

# Halifax Harbour Water Quality Monitoring Project

## Weekly Summary #68

**Survey Date:** 05 October 2005  
**Nature of Survey:** Coliform Survey  
**Report File (this document):** HHWQMP\_report068\_051005.doc  
**Data File:** HHWQMP\_data068\_051005.xls

### Data Return:

Profile: 103%  
Bacteria: 100%  
Chemical: na  
**Overall: 102%**

### Sample Notes:

An additional CTD profile was obtained at station B1

### QA/QC samples:

#### Fecal Coliform (CFU/100ml)

Site	F1-1m	SYC-1m	C3-10m	HC-1m
Reference	44	3	11	560
QA/QC	26	26	16	780

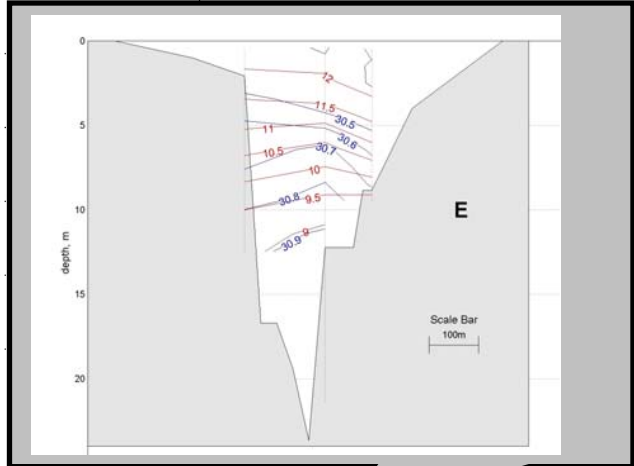
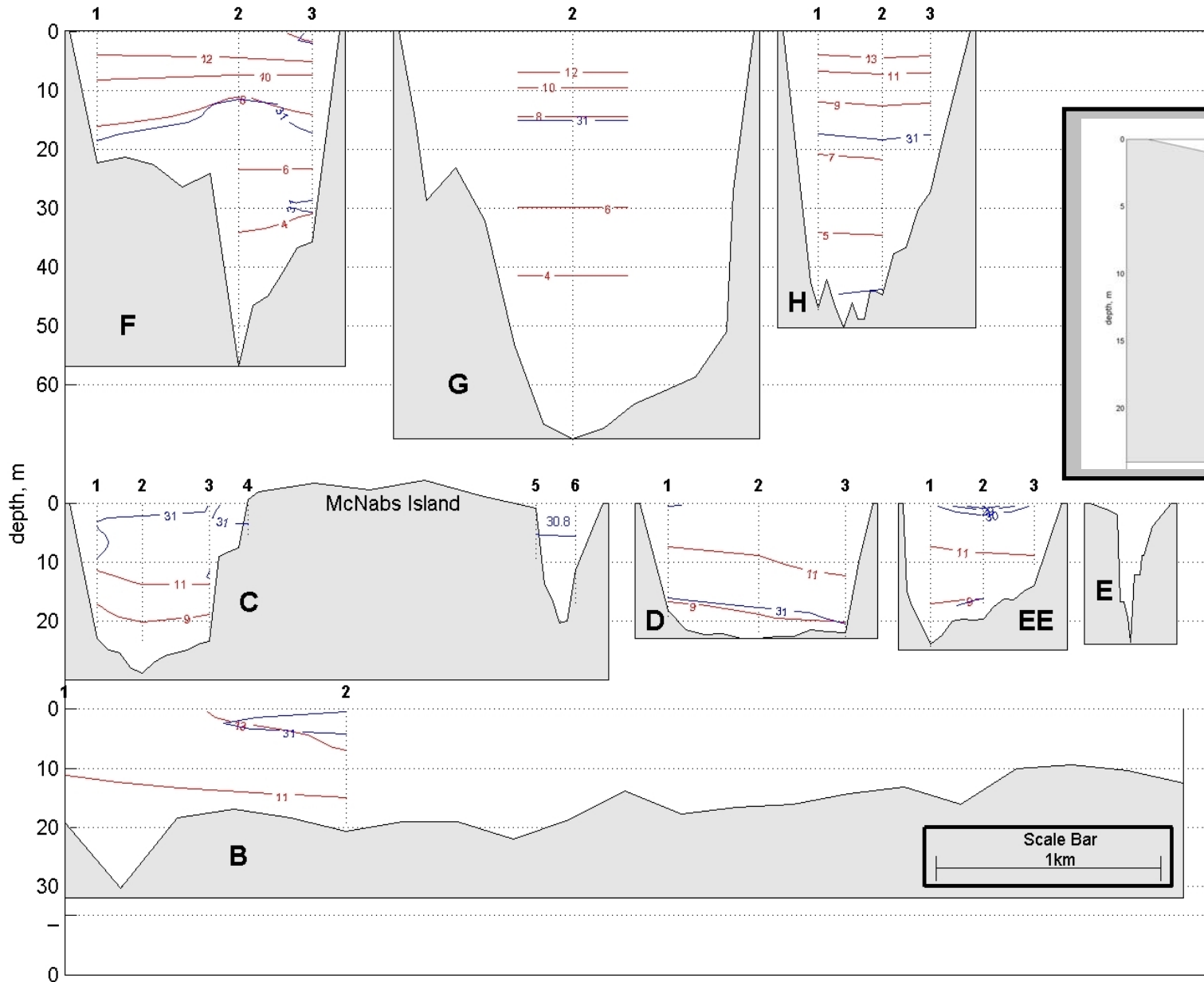
### Comments:

