

Halifax Harbour Water Quality Monitoring Project

Weekly Summary #72

Survey Date: 02 November 2005
Nature of Survey: Coliform Survey
Report File (this document): HHWQMP_report072_051102.doc
Data File: HHWQMP_data072_051102.xls

Data Return:
 Profile: 94%
 Bacteria: 96%
 Chemical: na
Overall: 95%

Sample Notes:

Station B2 missed due to sea state.

The CTD data record from Site C5 was prematurely truncated and contained no useful data. The reason is unknown.

QA/QC samples:

Fecal Coliform (CFU/100ml)

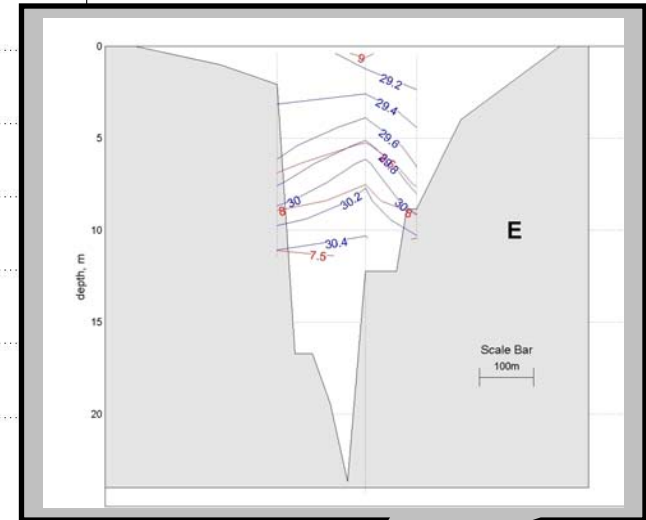
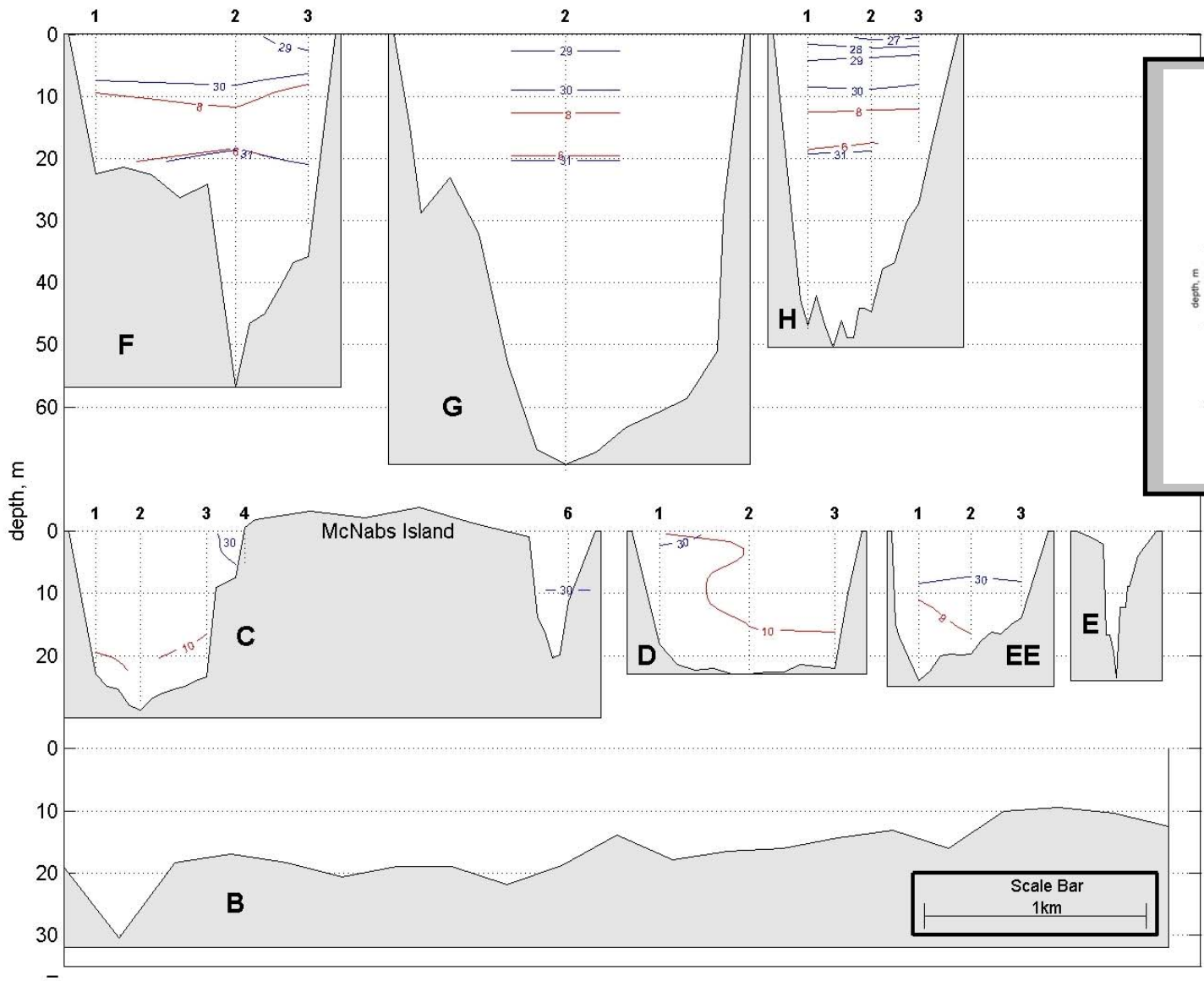
Site	EE2-10m	H1-1m	D1-1m	AYC-1m
Reference	190	23	>10000	14
QA/QC	230	13	>10000	11

