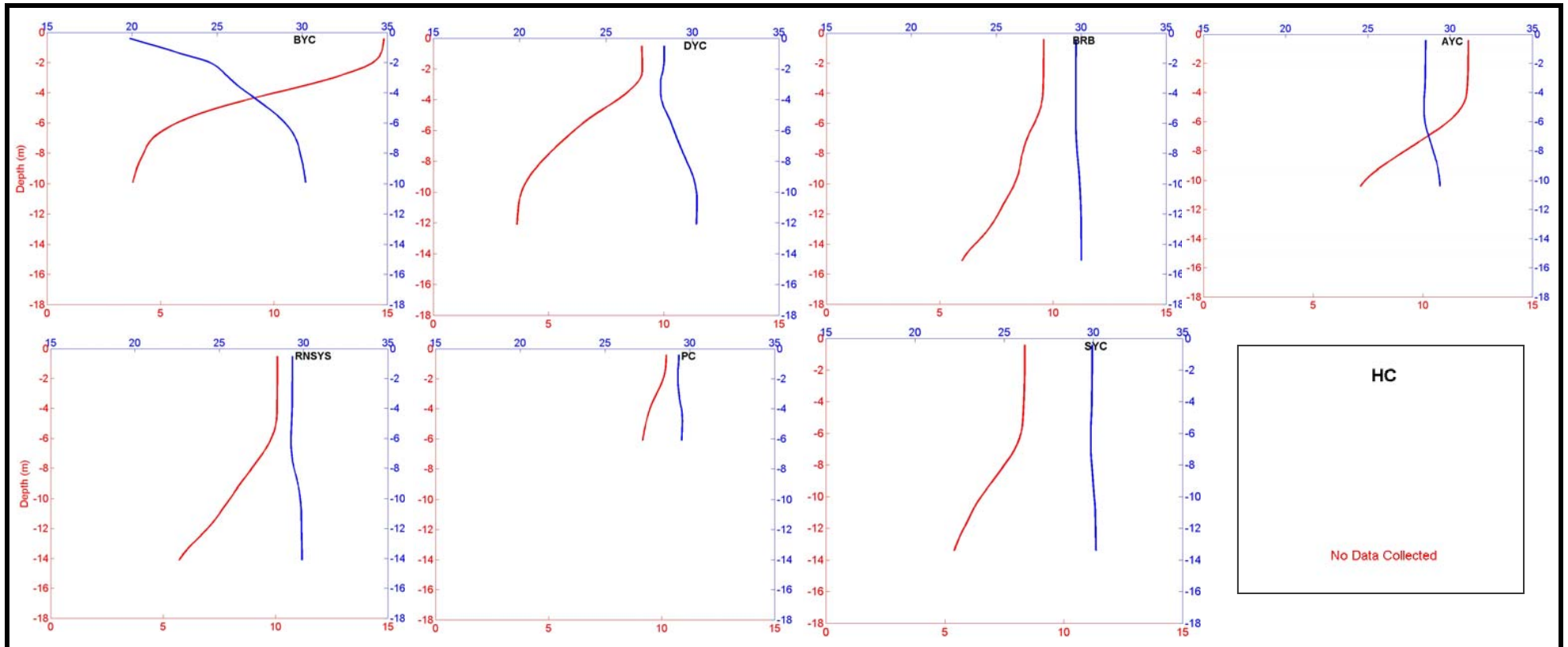
General: While the recent weather has been dry, the Basin is quite stratified with a layer of warmer, fresher water in the top 10m. This does not extend appreciably into the inner Harbour, while there is some temperature stratification evident here, the density stratification is modest. The coliform counts are relatively low in the inner Harbour, with the distribution displaced up harbour into the Narrows (section E) and the southern Basin (section F). This may be due to the east and southeast winds forcing surface water into the Harbour and impeding the flow of fresher water out of the Basin. The chlorophyll maximums tend to occur at the same depth as the dissolved oxygen maximums and in some cases the dissolved oxygen values are quite high. For example: At BYC the maximum chlorophyll a concentration (48 mg/m³) corresponds to a dissolved oxygen measurement of 12 mg/l.



