

Halifax Harbour Water Quality Monitoring Project

Weekly Summary #80

Survey Date: 28 December 2005
Nature of Survey: Coliform Survey
Report File (this document): HHWQMP_report080_051228.doc
Data File: HHWQMP_data080_051228.xls

Data Return:
 Profile: 94%
 Bacteria: 93%
 Chemical: na
Overall: 93%

Sample Notes:

B2 and HC were not sampled due to weather.

The depths of the QA/QC samples were not recorded

Fecal Coliform QA/QC (CFU/100ml)

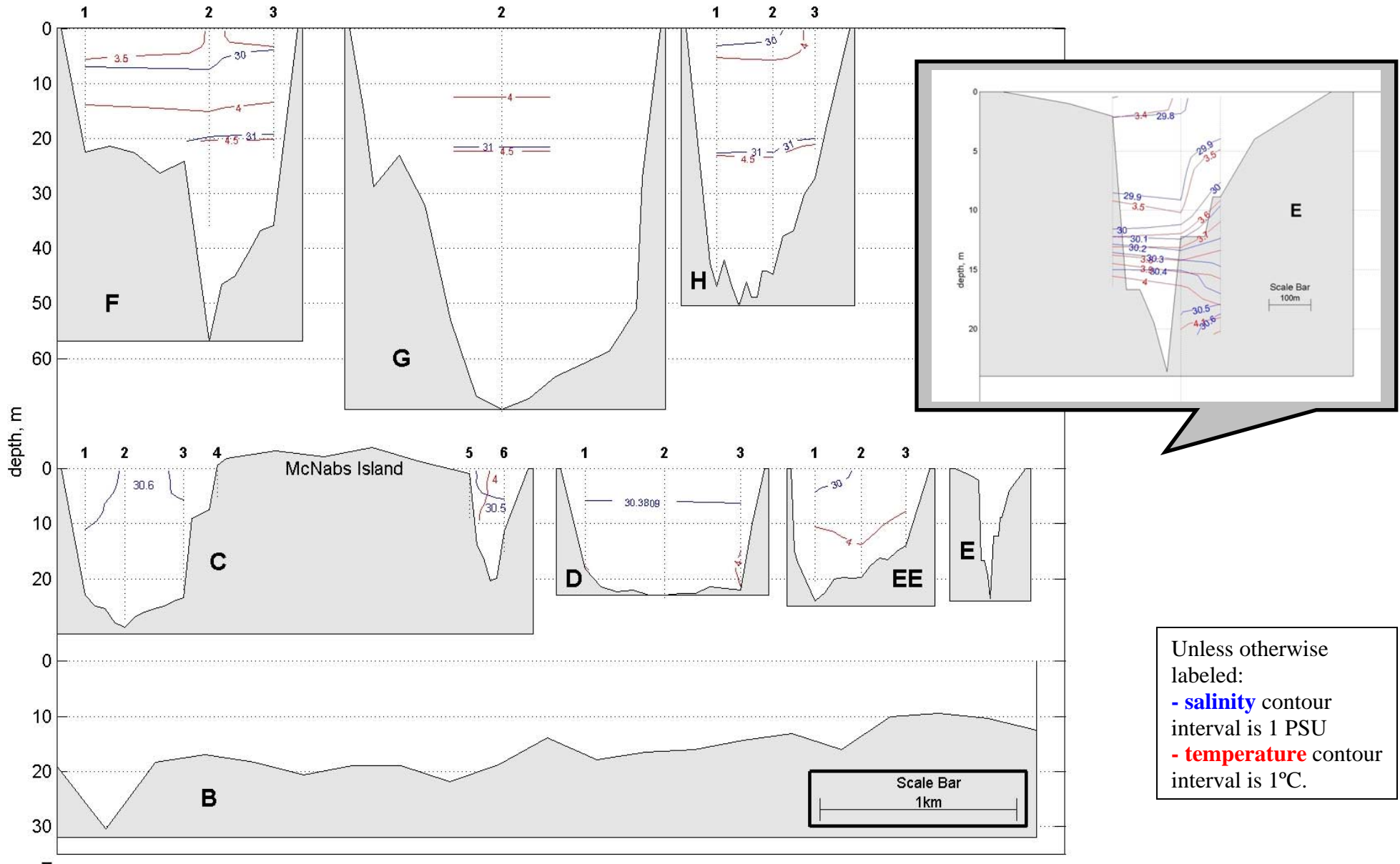
Site	C2	BRB	DYC	SYC
Reference				
QA/QC	290	130	69	86

