

Halifax Harbour Water Quality Monitoring Project

Weekly Summary #82

Survey Date: 11 January 2006
Nature of Survey: Coliform Survey
Report File (this document): HHWQMP_report082_060111.doc
Data File: HHWQMP_data082_060111.xls

Data Return:

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

Sample Notes:

Sampling was truncated due to boat trouble. Sites C5 and C6 were not sampled.

The BYC sample was taken at an alternate site due to ice. Coordinates: 44° 43.124' N , 63° 80.887' W

Fecal Coliform QA/QC (CFU/100ml)

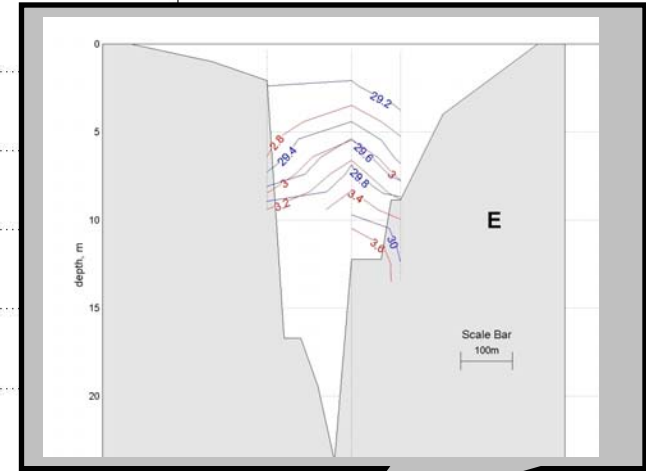
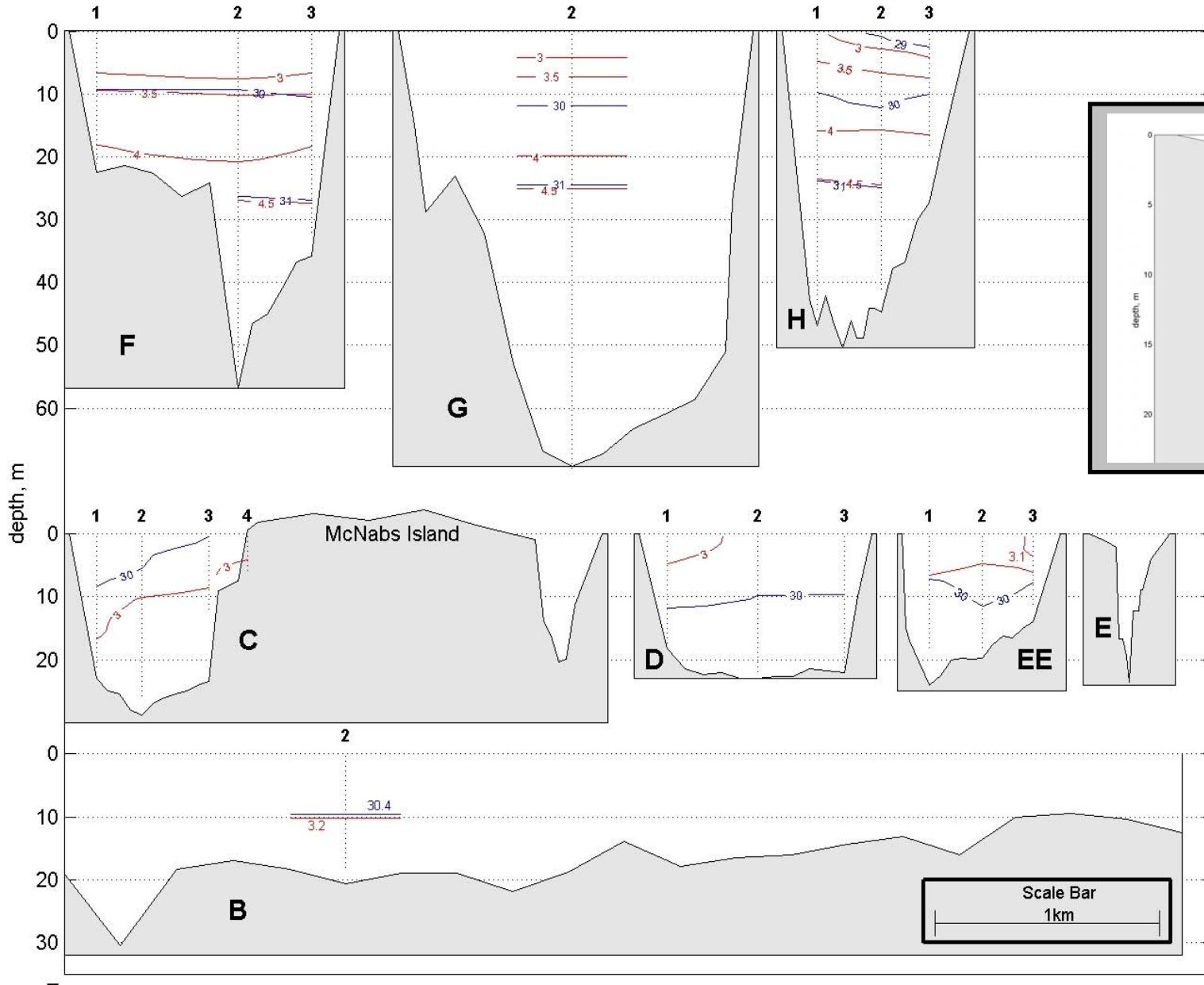
Site	PC-1m	HC-10m	BRB-1m	EE1-1m
Reference	460	39	720	2100
QA/QC	400	92	500	520

