

**Real Time Water Quality Monthly Report  
 Aur Resources Inc.  
 February 2007 - March 2007**

**General**

- The Water Resources Management Division staff monitors the real-time web page on a daily basis.
- Aur Resources Inc. will be informed of any significant water quality events in the form of a monthly report.

**Maintenance and Calibration of Instrumentation**

- The instrument at Gills Pond Brook was removed on February 19<sup>th</sup>, 2007 for cleaning and calibration and then reinstalled on February 21<sup>st</sup>. The results from comparing the QA/QC datasonde values to the station datasonde values during removal can be seen in **Table 1**. Due to a transmission problem no data was recorded at Gill’s Pond Brook from February 21 through March 21, therefore no reinstallation QA/QC comparison could be made.
- The instrument at East Pond Brook was removed on February 19<sup>th</sup>, 2007 for cleaning and calibration and then reinstalled on February 21<sup>st</sup>. The results from comparing the QA/QC datasonde values to the station datasonde values during removal and reinstallation on February 19<sup>th</sup>/21<sup>st</sup> can be seen in **Table 1**.

**Table 1: QA/QC Data Comparison Rankings upon removal/reinstallation on Feb. 19<sup>th</sup>/Feb. 21<sup>st</sup>**

Station	Date	Action	QA/QC Datasonde vs. Installed Datasonde Comparison Ranking			
			Temperature	pH	Conductivity	Dissolved Oxygen
Tributary to Gills Pond Brook	February 19 <sup>th</sup> , 2007	Removal	Good	Good	Fair	Excellent
East Pond Brook	February 19 <sup>th</sup> , 2007	Removal	Excellent	Poor	Fair	Fair
	February 21 <sup>st</sup> , 2007	Installation	Excellent	Fair	Excellent	Excellent

- Transmission and hydrolab performance difficulties were encountered at both the Gill’s Pond Brook and East Pond Brook stations during this deployment period. Harsh winter weather and ice conditions periodically affected the collection and transmission of data. The Gill’s Pond Brook station didn’t transmit data for the entire deployment period; however the hydrolab itself was not impacted, and continues to function normally. The East Pond Brook Datasonde was deployed from February 21 until March 21; however, it stopped transmitting data on March 13. When the hydrolab was removed on March 21 it was noted that the turbidity sensor had sustained damage, probably due to moving ice. The hydrolab was shipped to the supplier for repairs, where it was noted that the pH (glass), dissolved oxygen, turbidity and nitrate sensors were also damaged and had to be replaced.

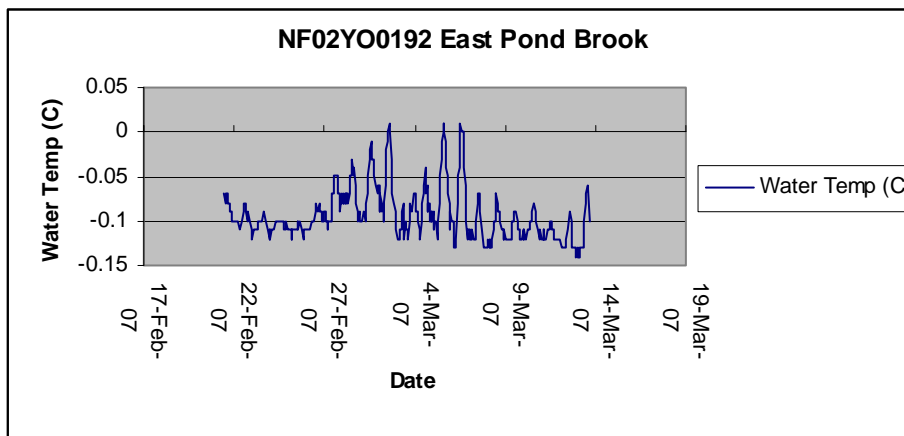
## Data Interpretation

- No data is available from Gill's Pond Brook for this entire deployment period. The data collected from East Pond Brook from February 2 until March 13 will be analysed in this report. No QA/QC comparison data is available for the removal of this hydrolab on March 21, since the station stopped transmitting on March 13.