Comments:

General: The water temperature is quite uniform at around 4.0°C, which is, on average, slightly lower than last week. The temperature distribution is more vertically uniform, with the water only slightly cooler at the surface and a top to bottom difference of less than 1°C (only slightly greater in the Basin). There has been 26 mm of precipitation two days before the survey but there is very little fresh water signal evident anywhere except very near points of freshwater input in the Bays in Bedford Basin (BYC and DYC) and the NW Arm (RNSYS), and to a lesser degree in the Narrows and southern Basin. Elsewhere, the water is quite well mixed. Fecal coliform levels are quite high in the 1m samples in the inner harbour, but more moderate elsewhere. The highest values are associated with water with a density of 1023.7 -1024.0 kg/m³. This is the same density as the surface water with the highest values in the southern Basin. Water of this low density does not exist in the centre of the Basin (G2) this seems to imply a density induced surface flow in both directions from the Narrows. The up-harbour flow is in spite of a moderate but still significant down-harbour wind. The lower density water recurs in the northern Basin due to the influence of the Sackville River.

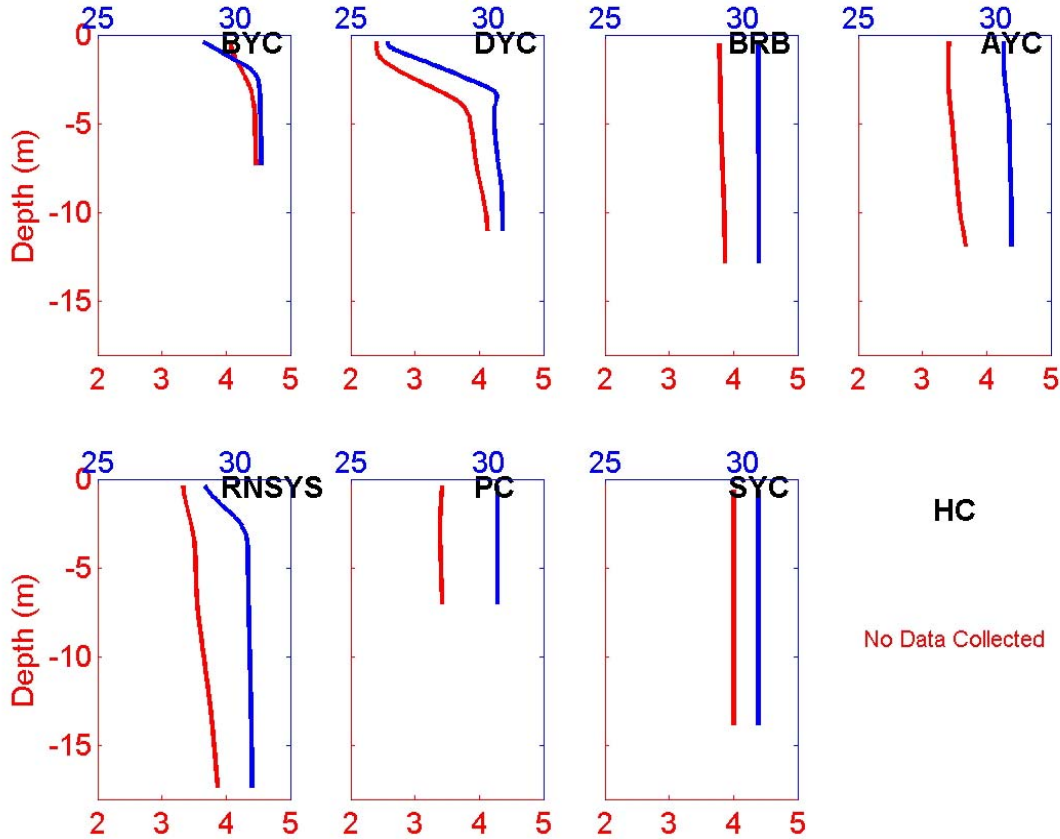
Chlorophyll: The fluorescence values are very uniform, with values near 2 mg/m³ which are on average about half of last week's values. The higher values of last week, evident at the head of the Basin, have disappeared.

Dissolved Oxygen: The dissolved oxygen values have increased slightly almost everywhere since last week. The exception is the deeper waters of the Basin, where the DO has dropped slightly to about 5.0 mg/L. This 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).