Comments:

General: The Harbour continues its seasonal cooling trend and is on average about 0.2° C cooler than last week. The warmest water in the Harbour is in the bottom of the Basin which remains unchanged at 4.8° C. There has been very little precipitation in the previous week. The Harbour is slightly saltier this week than last, and the local freshwater signals that were evident last week are reduced, with only a slight signature from the Sackville River at the head of the Basin. Down harbour from this, the surface salinity varies very slowly from about 29.2 PSU in the centre of the Basin to 29.7 PSU at section C. The fecal coliform levels remain high, and are only slightly lower than last week. There are again detectable, but low, values all the way out to B2. The distribution is relatively typical with the 10m values displaced up-harbour and the 1m values displaced down-harbour. This may be as a result of a weak estuarine circulation and/or a wind induced shear flow. The water level during sampling is 0.1 to 0.3 m below the predicted tide indicating an influence of wind/shelf processes on the harbour water levels/circulation.

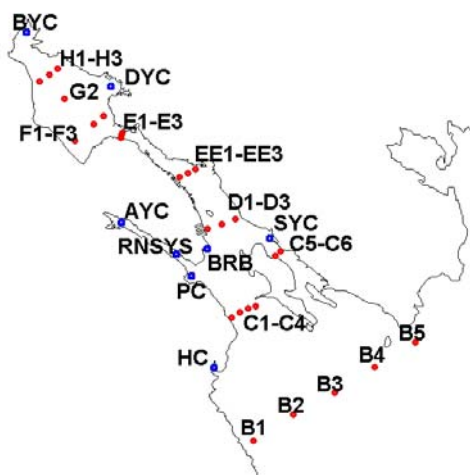
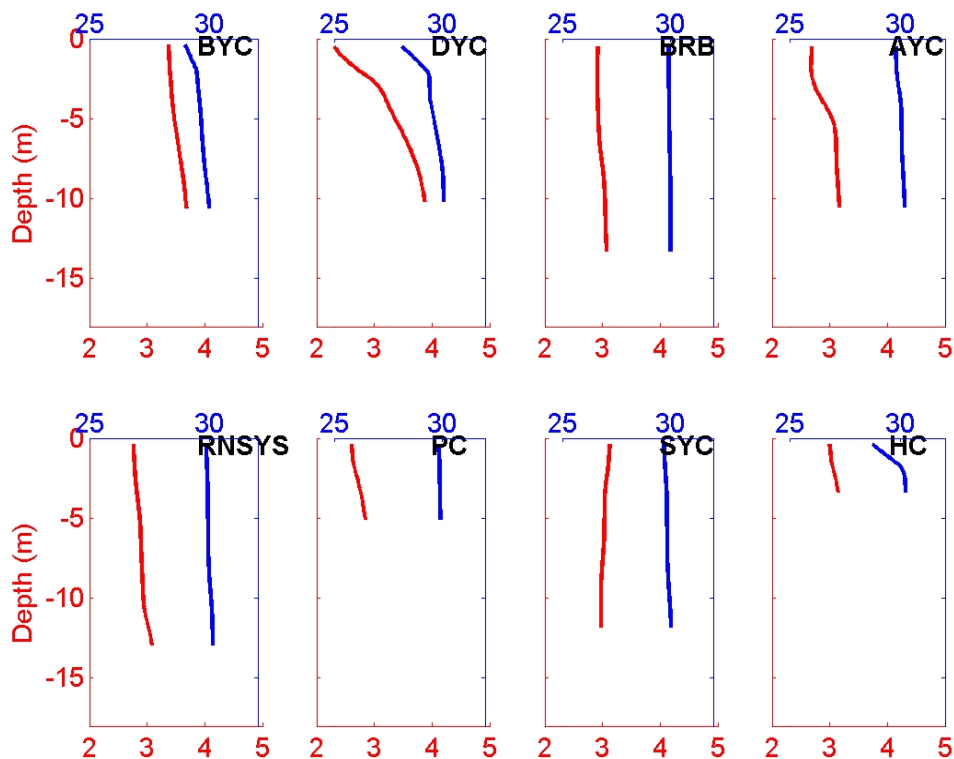
Chlorophyll: The profile maximum fluorescence levels vary only between 1 – 2 mg/m³ throughout the Harbour. This is somewhat lower and more uniform than last week and is near typical winter “background” levels in the Harbour.

