Halifax Harbour Water Quality Monitoring Project
Weekly Summary #85

Survey Date: 31 January 2006
Nature of Survey: Complete Survey
Report File (this document): HHWQMP_report085_060131.doc
Data File: HHWQMP_data085_060131.xls

Data Return:

Profile:	97%
Bacteria:	96%
Chemical:	86%
Overall:	**94%**

Sample Notes:

Site B2 was not sampled due to weather.

QA/QC samples:

Chemical Analysis

		D2-10m		
Detectable Parameter	**units**	**reference sample**	**QA/QC**	**Dup**
Ammonia (as N)	mg/L	<0.05	<0.05	
Total Suspended Solids	mg/L	7	9	8

Fecal Coliform (CFU/100ml)

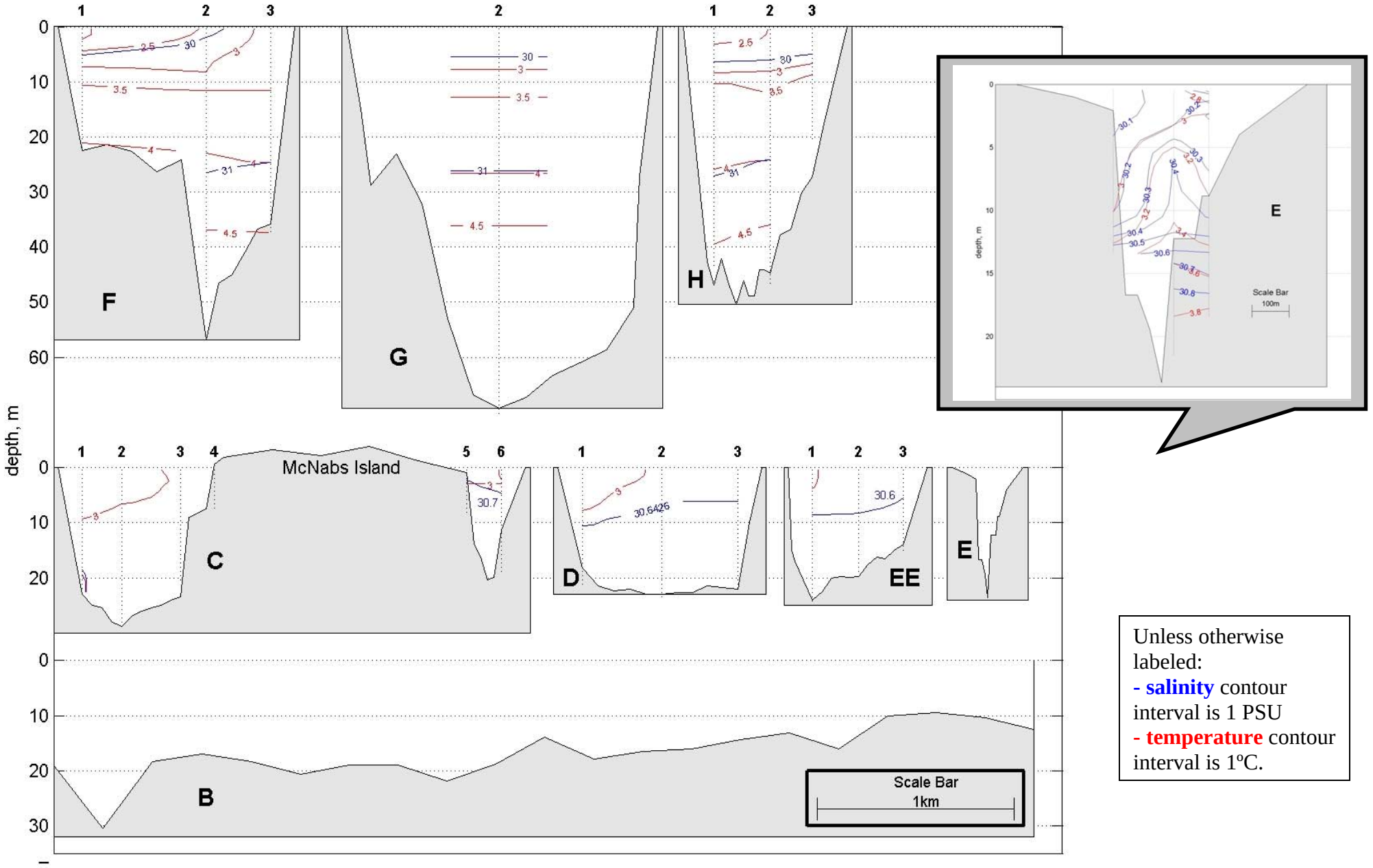
Site	F1-1m	DYC-10m	RNSYS-1m	D2-10m
Reference	11	46	1000	240
QA/QC	2	100	310	99

Comments:

General: The overall salinity is higher and the stratification significantly less than last week. There has been moderate precipitation in the form of snow, in the day before and day of sampling. The temperature has been generally below freezing for the previous week. South of the Narrows the water column is very uniform vertically. The winds are moderate from the North and swing around to the NE during sampling. There is a surge in the water level, of around 20 cm, that seems to be increasing during the sampling period. The fecal coliform values are similar to last week's in magnitude and distribution. If anything, the distribution is perhaps somewhat more vertically uniform. The highest values (32,000 fc/100 mL) at EE3 are because the sample was taken directly in the effluent plume from the Peace Pavillion outfall. Visible detritus is documented in the field notes. This is likely due to the North wind and the falling, almost low tide at the time of sampling. As is typical, there is a hint of estuarine circulation in the southern Basin, with the surface FC values being lower than the 10m samples.