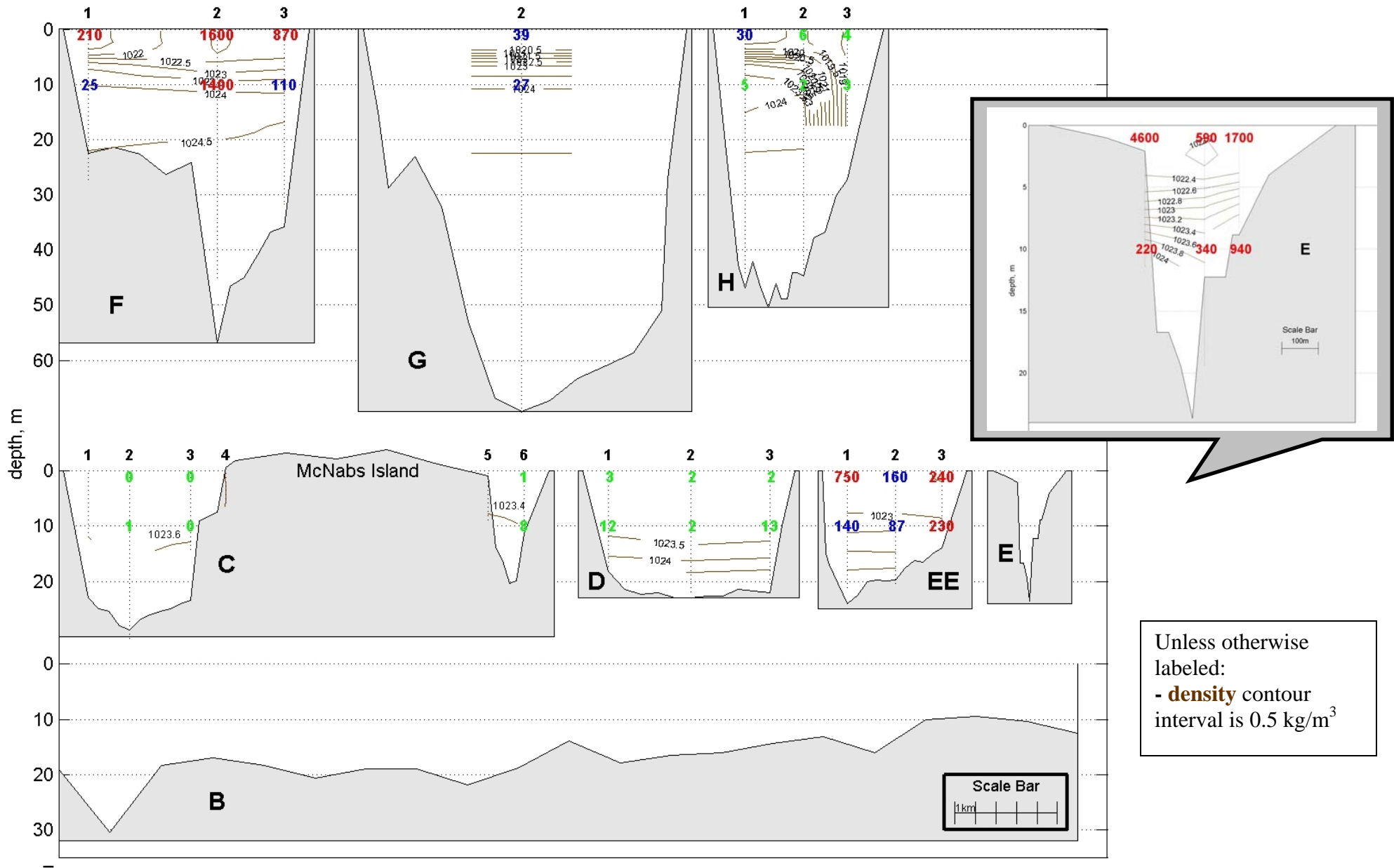
Unless otherwise labeled:
 - **salinity** contour interval is 1 PSU
 - **temperature** contour interval is 1°C.