Dissolved Oxygen: The dissolved oxygen levels are similar to those of last week. The data indicate that the near surface values in the Basin have dropped slightly, and are just under 8.0 mg/L. The DO in the Basin deep water continues to drop, and is at about 4.5 mg/L. South of the Narrows, the DO profiles are very uniform and everywhere above 8.0 mg/L. The DO gradually increases to 8.5 mg/L in the Outer Harbour (B2). The Basin deep water represents the only values below the applicable use-specific guidelines this week. The DO data is not ground-truthed and absolute values are questionable (see DO discussion in QR#1).



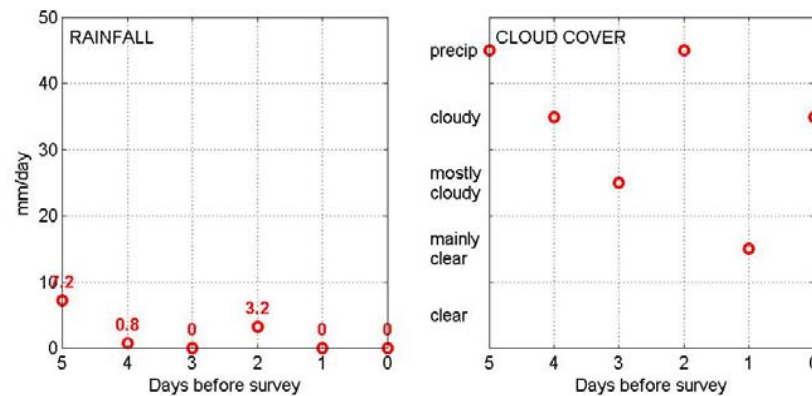
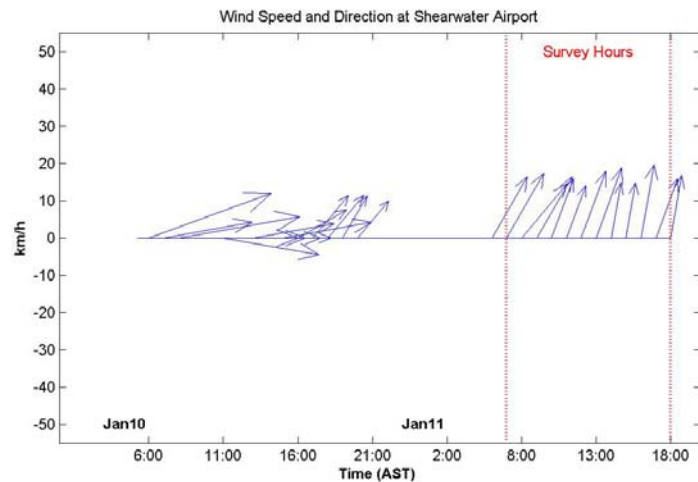
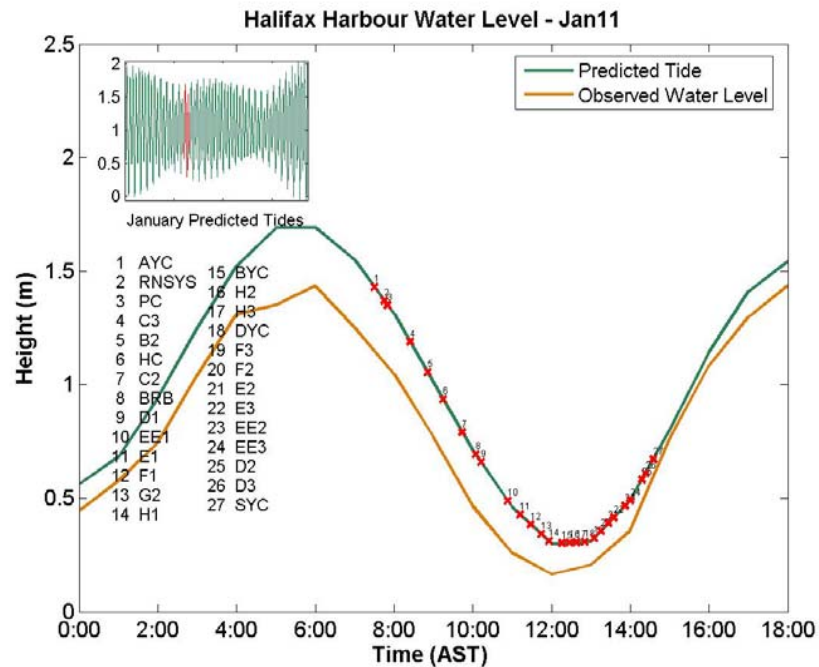
Unless otherwise labeled:
- salinity contour interval is 1 PSU
- temperature contour interval is 1°C.