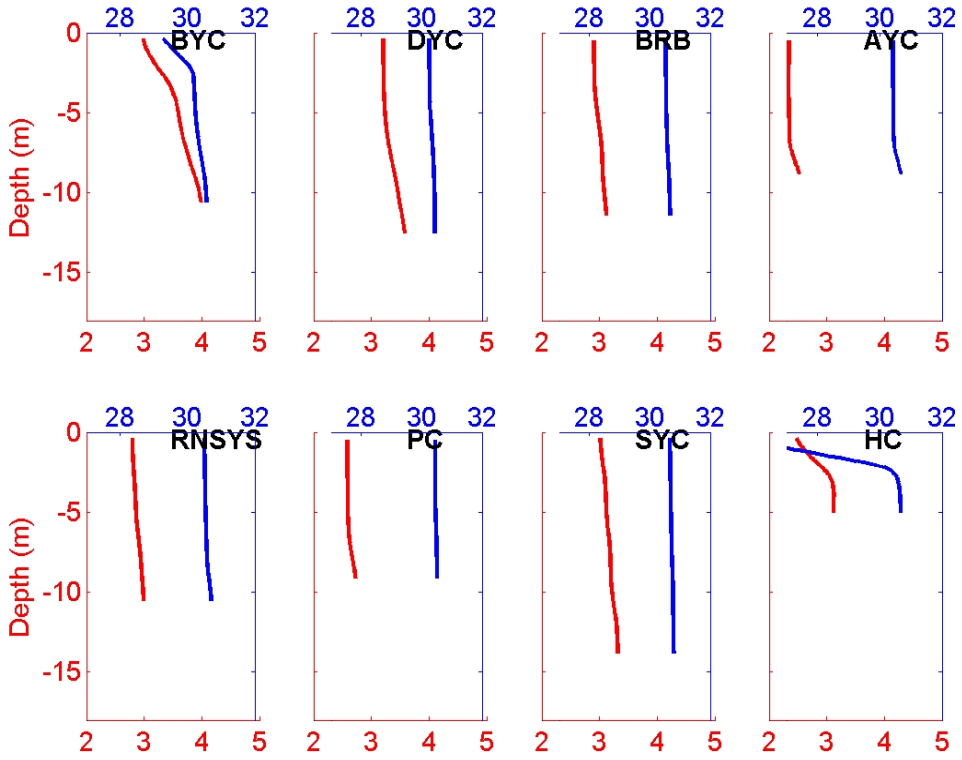
Chlorophyll: The chlorophyll levels are slightly higher than last week, but remain low with profile maximum fluorescence levels between 1 – 3 mg/m^3 throughout the Harbour. The values are near typical winter "background" levels in the Harbour**.** **S**echhi disk depths of 6-9 m corroborate this, indicating quite clear water throughout the Harbour

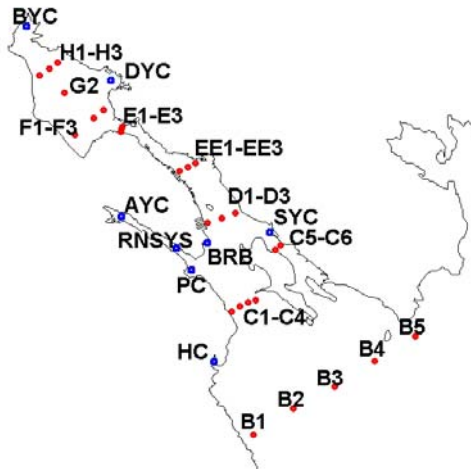
Dissolved Oxygen: The dissolved oxygen levels are similar to those of last week. The data indicate that the surface values in the Basin are somewhat greater than 8.0 mg/L. The deep water continues to drop, and is at about 4.0 mg/L. South of the Narrows, the DO profiles are very uniform and are everywhere between approximately 8.0 and 8.3 mg/L. 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 1ºC.