General: The Harbour is considerably less stratified than last week. This is probably due to vertical mixing in the absence of significant freshwater input, as the average salinity of the Harbour has changed very little. The average temperature is slightly higher, suggesting the possibility of an effect of shelf water input. Another explanation is due to the mainly clear weather, which could have resulted in local late season warming. Station B2 is an anomaly in that the entire water column warmed. The most elevated coliform levels generally occur in the surface samples in the vicinity of the inner Harbour sources, with some displacement up the Harbour and into the Basin. This is consistent with the high tide sampling in the Narrows. The low stratification allows all discharges to reach the surface relatively unimpeded but also allows for enhanced vertical mixing, perhaps explaining the elevated values in the 10m samples in the Narrows.

Dissolved Oxygen: Overall, the DO data indicates that the oxygen levels throughout the Harbour are slightly lower than last week. The largest change is in the Basin where surface values have decreased over 1 mg/L. The normally low values in the bottom of the Basin have increased by about 1.2 mg/L, indicating a partial replacement of bottom water. This is likely associated with a continuation of the intrusion underway last week into the bottom water of the Basin. The DO data is not ground truthed and absolute values are questionable (see DO discussion in QR#1).

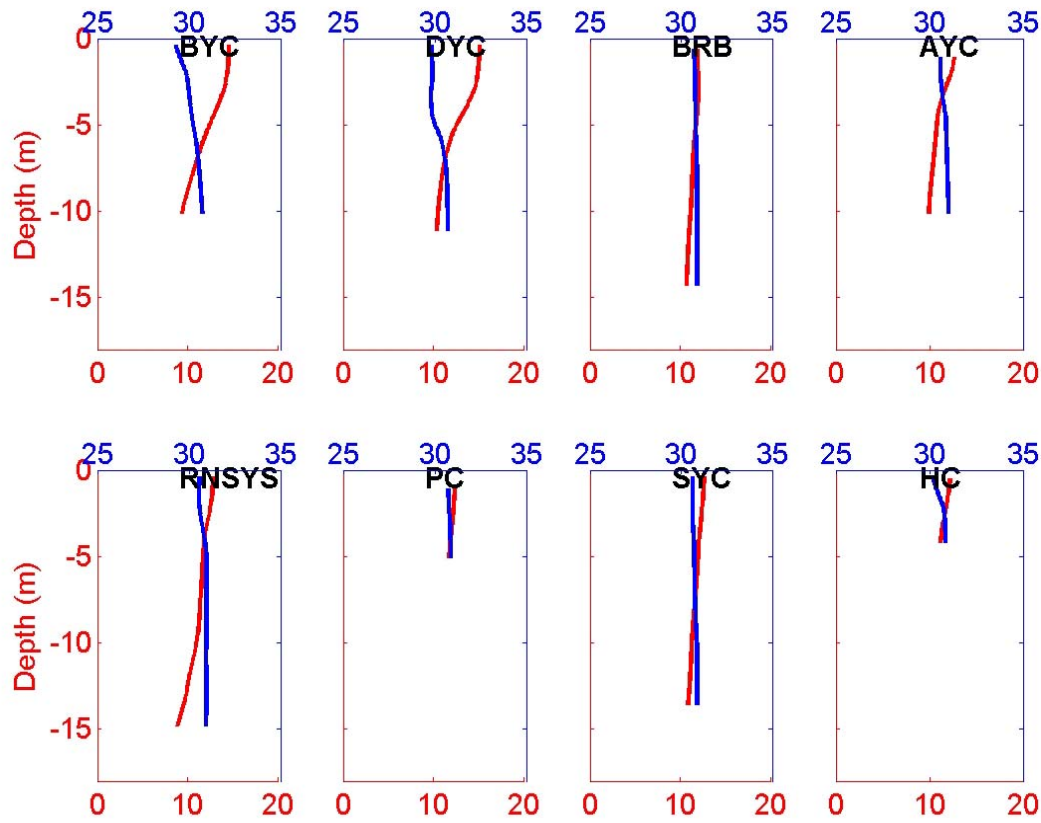
Chlorophyll: The phytoplankton bloom evident in the past two weeks has subsided with fluorescence values throughout the Harbour dropping to the 1-2+ mg/m<sup>3</sup> range. The highest values in the Harbour this week were in the outer Harbour (B section) where profile maximums are 6+ mg/m<sup>3</sup>.