Comments:

General: The Harbour has resumed more usual conditions after several weeks of stormy conditions (heavy rain and/or wind). The wind has remained relatively strong and there is again a greater than 10 cm surge over tide. The week has been dry but there remains a significant freshwater signal in the vicinity of the Sackville River and other streams (e.g. DYC and HC). There is no longer a strong freshwater signal from storm sewers in the Narrows. Overall the Harbour has warmed somewhat (on the order of 0.5°C), relatively uniformly with depth. This is counter to the expected seasonal cooling but is perhaps an adjustment after the intrusion of colder than normal shelf water. The Harbour is moderately stratified north of Section D and quite well mixed south of this. High bacteria levels are less extensive than the previous few weeks but are high in the Inner Harbour near outfalls. Elevated bacteria levels extend into the southern Basin, perhaps due to up-harbour transport of surface water.

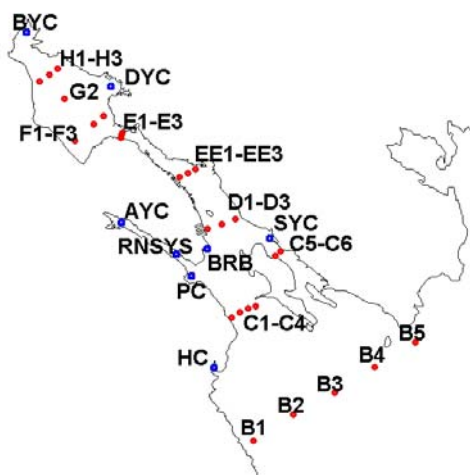
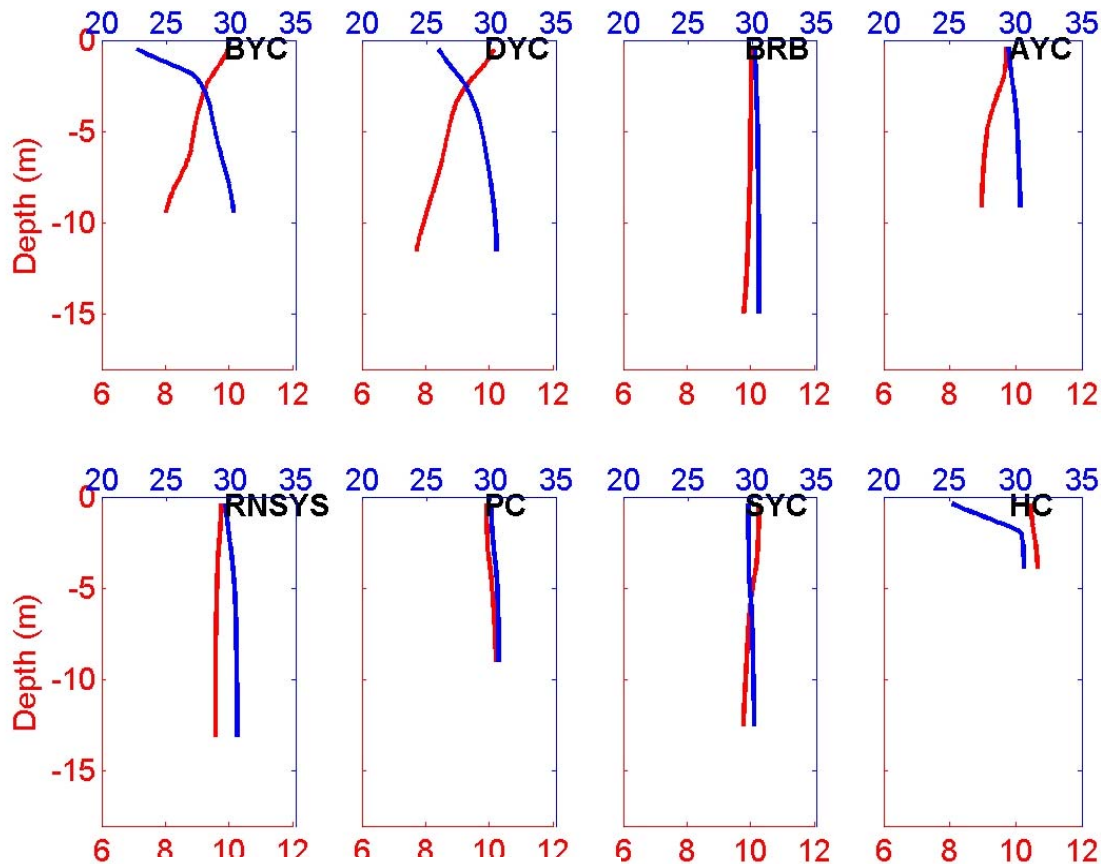
Dissolved Oxygen: Overall the DO in the deeper Basin has changed very little, indicating that the intrusion observed last week was essentially over at that time. The minimum dissolved oxygen observed in the Basin last week persists at approximately 27 m. The data indicate that the dissolved oxygen in the bottom water is around 6 mg/L. At section D and further out of the Harbour the DO is almost uniform at 7.0 mg/L. The surface water of the inner Harbour has maximum values of 6.5 to 7.0 mg/L but with some bottom values less than 6 mg/L. The values increase in the surface water of the Basin, reaching greater than 7.5 mg/L by the H section and BYC. The DO data is not ground truthed and absolute values are questionable (see DO discussion in QR#1).