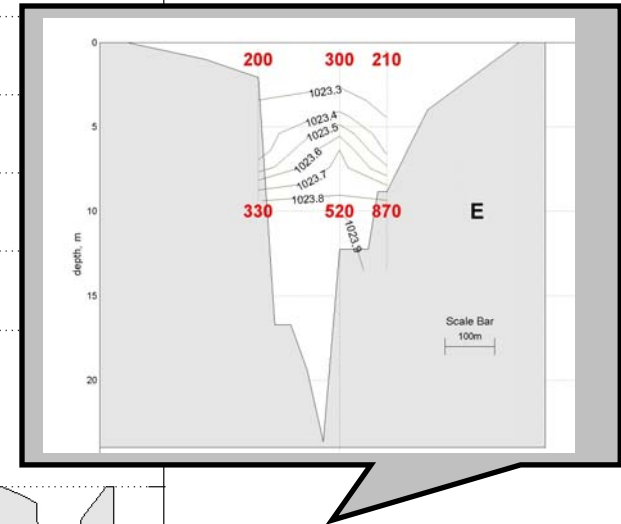
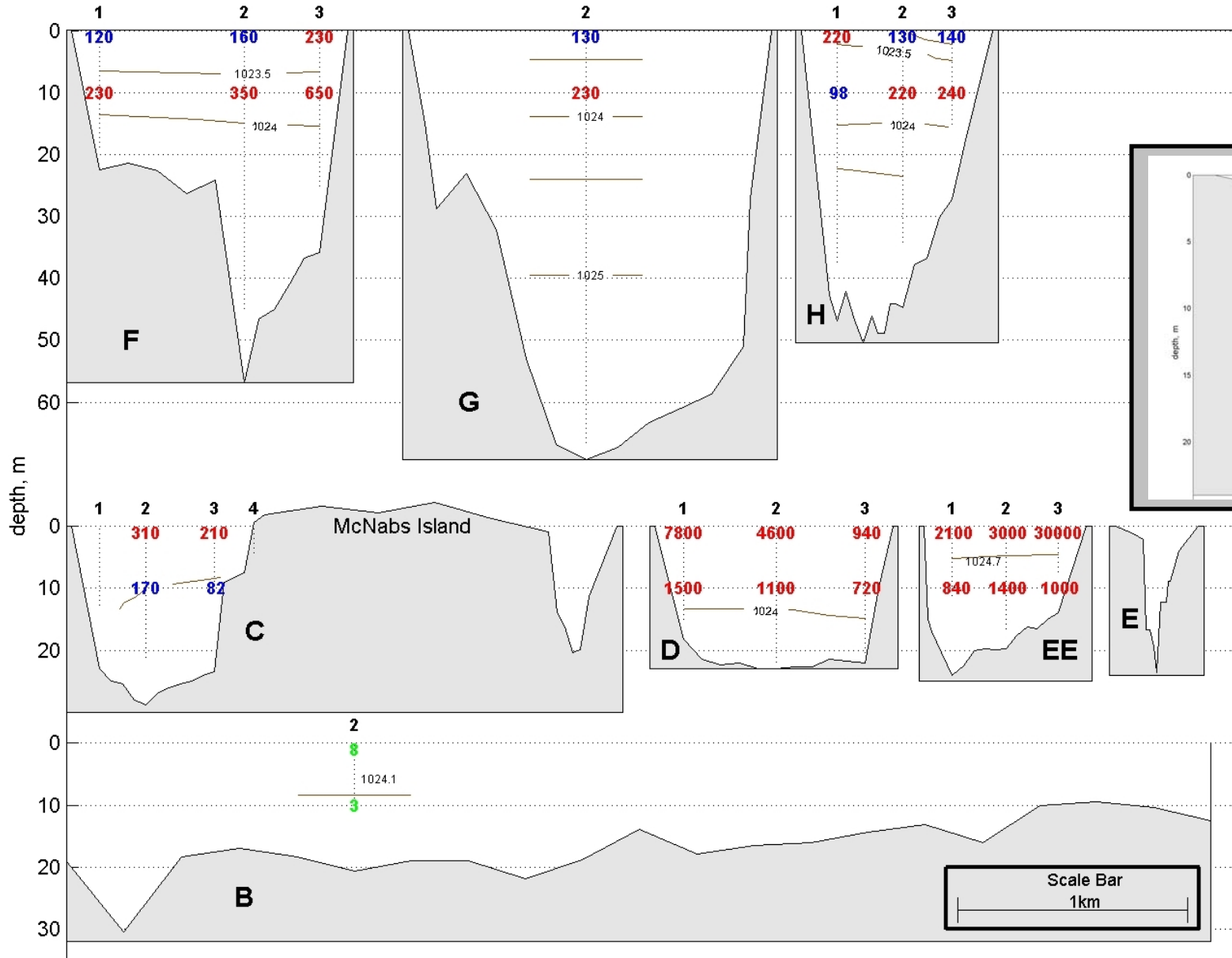
Yacht Clubs