TEMPERATURE-SALINITY CONTOURS

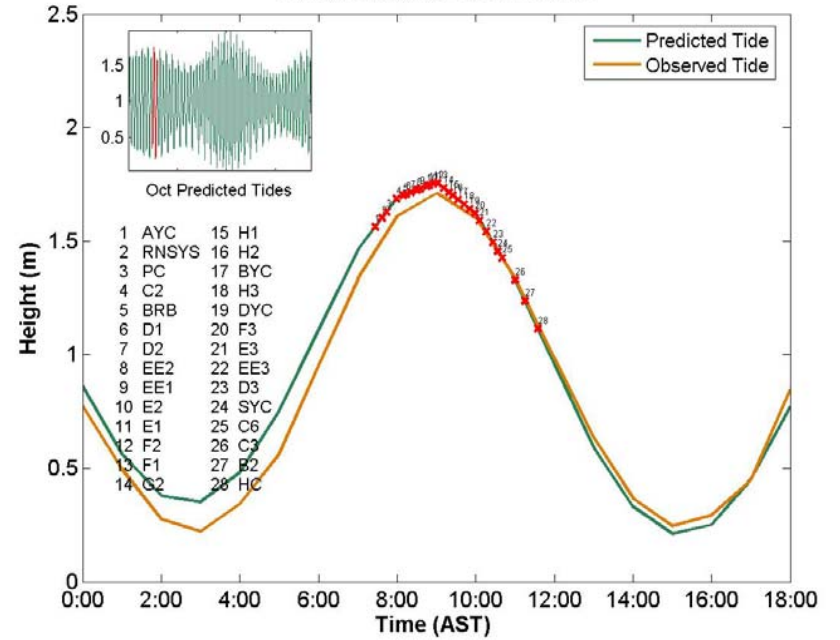


Unless otherwise labeled:  
- salinity contour interval is 1 PSU  
- temperature contour interval is 2°C.