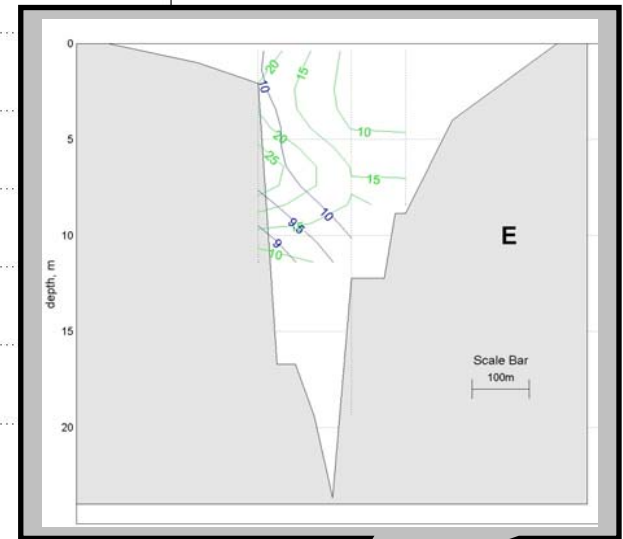
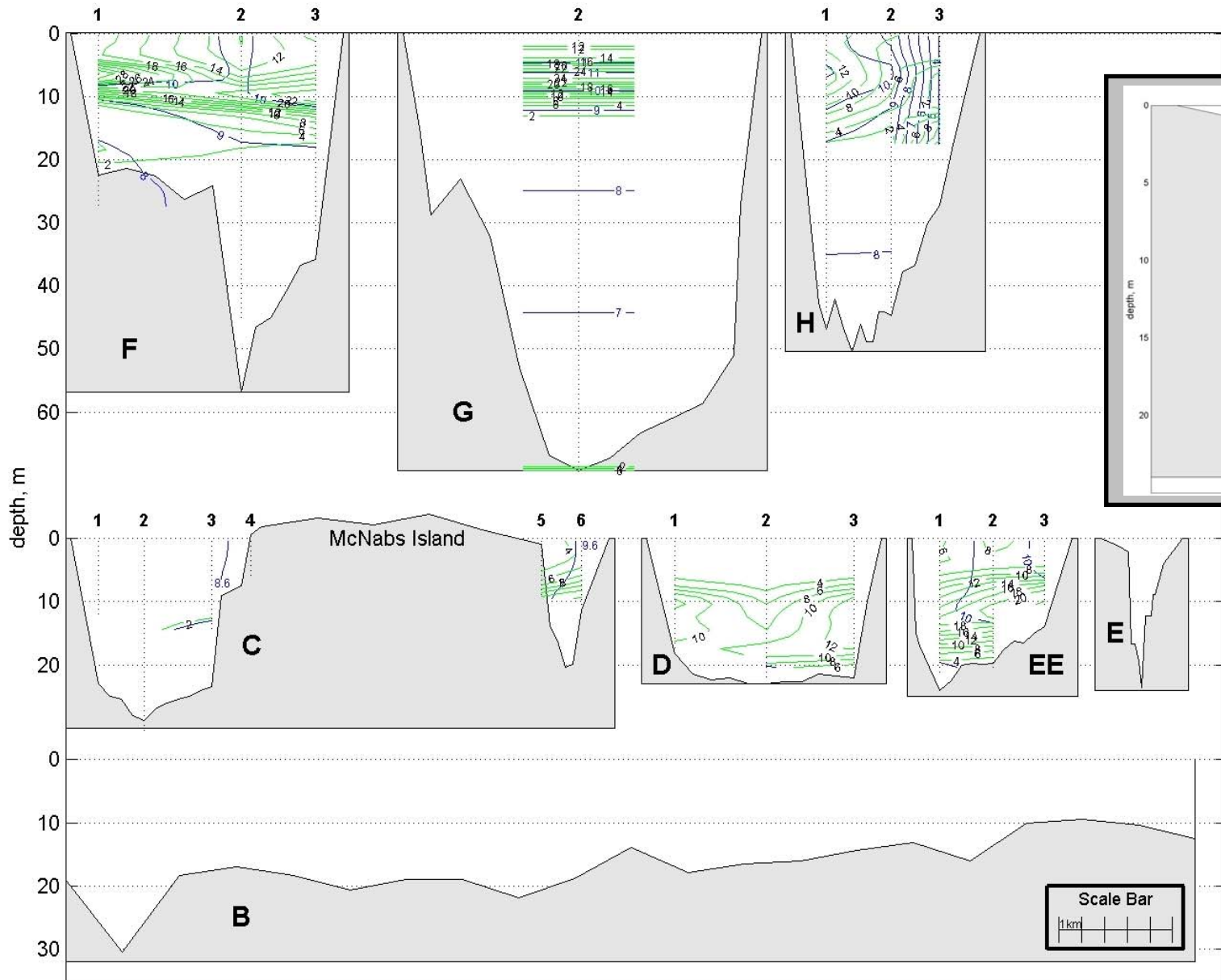
Yacht Clubs



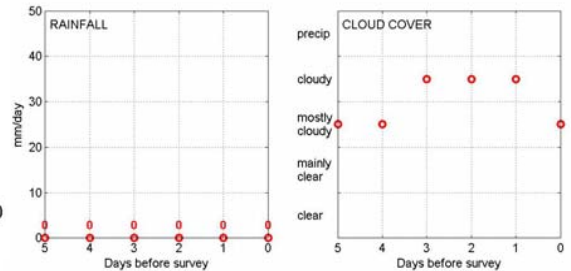
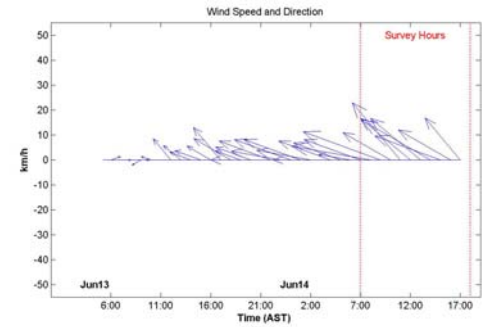