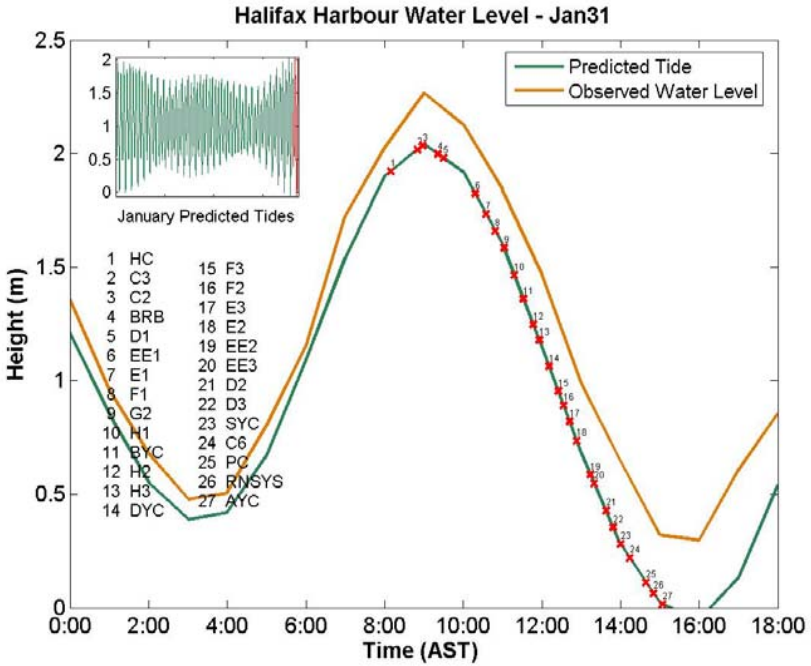
Yacht Clubs

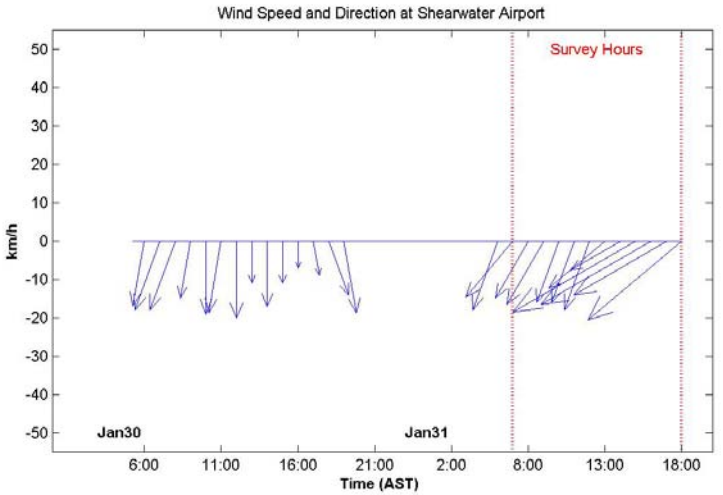