Chlorophyll: The fluorescence values have not changed substantially in the last several weeks. The profile maximums are typically 2-4 mg/m³ except in the Basin where the maximums are 4-9 mg/m³. The maximum values occur at a depth of 5-10m throughout the Harbour.



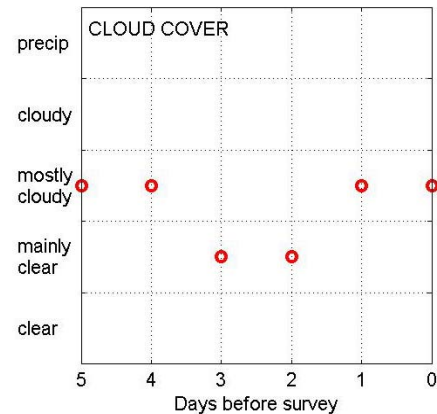
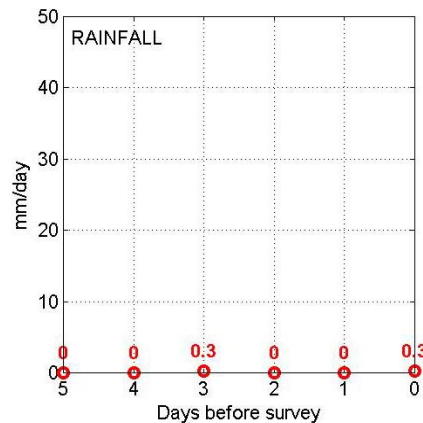
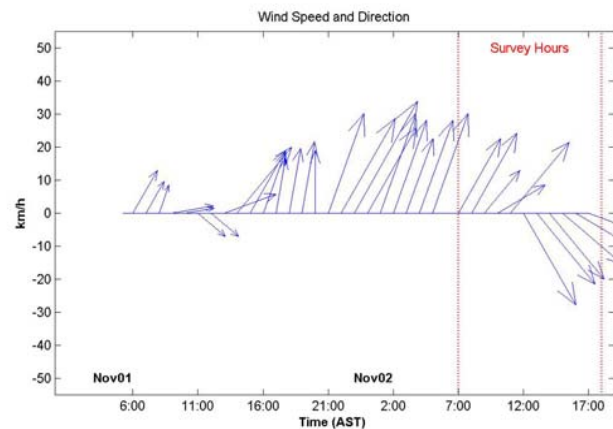
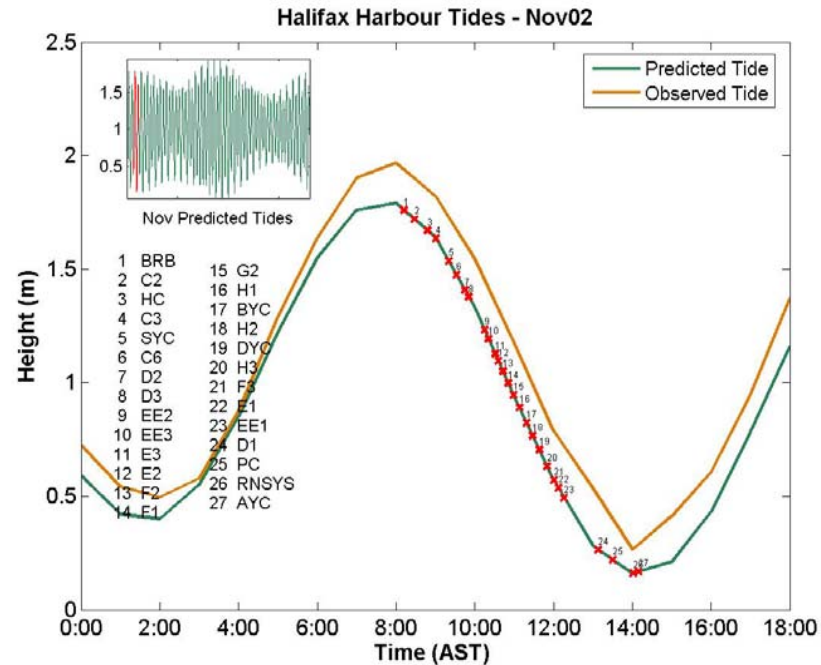
Unless otherwise labeled:
 - salinity contour interval is 1 PSU
 - temperature contour interval is 2°C.