Salinity in PSU Temperature in °C

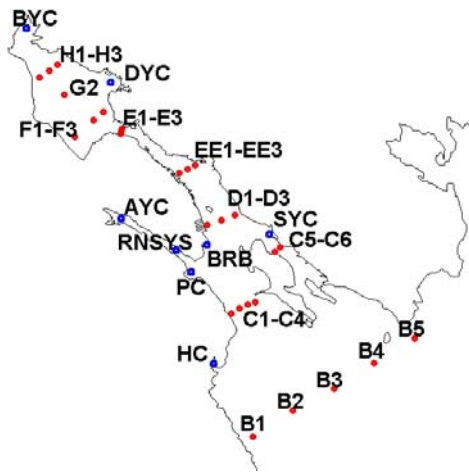
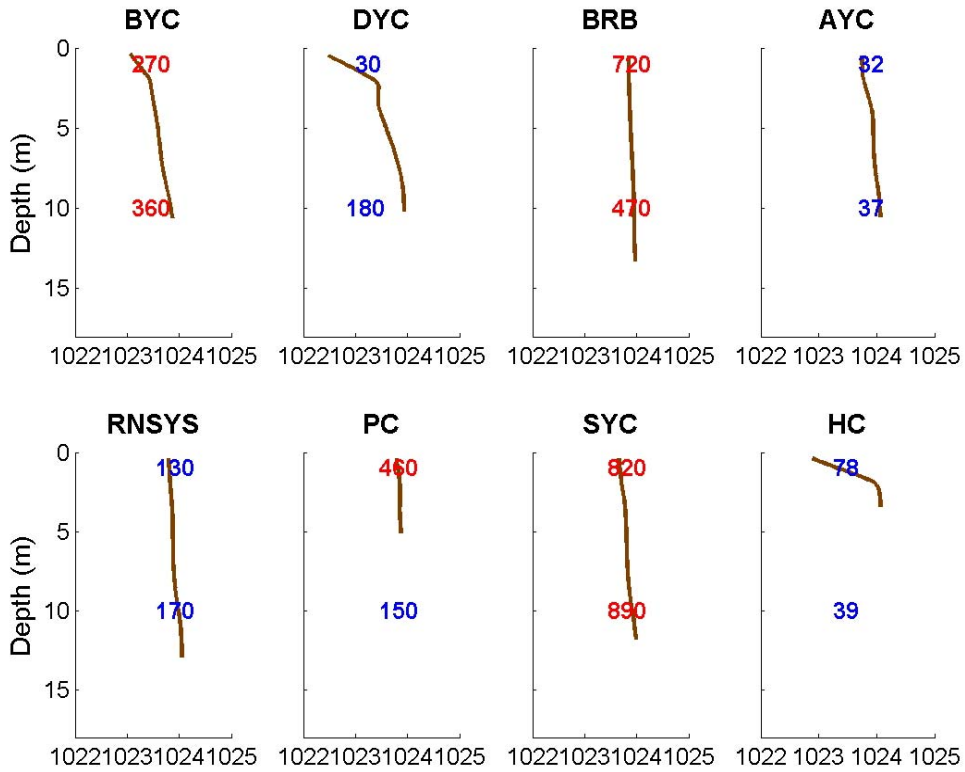
Weather data collected at the Shearwater Airport