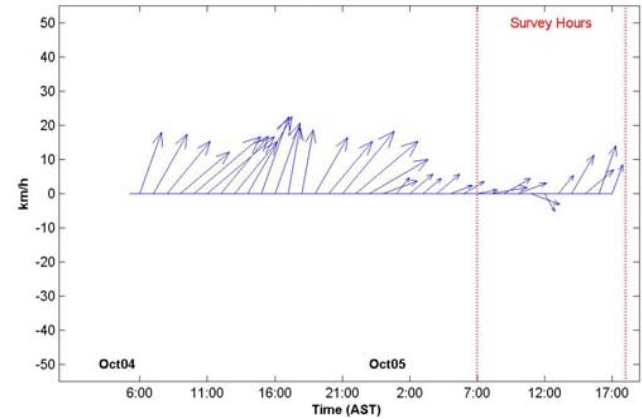
# Yacht Clubs



# Halifax Harbour Tides - Oct05

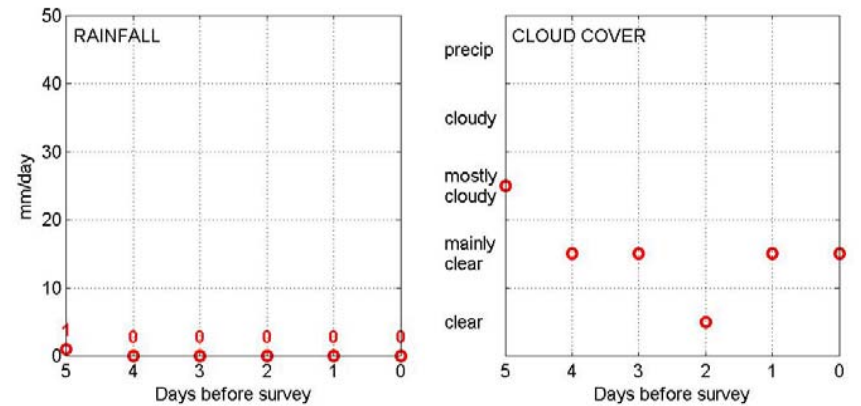


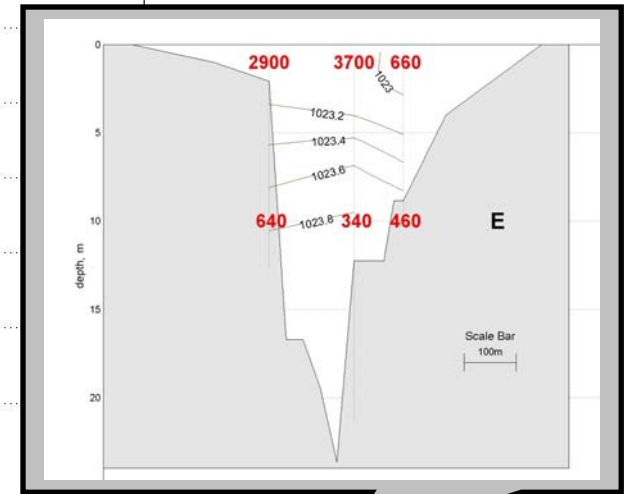
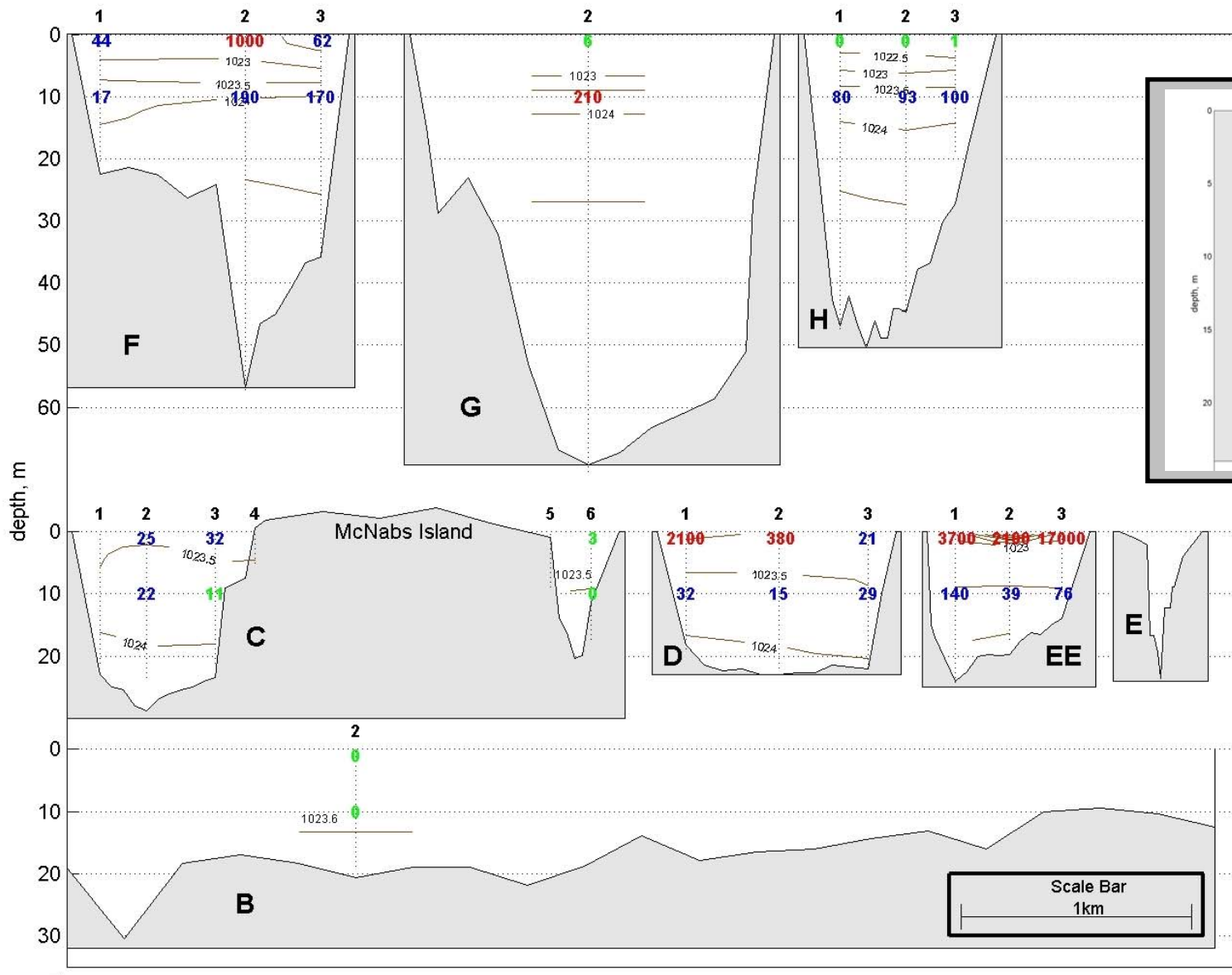
# Wind Speed and Direction