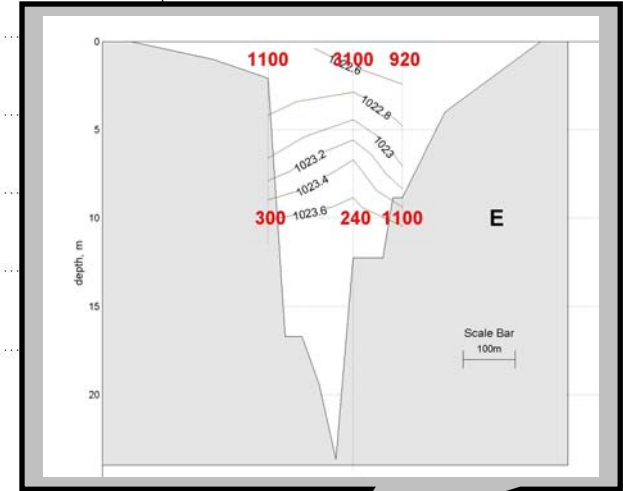
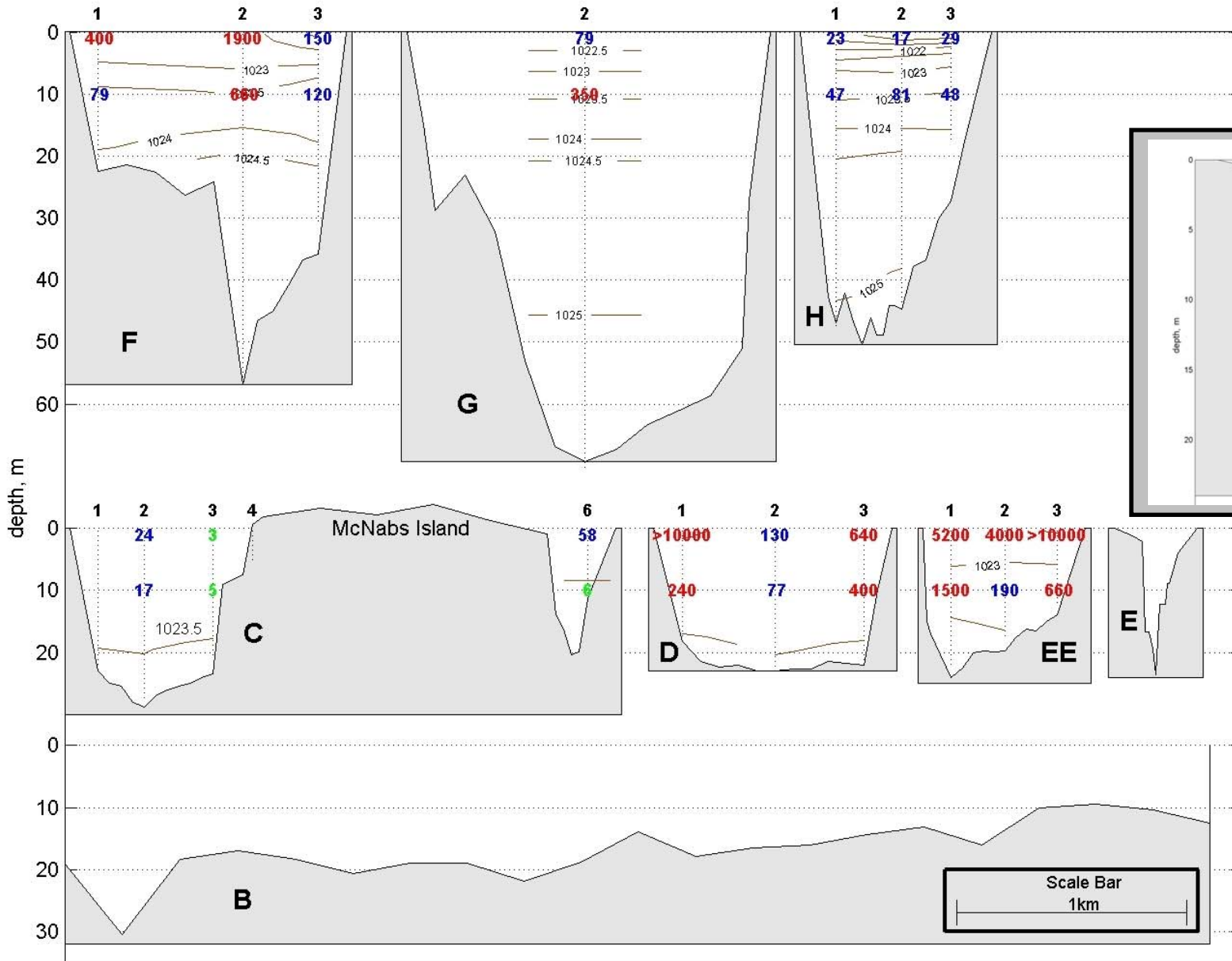
Yacht Clubs