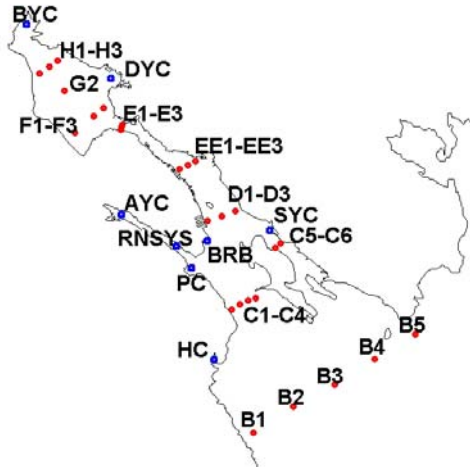
Unless otherwise labeled:
 - salinity contour interval is 1 PSU
 - temperature contour interval is 1°C.

Yacht Clubs



HC

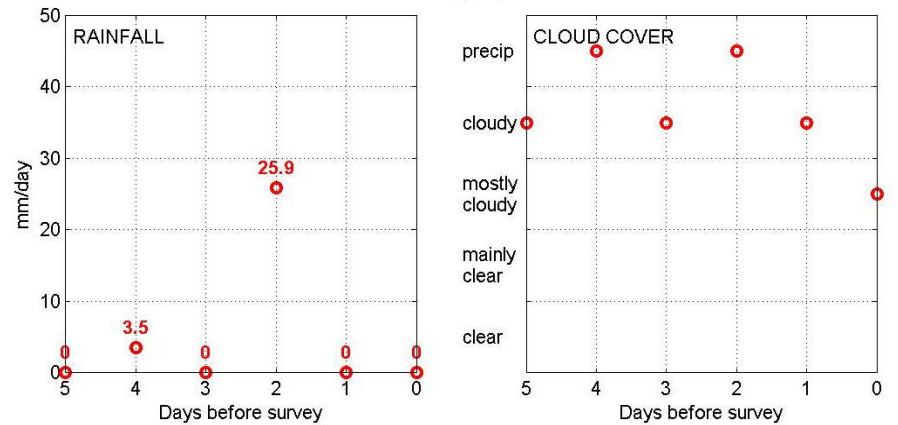
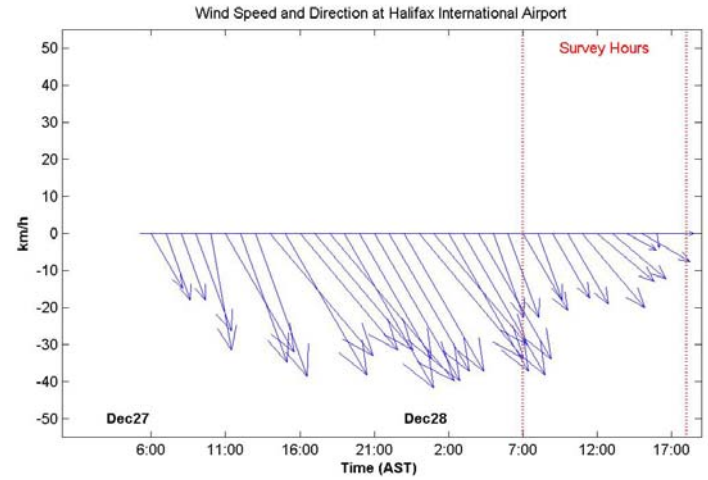
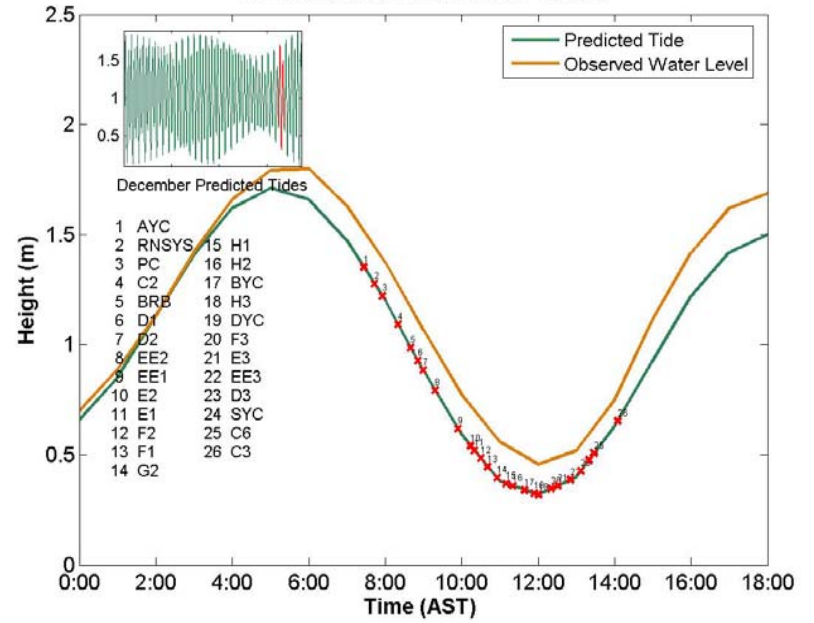
No Data Collected