Weather data collected at the Halifax International Airport

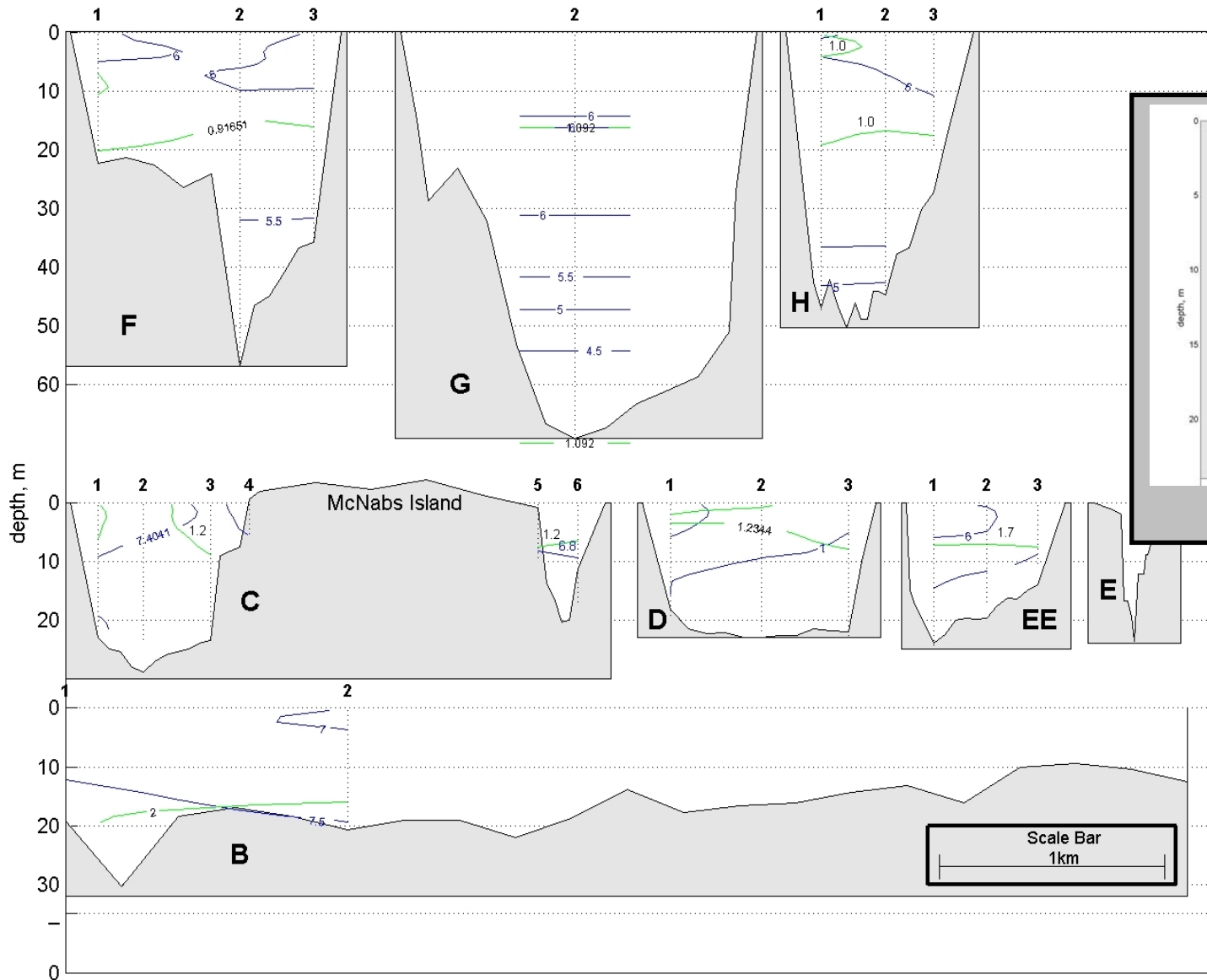
Salinity in PSU      Temperature in °C





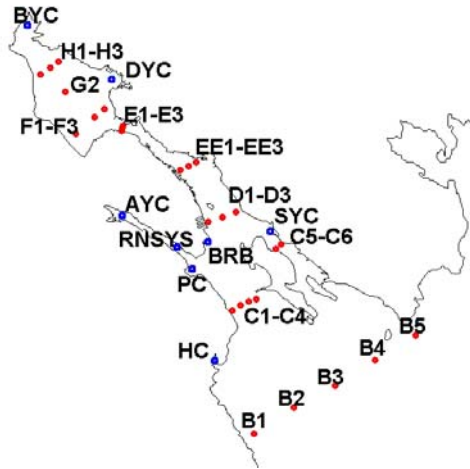
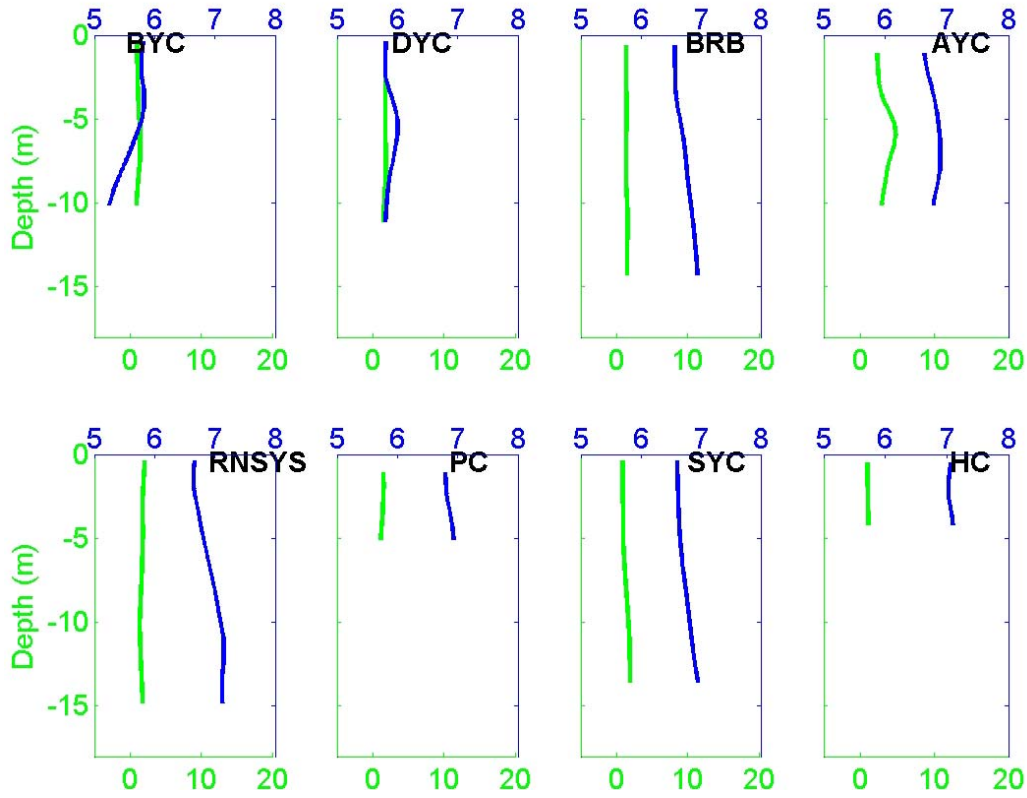
Unless otherwise labeled:  
 - **density** contour interval is 0.5 kg/m<sup>3</sup>





Unless otherwise labeled:  
- **dissolved oxygen** contour interval is 0.5 mg/L  
- **chlorophyll** contour interval is 2 mg/m<sup>3</sup>.

# Yacht Clubs



DO in mg/L

Chlorophyll in mg/m<sup>3</sup>

Weather data collected at the Halifax International Airport

# Halifax Harbour Tides - Oct05