Salinity in PSU Temperature in °C

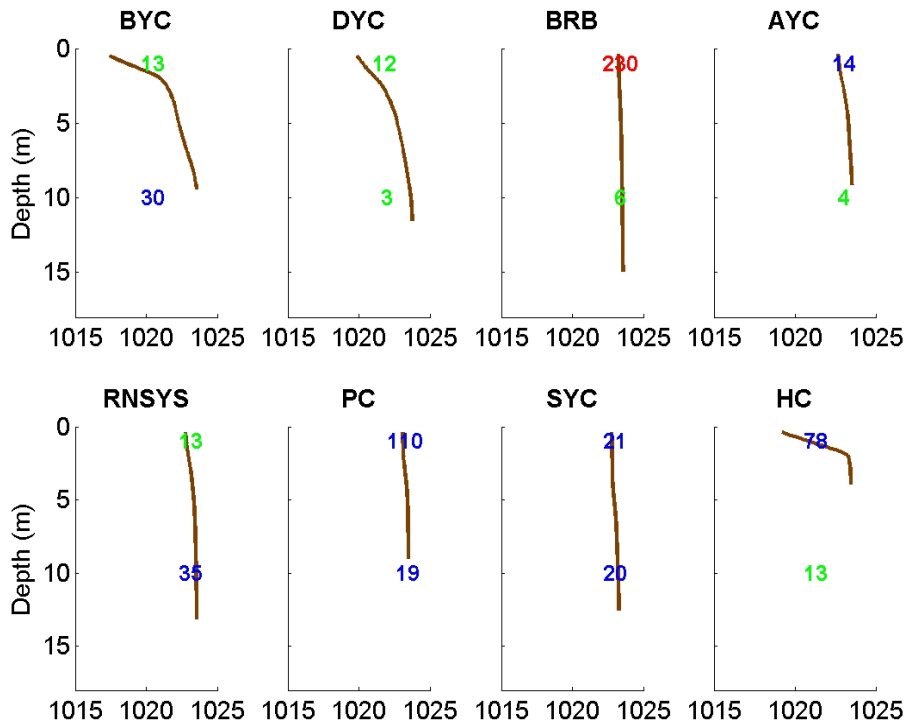
Weather data collected at the Halifax International Airport