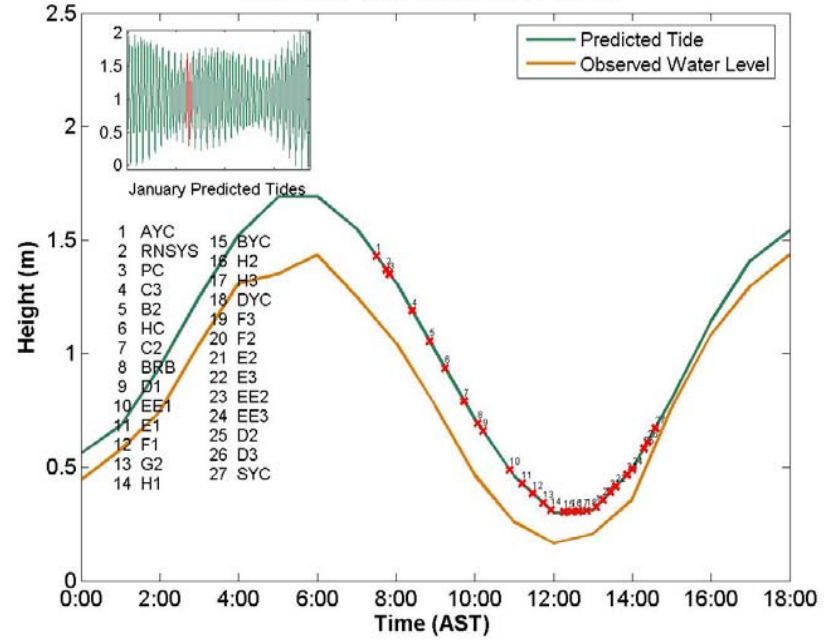
Unless otherwise labeled:
 - **density** contour interval is 0.5 kg/m³