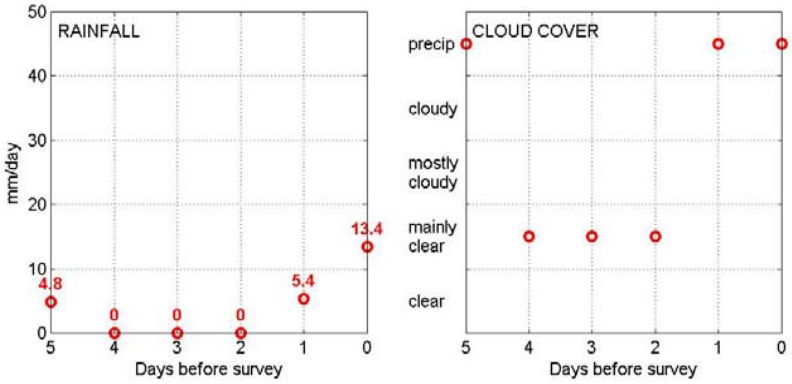


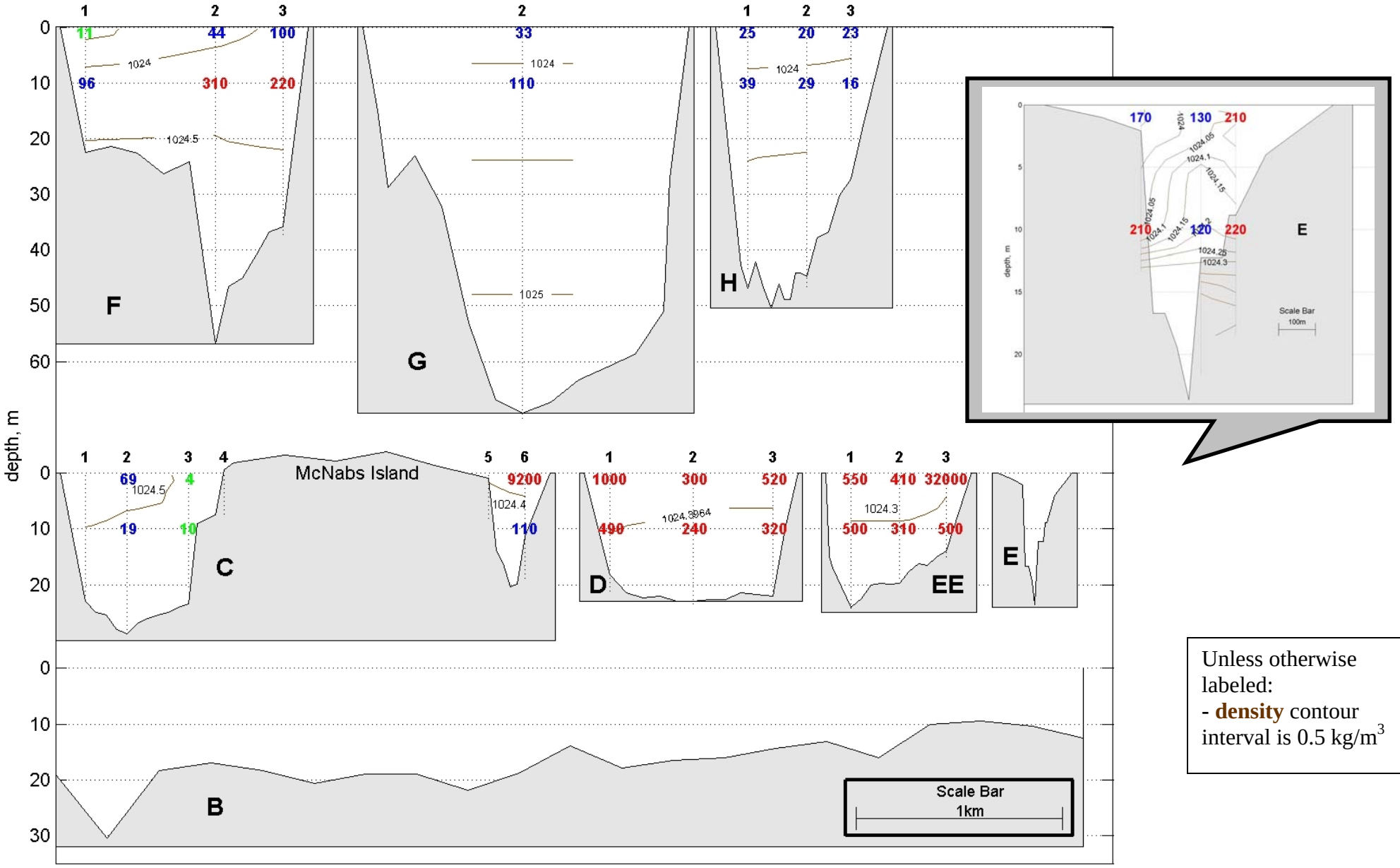
Salinity in PSU **Temperature in ^{o}C**