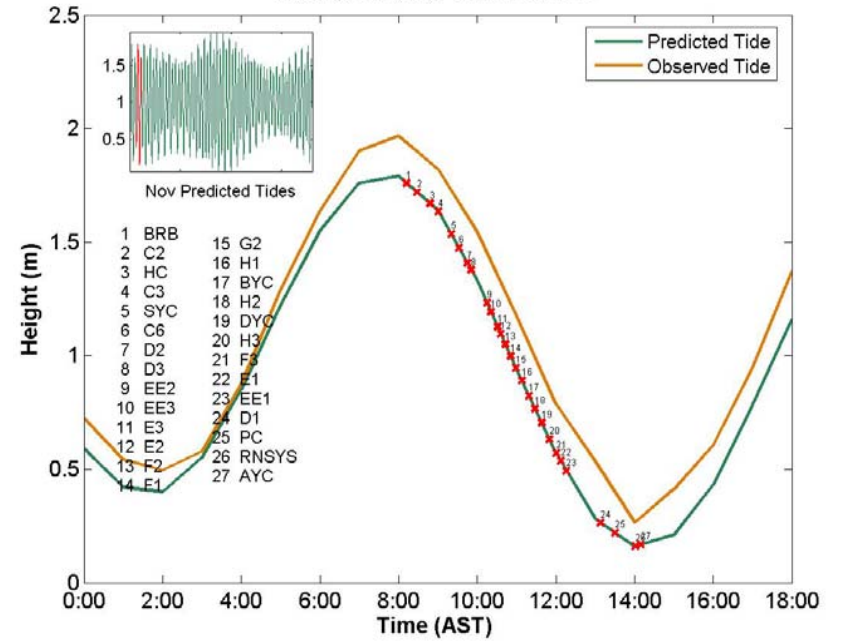


Unless otherwise labeled:
 - **density** contour interval is 0.5 kg/m³

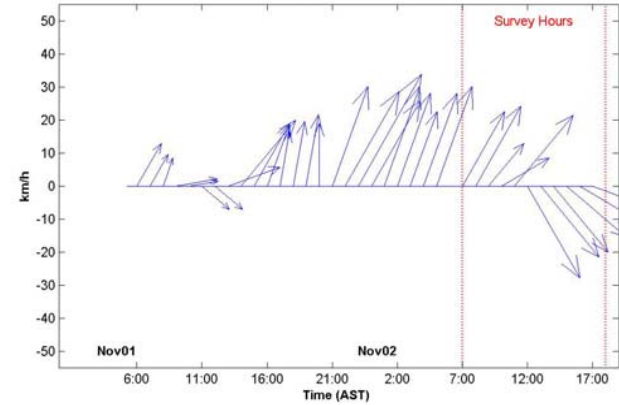
Yacht Clubs



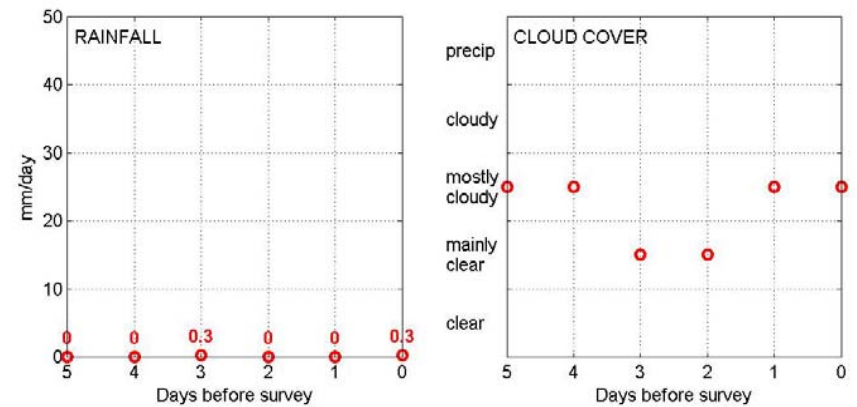