Yacht Clubs

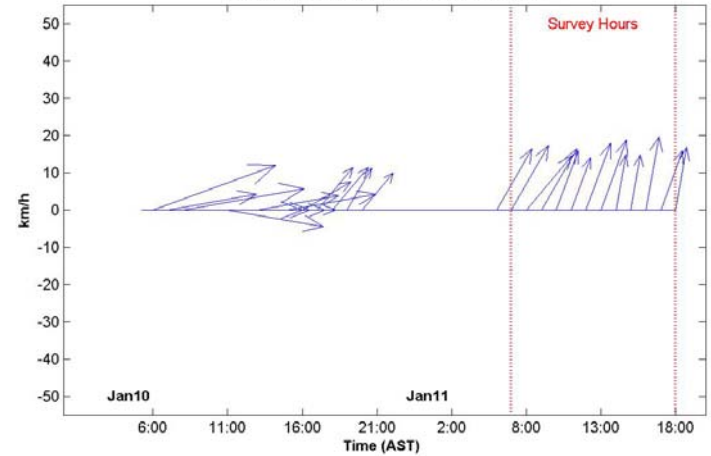


Weather data collected at the Shearwater Airport

Halifax Harbour Water Level - Jan11

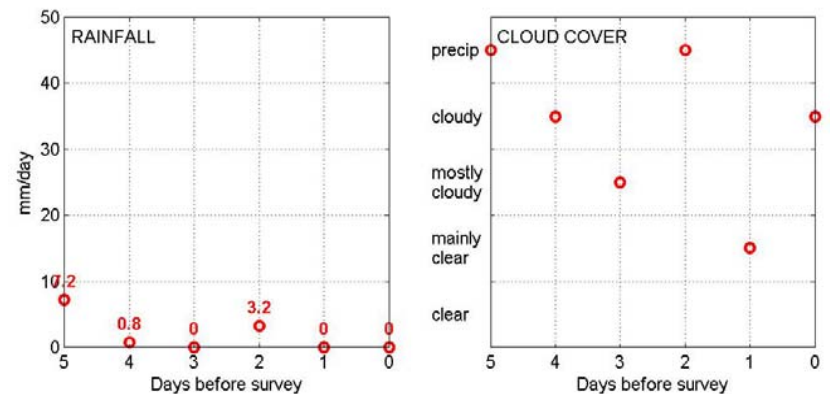


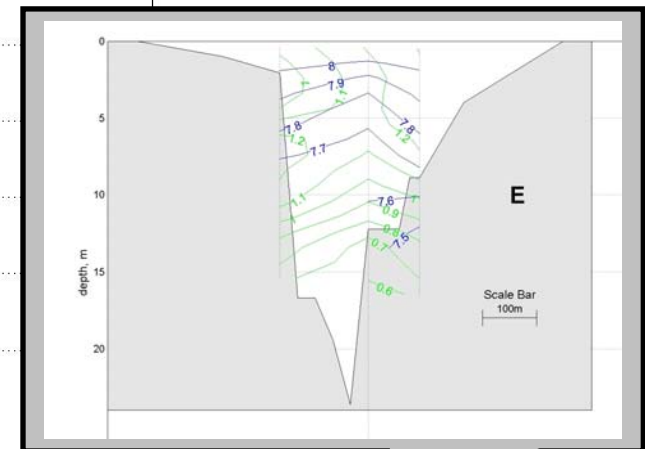
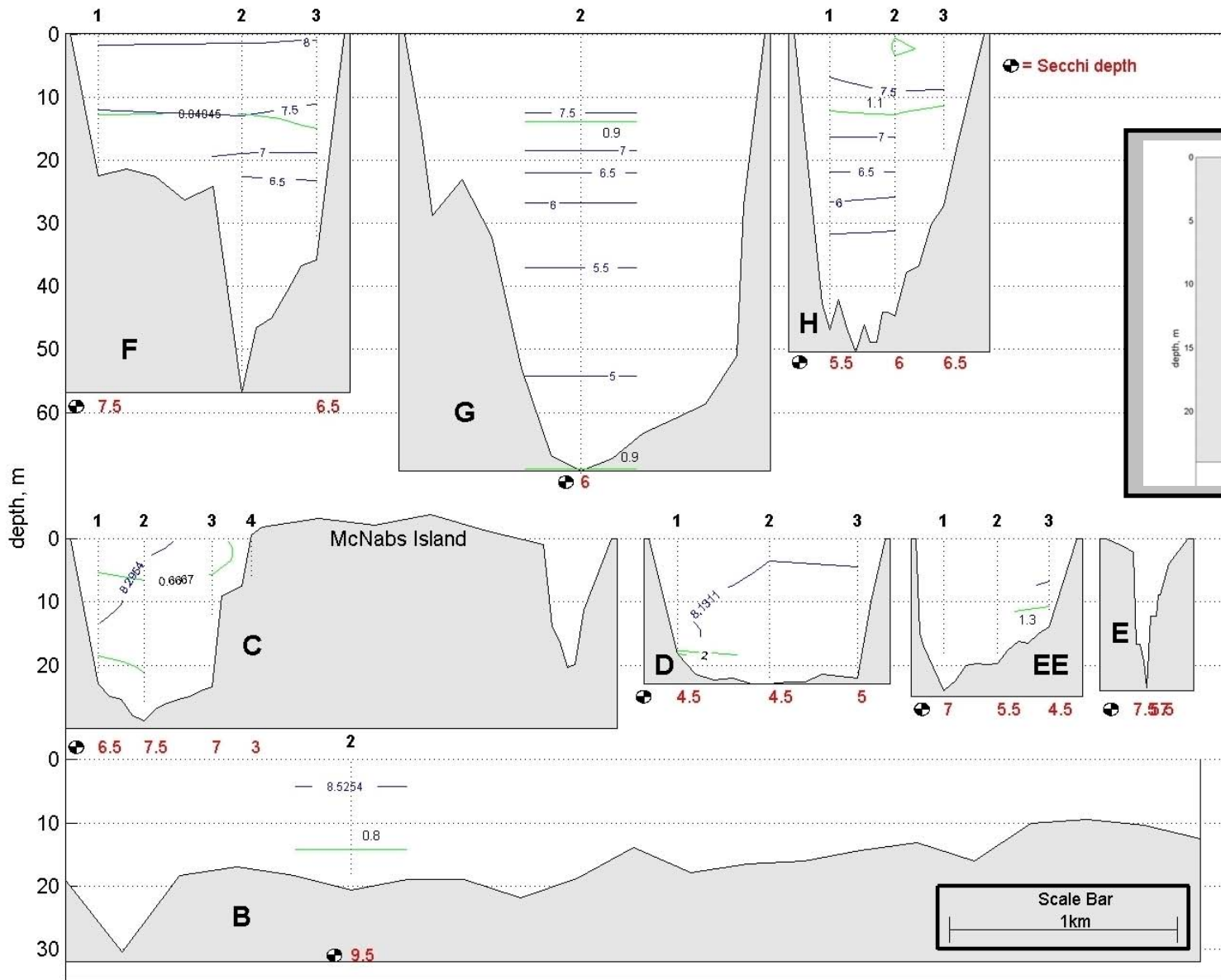
Wind Speed and Direction at Shearwater Airport