Weather data collected at the Shearwater Airport



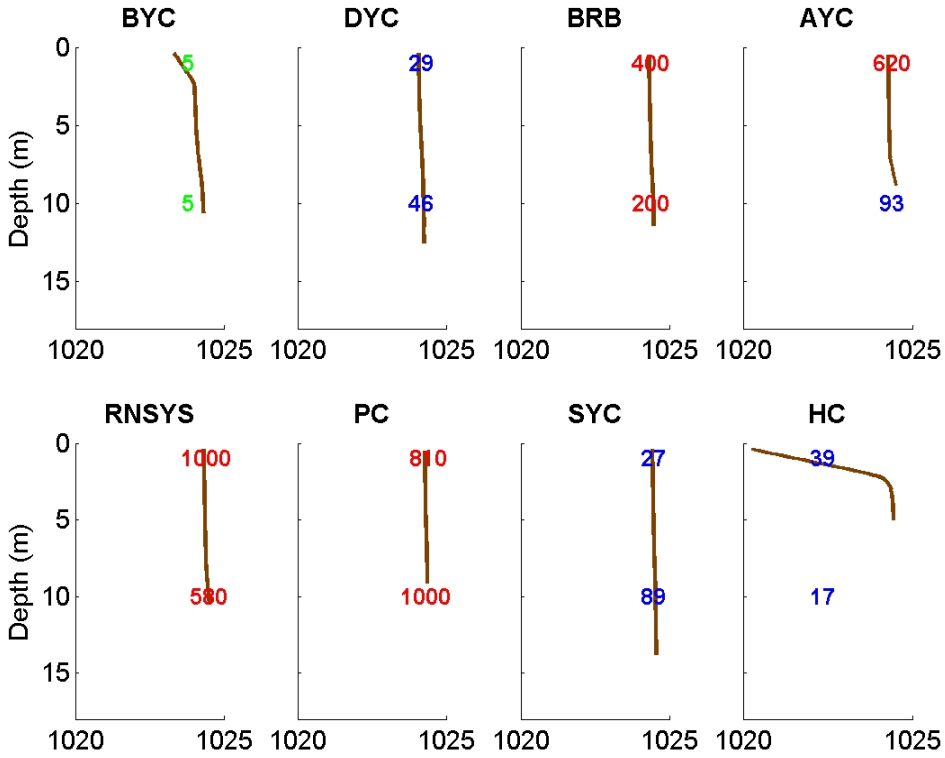


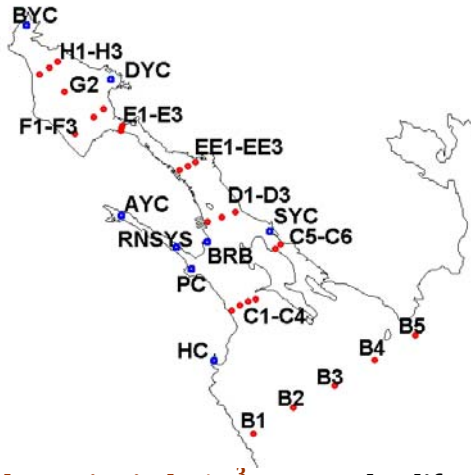




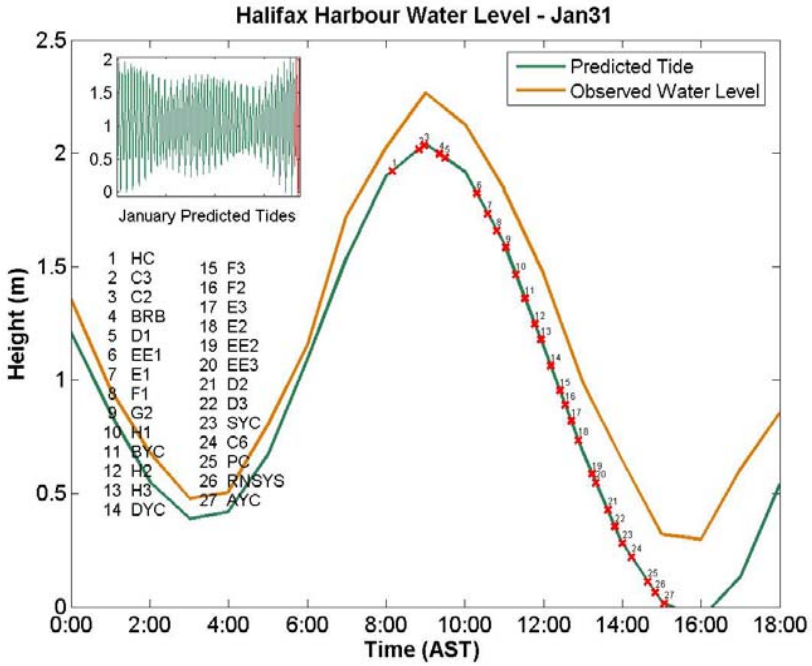
Unless otherwise labeled:
- **density** contour interval is 0.5 kg/m^3