Halifax Harbour Tides - Nov02



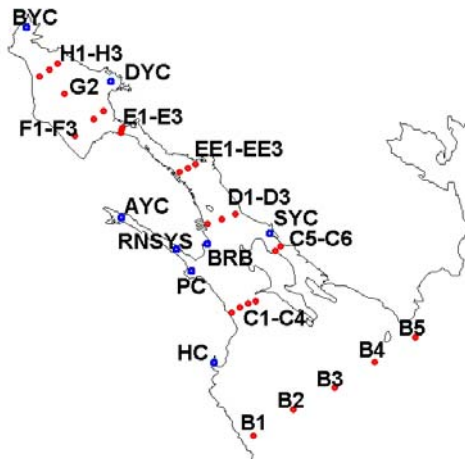
Wind Speed and Direction

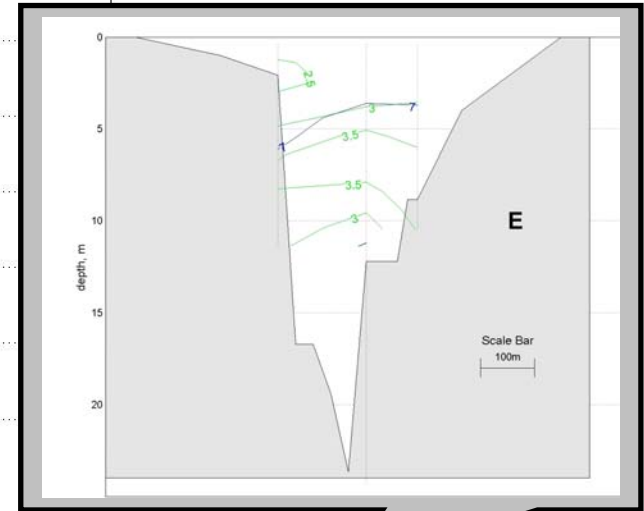
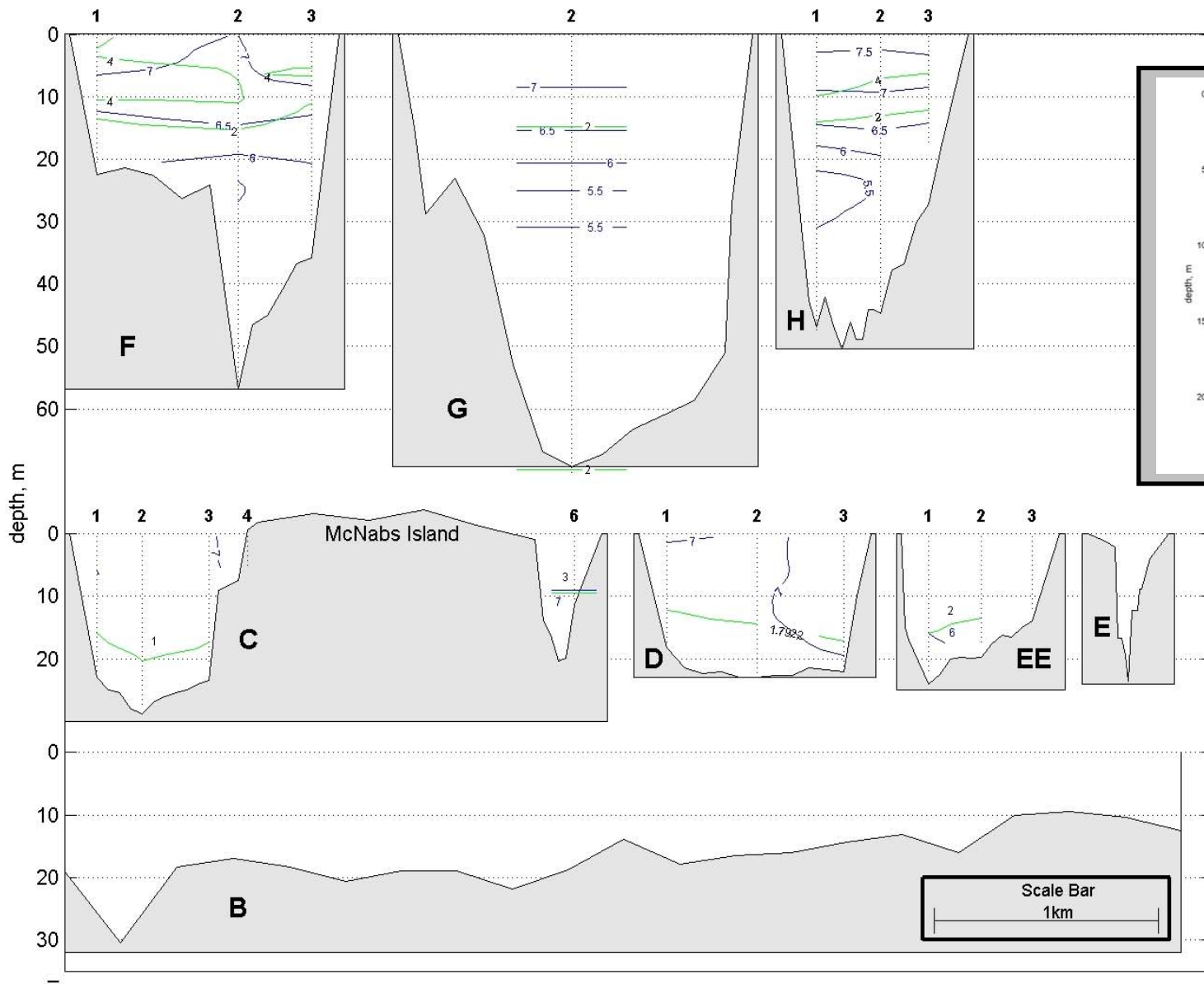