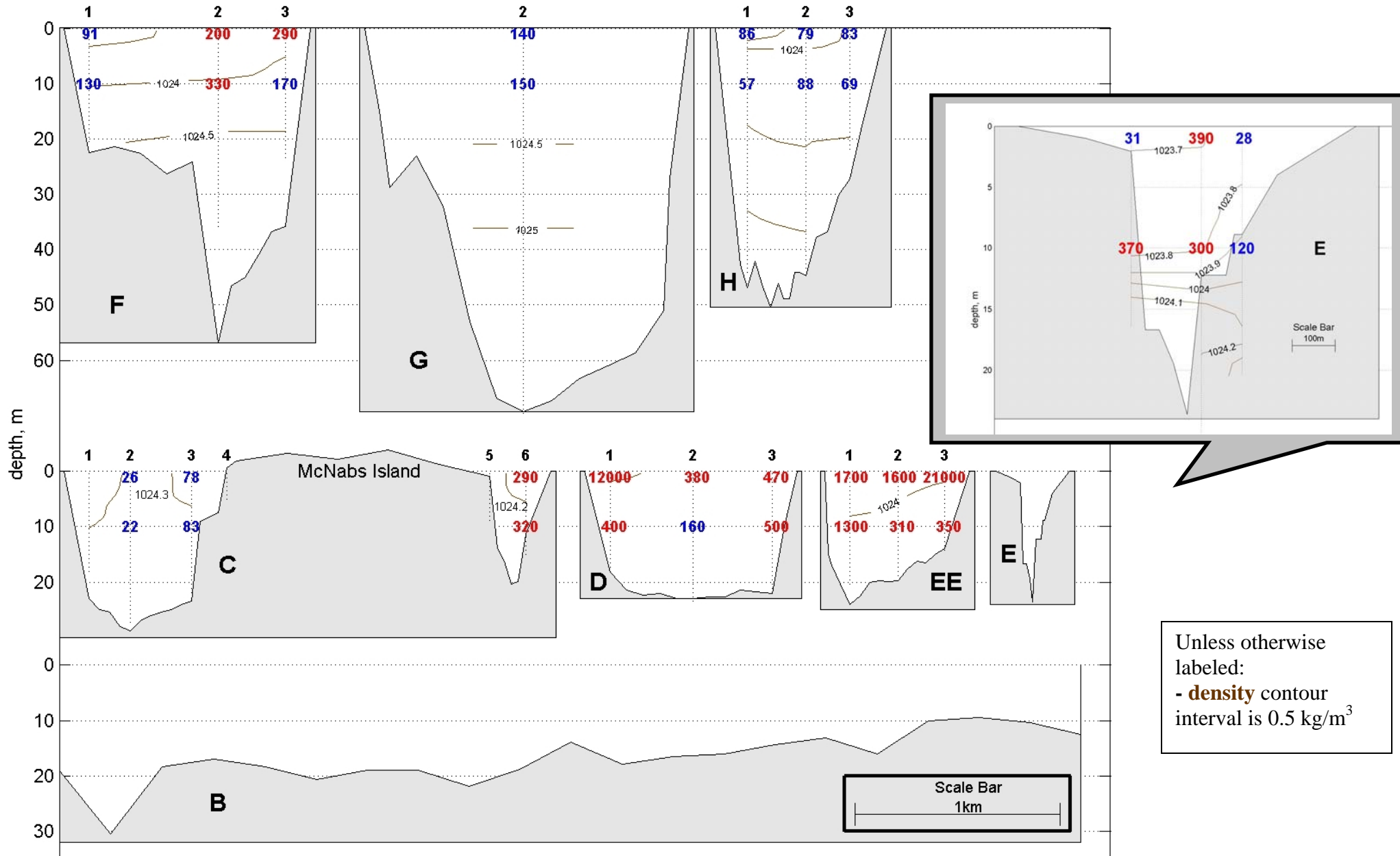


Salinity in PSU Temperature in °C

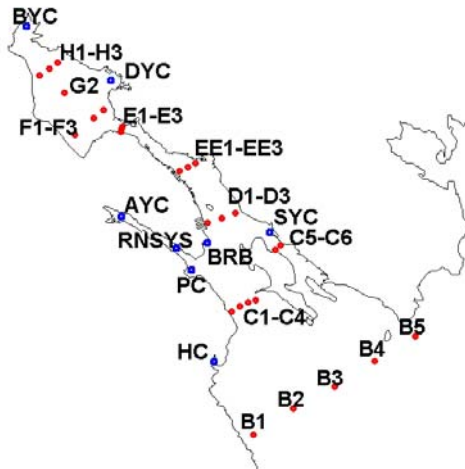
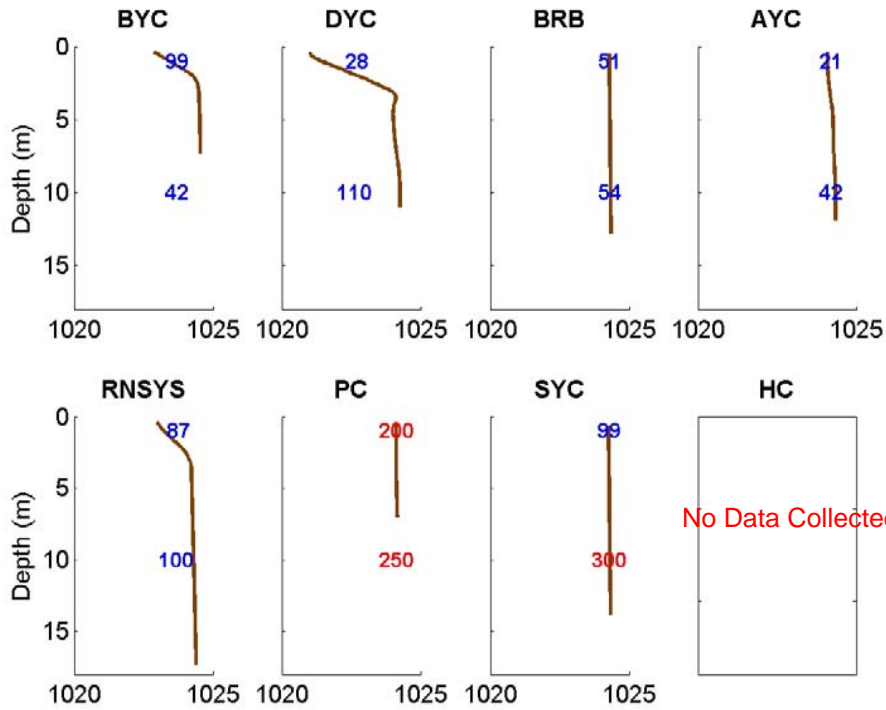
Weather data collected at the Halifax International Airport