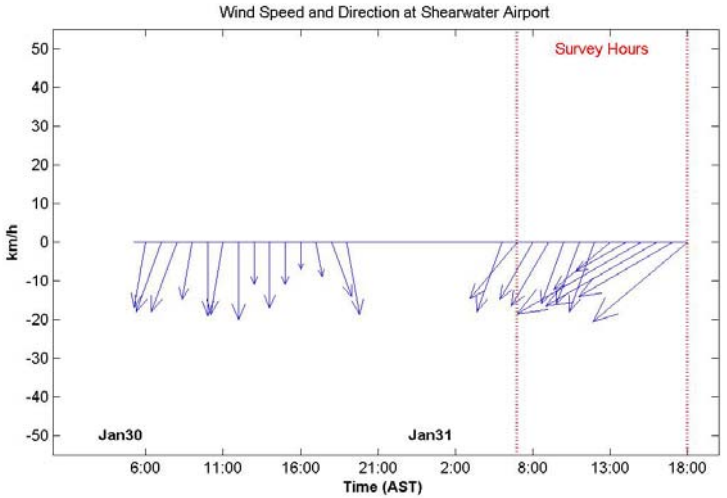
Yacht Clubs

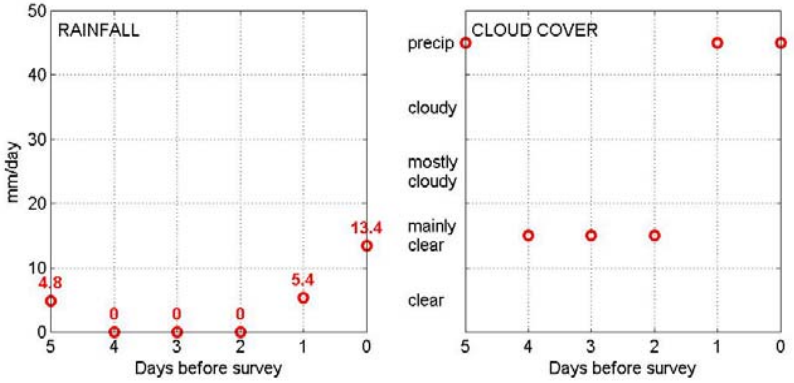




Weather data collected at the Shearwater Airport

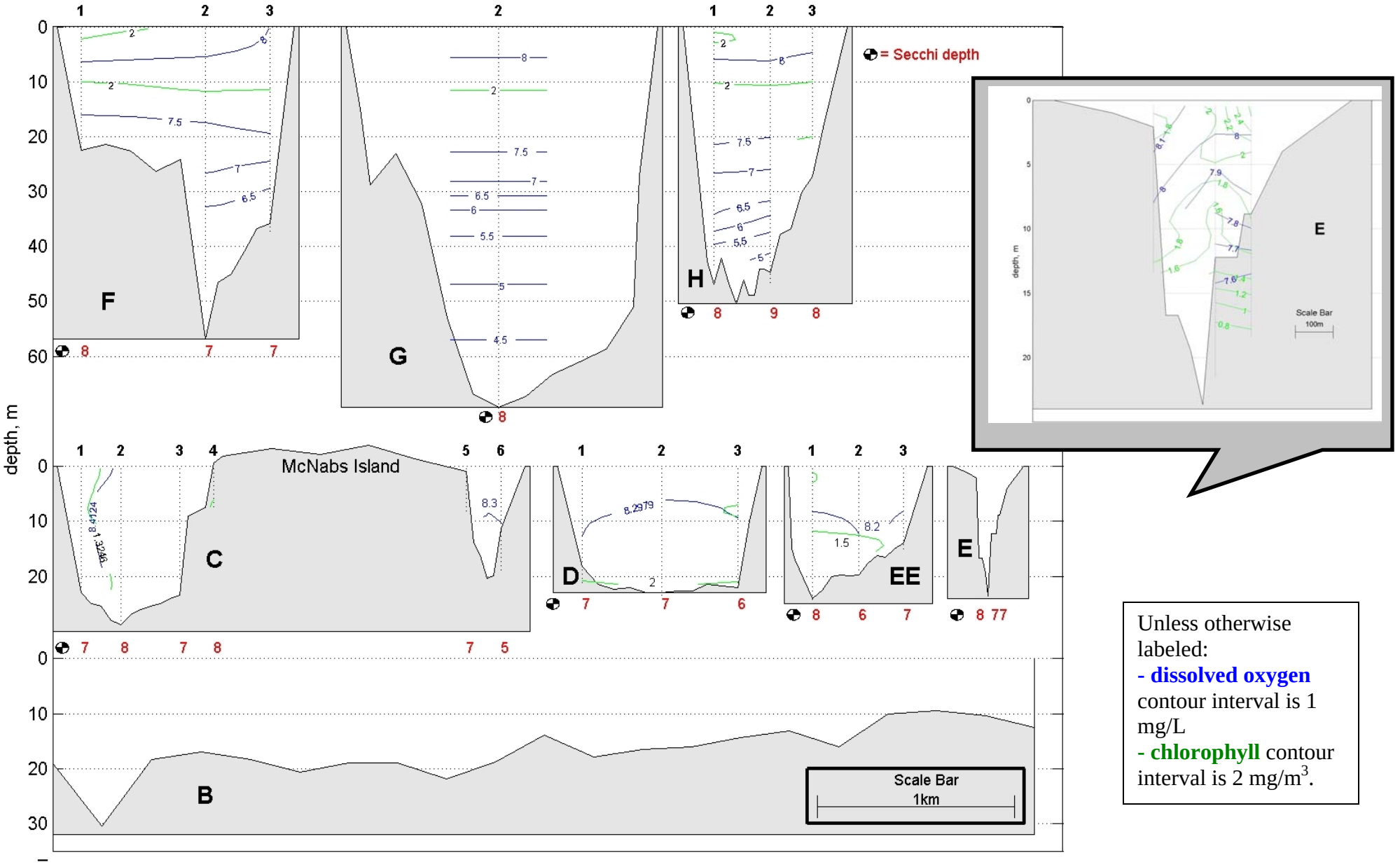






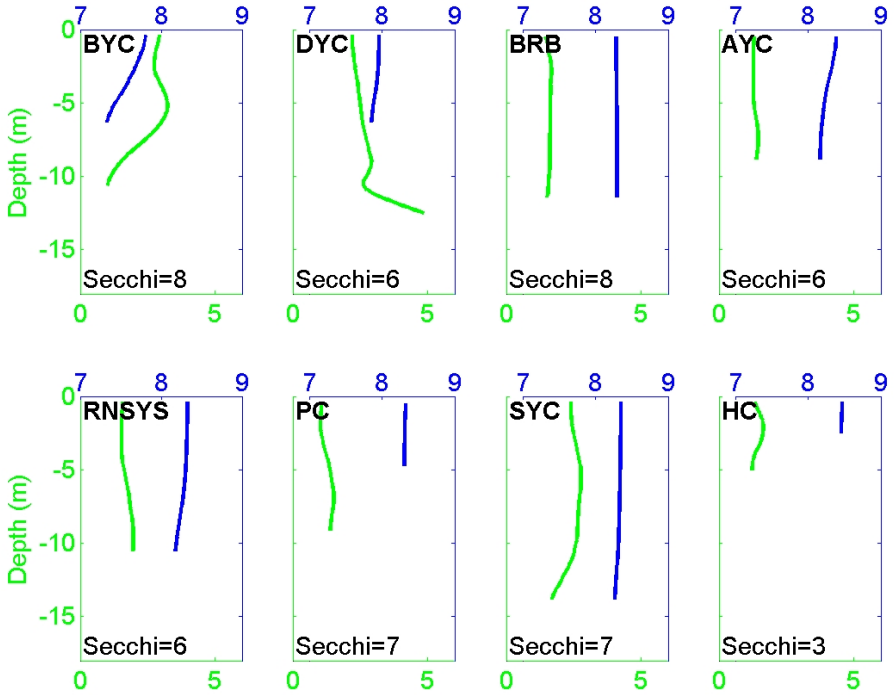
Potential Density in kg/m^3

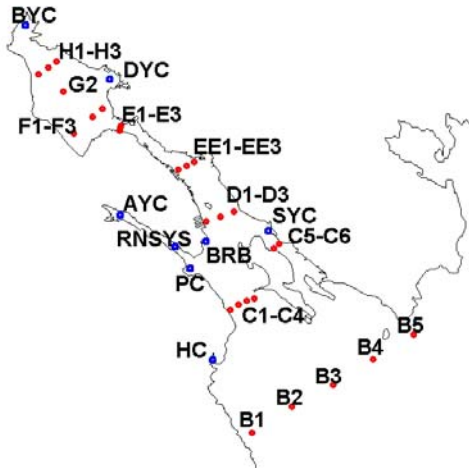
Fecal coliform: above swimming limit (200 cfu/100mL)
above shellfish limit (14 cfu/100mL)
below limits



Unless otherwise labeled:
- **dissolved oxygen** contour interval is 1 mg/L
- **chlorophyll** contour interval is 2 mg/m^3.