Potential Density in kg/m^3

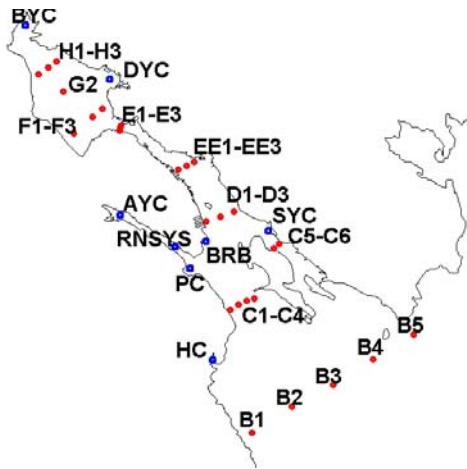
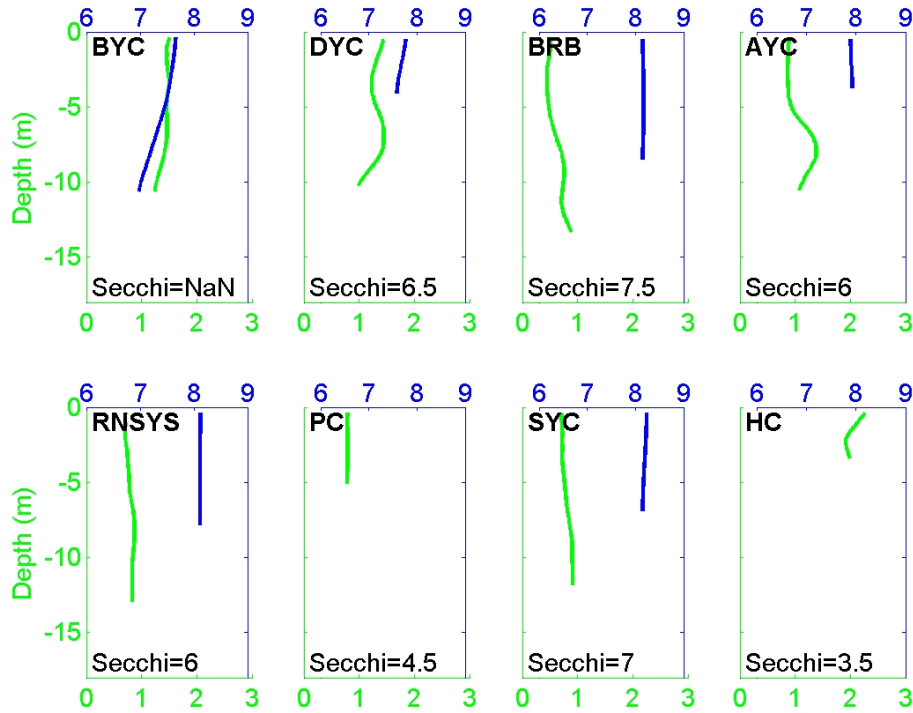
Fecal coliform: above swimming limit (200 cfu/100mL)
 above shellfish limit (14 cfu/100mL)
 below limits





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

Yacht Clubs

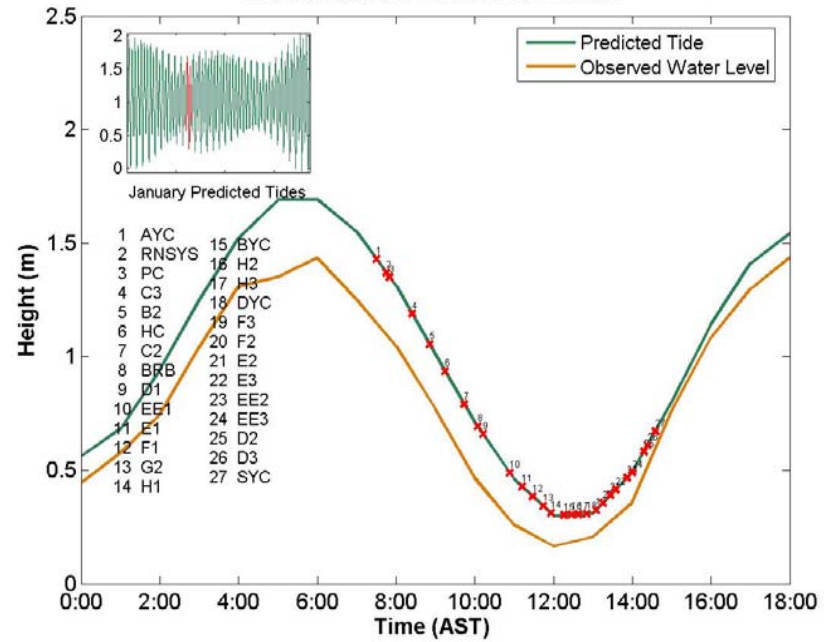


Weather data collected at the Shearwater Airport

DO in mg/L

Chlorophyll in mg/m³

Halifax Harbour Water Level - Jan11



Wind Speed and Direction at Shearwater Airport