Halifax Harbour Water Level - Dec28





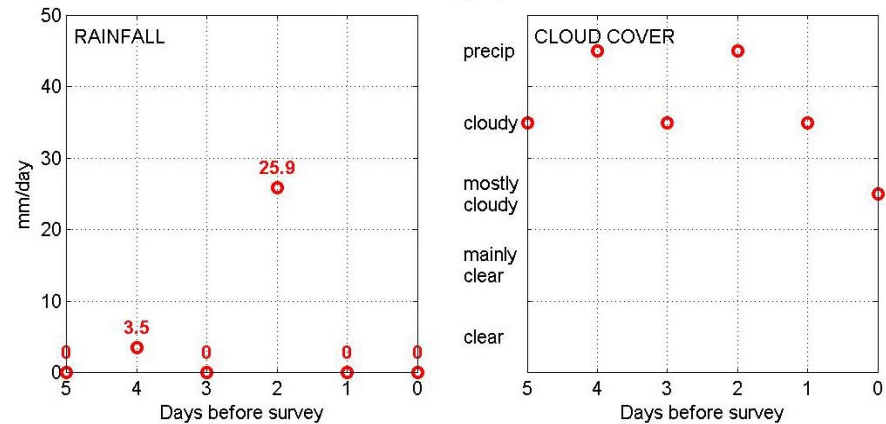
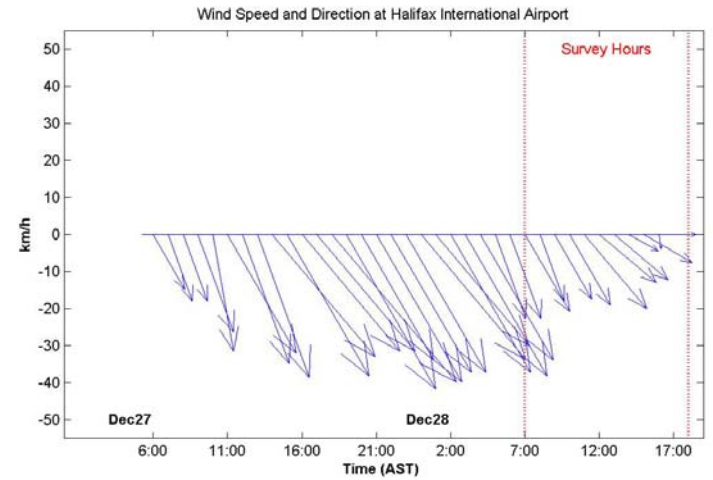
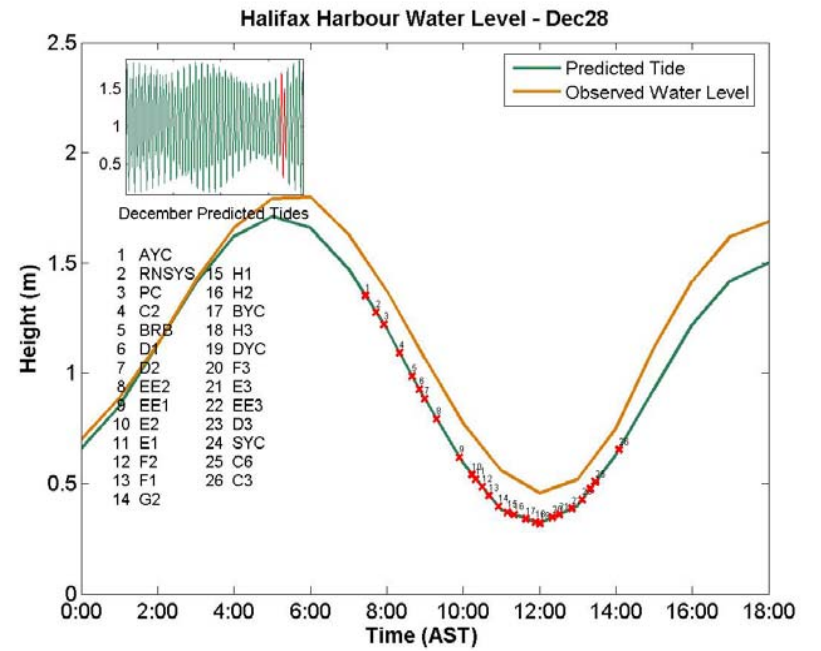
Yacht Clubs