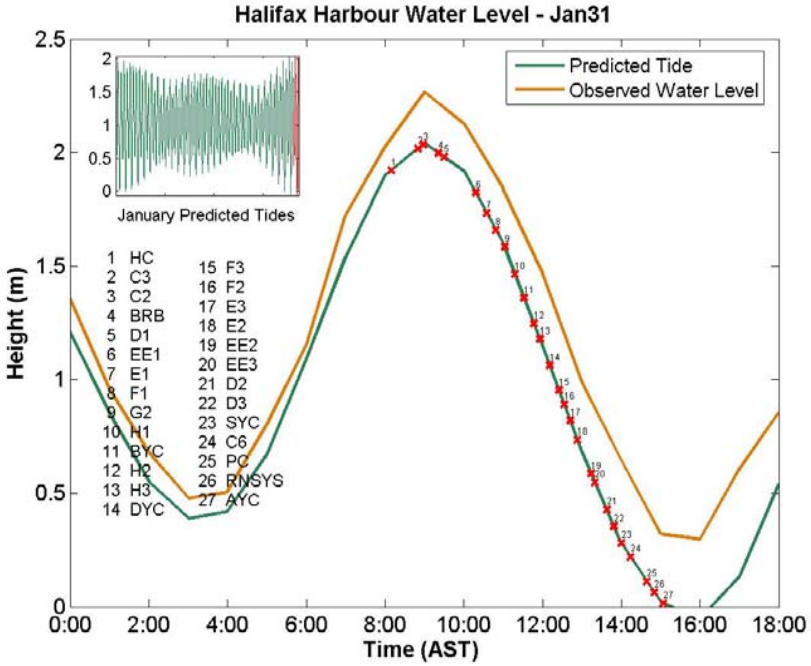
Yacht Clubs

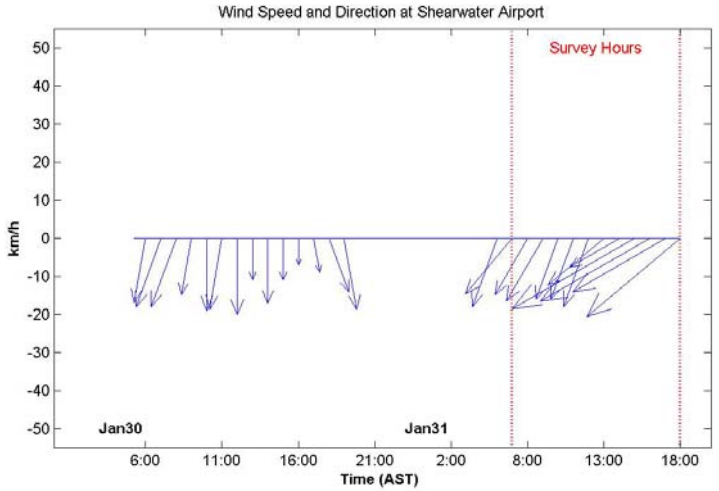


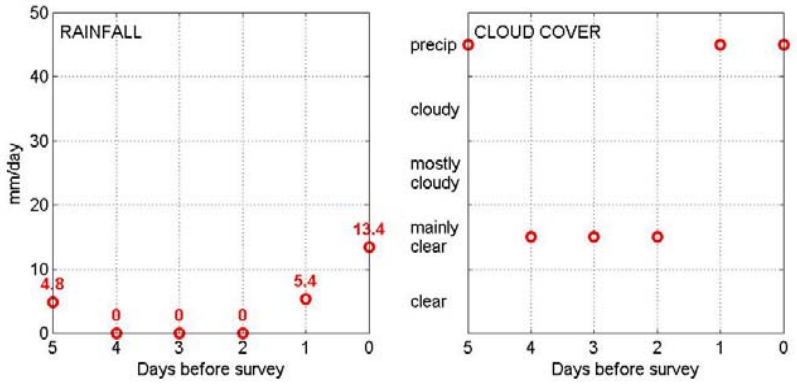


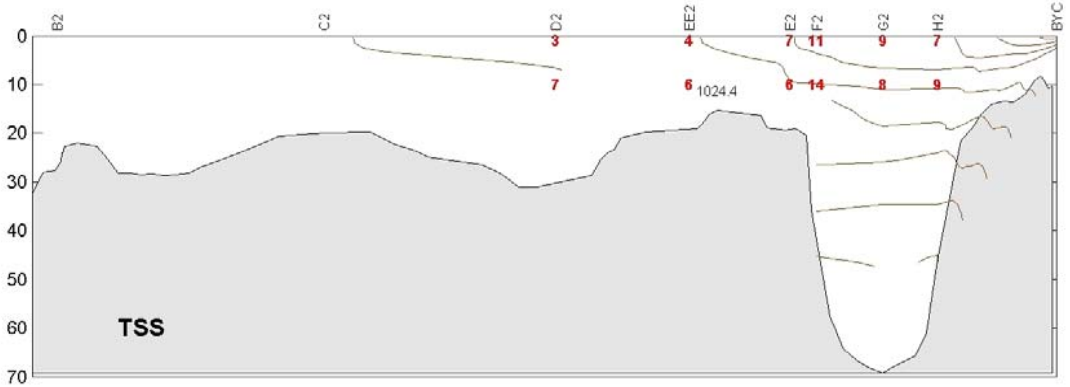
Weather data collected at the Shearwater Airport

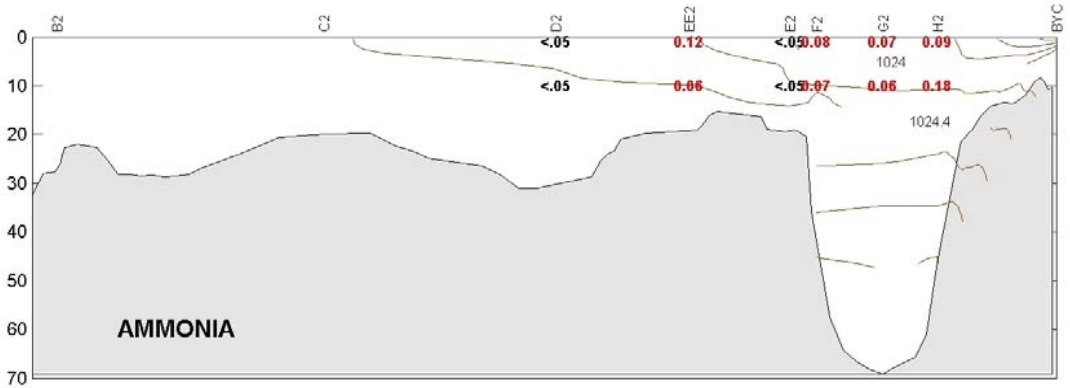
DO in mg/L **Chlorophyll in mg/m^3**

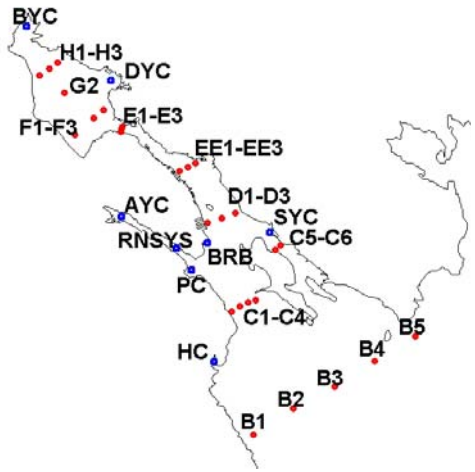












Weather data collected at the Shearwater Airport

Potential Density in kg/m^3 **Ammonia in mg/L** **TSS in mg/L**