Weather data collected at the Halifax International Airport



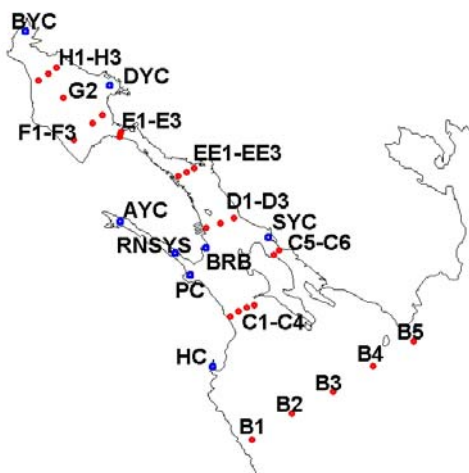
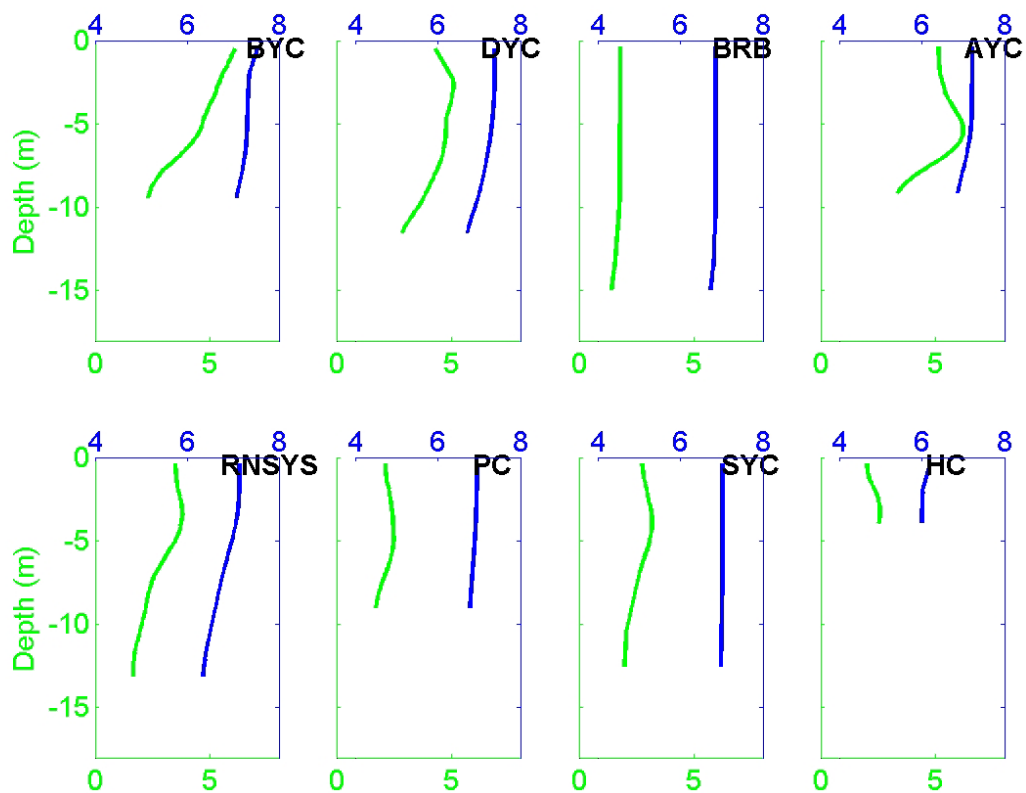
Potential Density in kg/m^3 Fecal coliform: above swimming limit (200 cfu/100mL)
 above shellfish limit (14 cfu/100mL)
 below limits





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 - Nov02