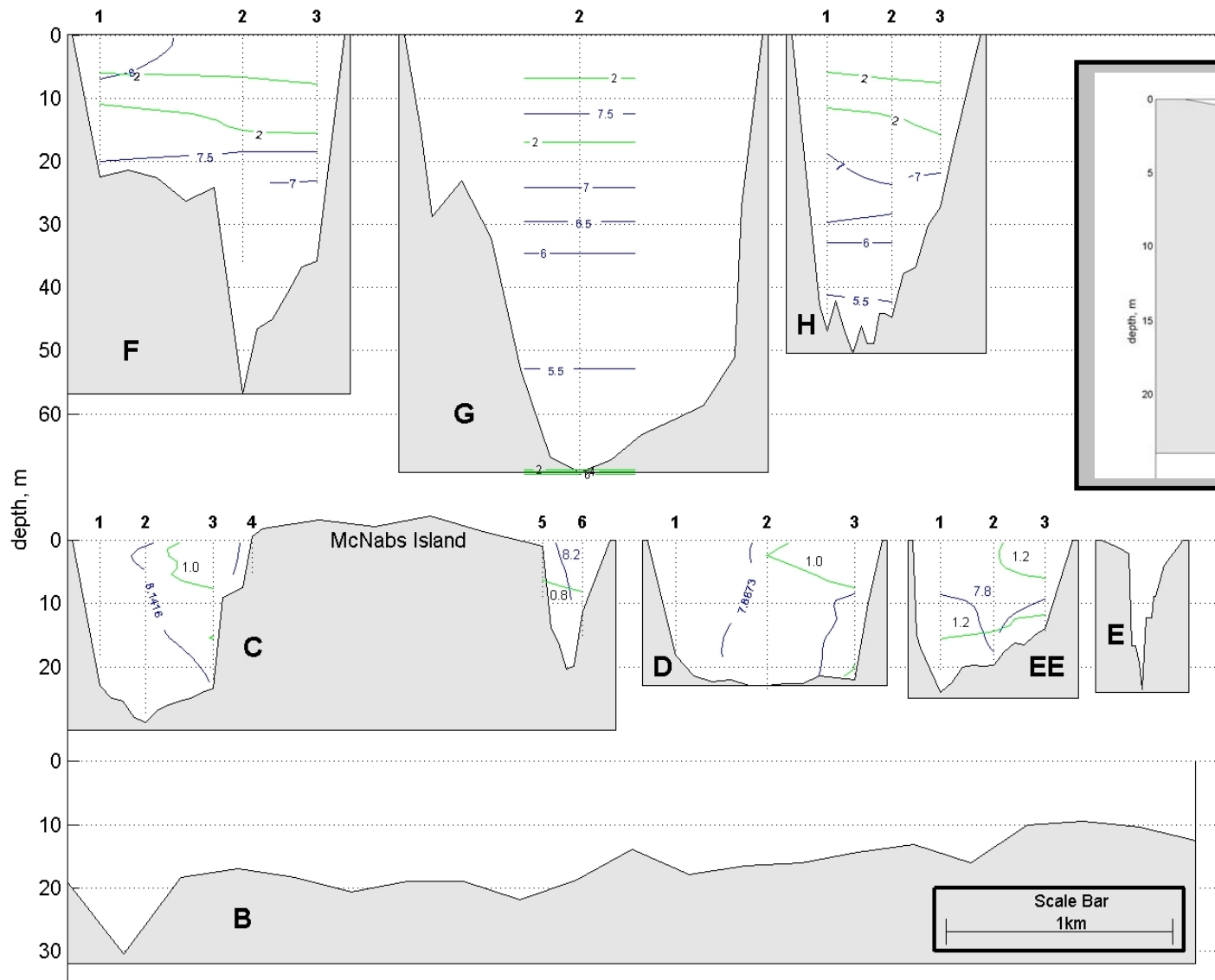


Weather data collected at the Halifax International Airport

Potential Density in kg/m^3