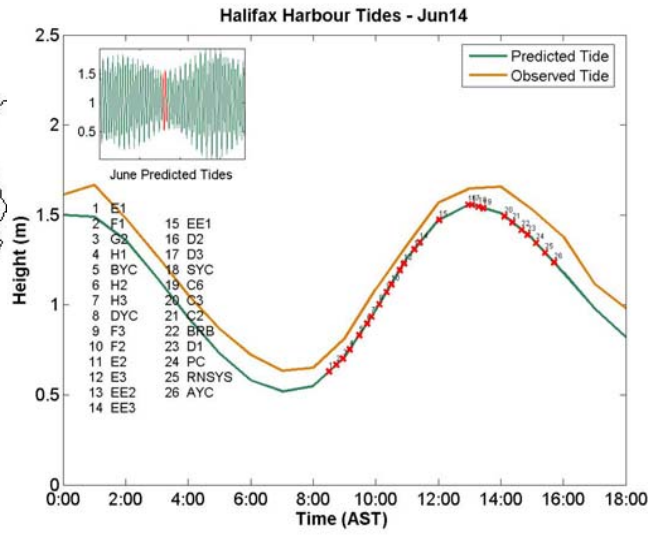
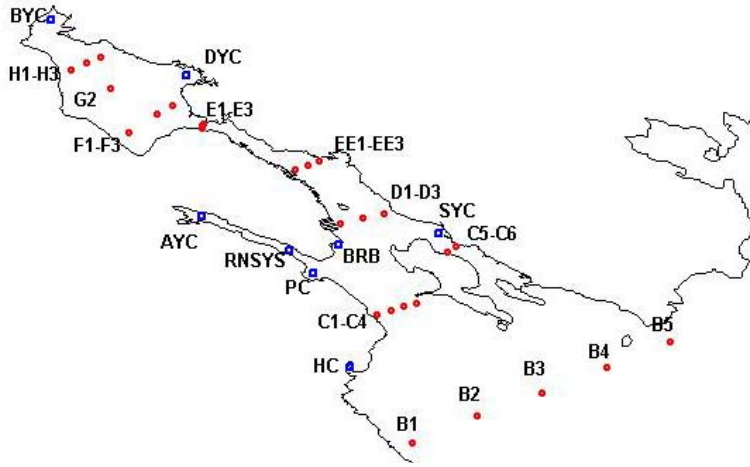
Salinity in PSU Temperature in °C



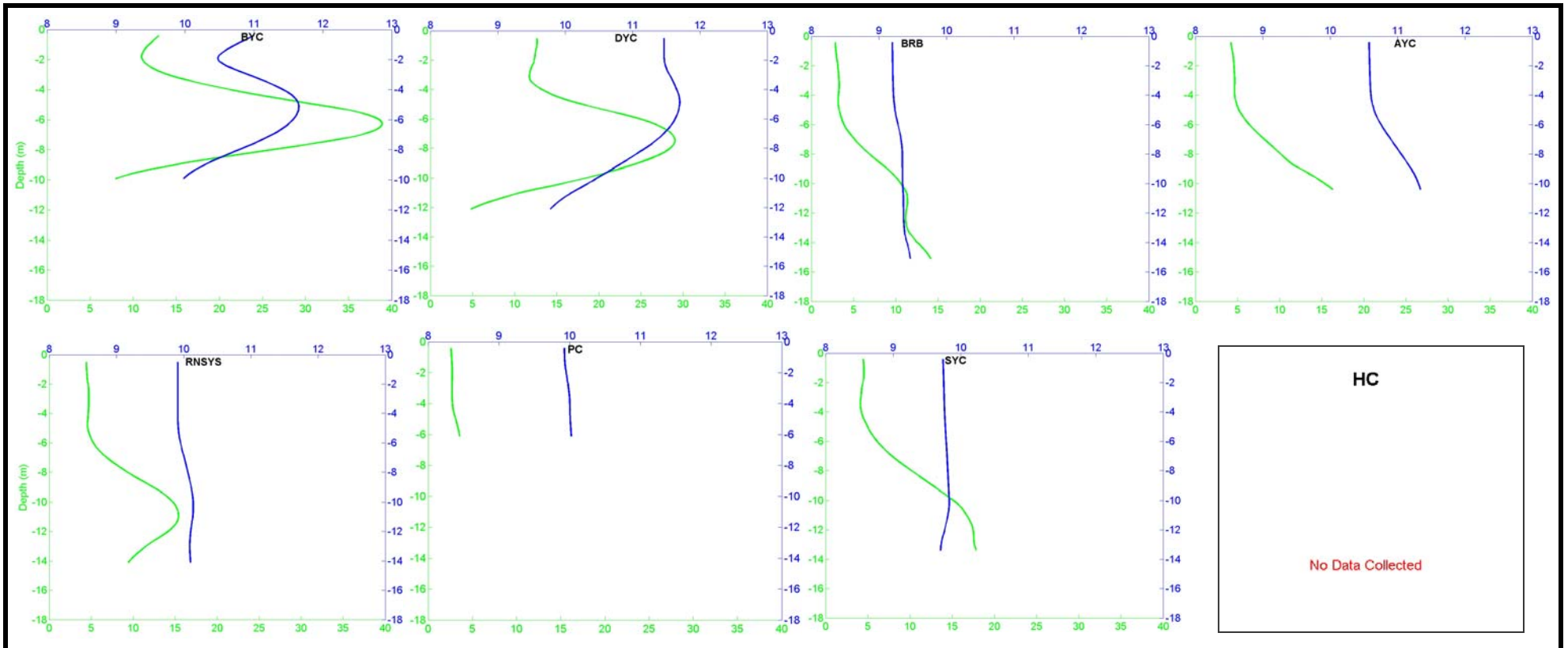
Unless otherwise labeled:
 - **density** contour interval is 0.5 kg/m³



Unless otherwise labeled:
 - **dissolved oxygen** contour interval is 1 mg/L
 - **chlorophyll** contour interval is 2 mg/m³.



Yacht Clubs



DO in mg/L

Chlorophyll in mg/m³