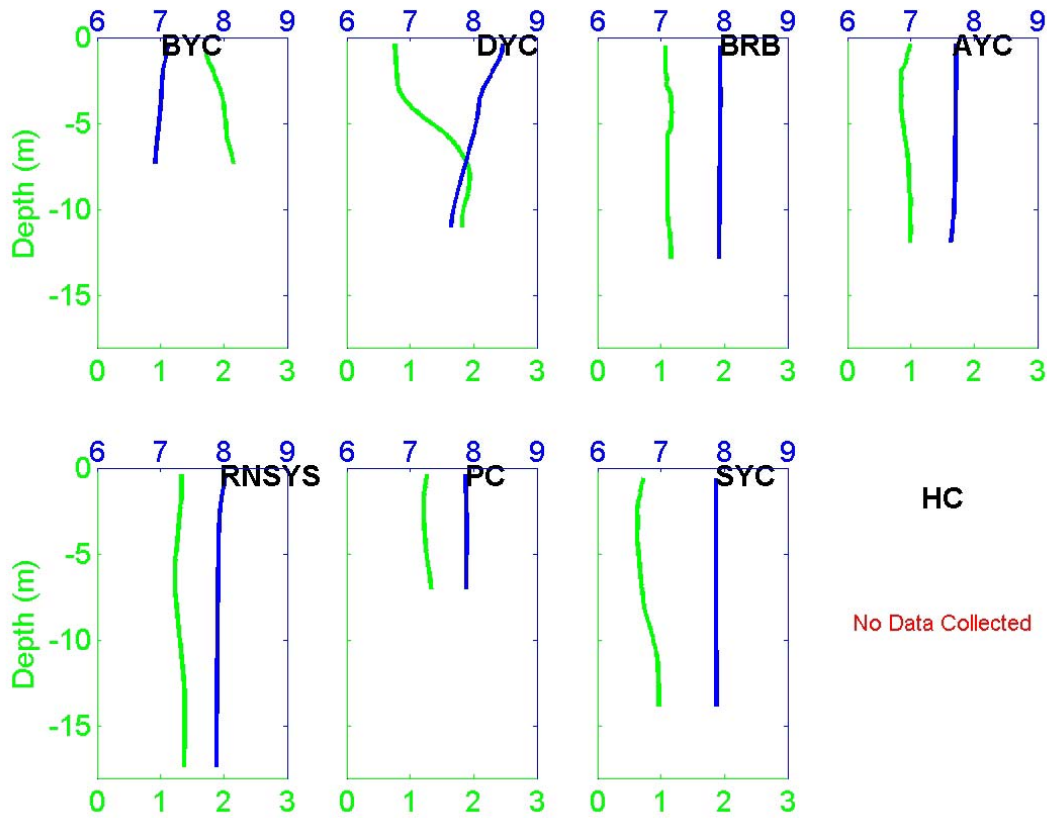
Fecal coliform: above swimming limit (200 cfu/100mL)
 above shellfish limit (14 cfu/100mL)
 below limits





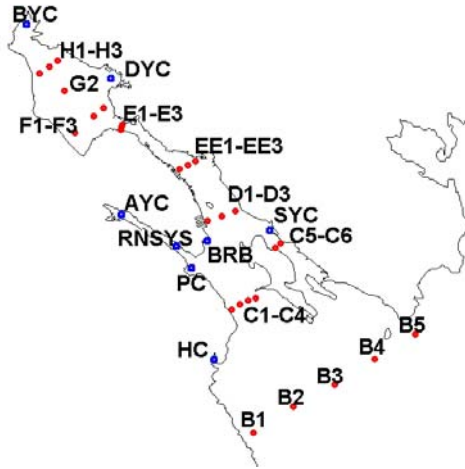
Unless otherwise labeled:
 - **dissolved oxygen** contour interval is 1 mg/L
 - **chlorophyll** contour interval is 2 mg/m³.

Yacht Clubs



HC

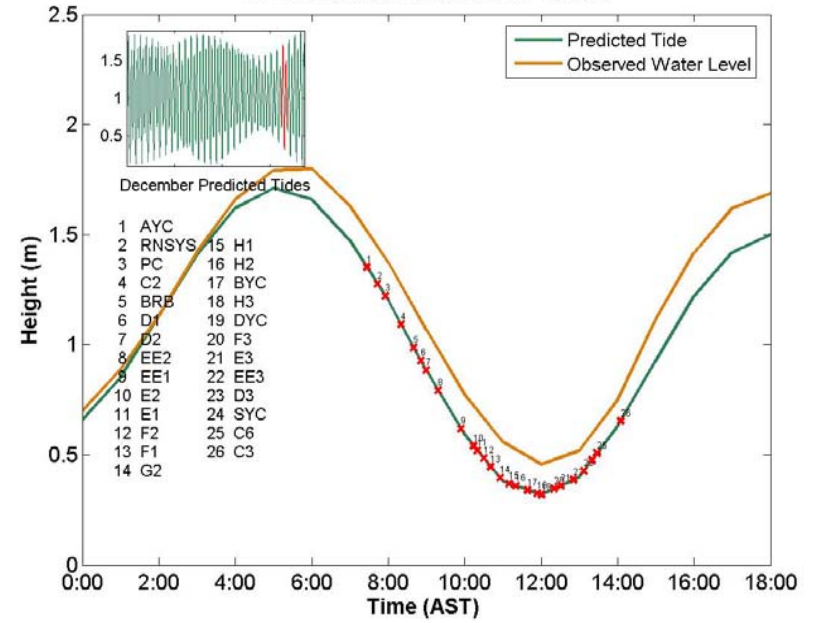
No Data Collected



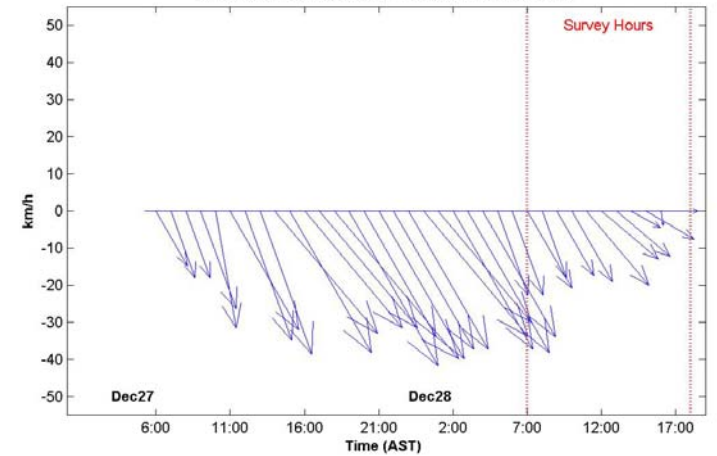
DO in mg/L

Chlorophyll in mg/m³

Halifax Harbour Water Level - Dec28



Wind Speed and Direction at Halifax International Airport



Weather data collected at the Halifax International Airport