### EAST POND BROOK

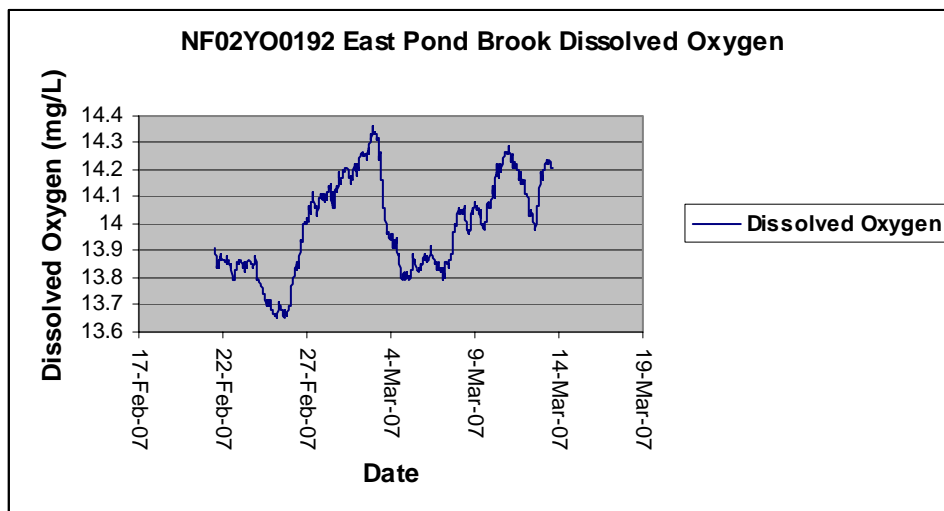
- East Pond Brook transmitted data from February 21–March 13/07.
- Water temperatures (**Figure 1**) fluctuated slightly throughout the deployment period with a range of  $-0.14^{\circ}\text{C}$  to  $0.01^{\circ}\text{C}$ . Ice cover developed and thickened across the entire surface of the brook during this deployment.

**Figure 1: Water Temperature**



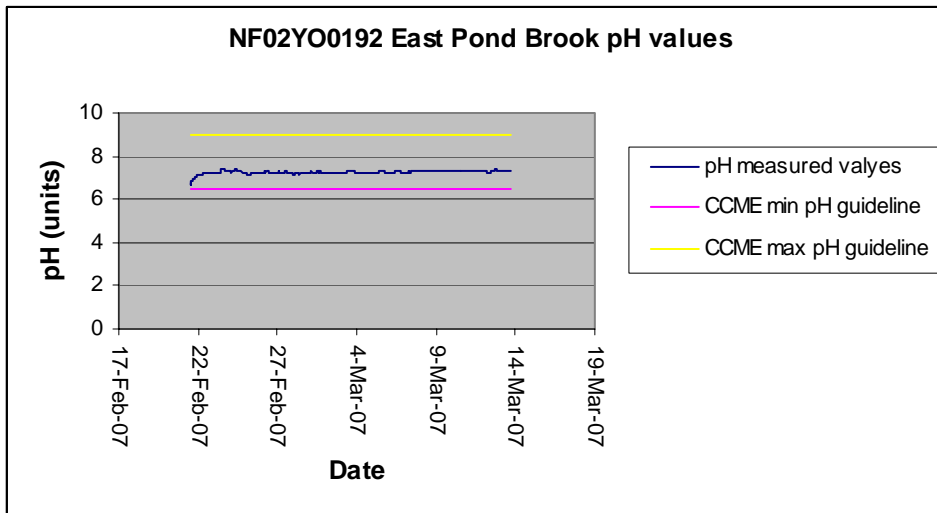
- The dissolved oxygen (DO) values (**Figure 2**) fluctuated throughout the deployment period, ranging from 13.65 to 14.36 mg/L. These higher DO values are typical this time of year, as low water temperatures have the capacity to hold higher concentrations of DO. These values fall within the recommended CCME Protection of Aquatic Life guidelines for dissolved oxygen (cold water/other life stages – above 6.5; warm water/other life stages – above 5.5; warm water/early life stages – above 6).

**Figure 2: Dissolved Oxygen**



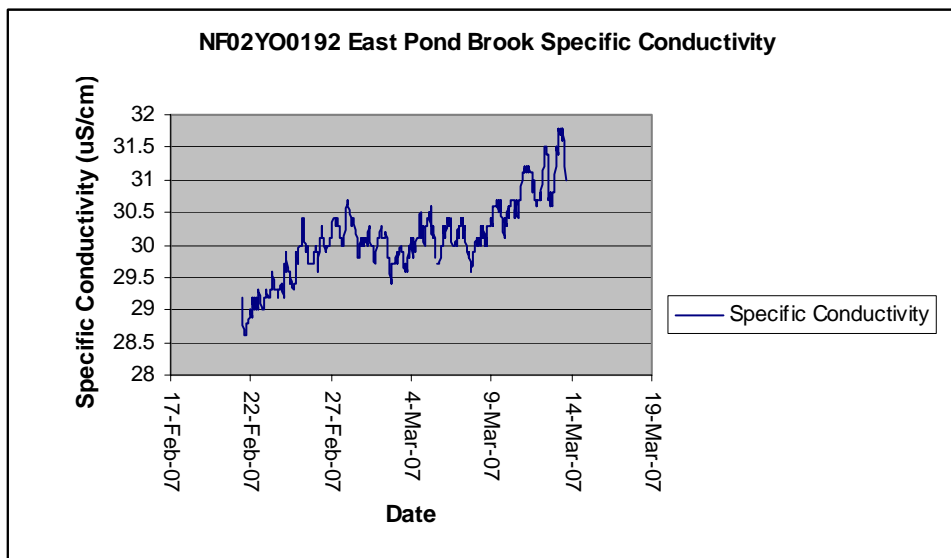
- The pH values for the Gills Pond Brook station remained constant over the deployment period (**Figure 3**). The pH values ranged from 6.64 to 7.38 with all of the values falling within the recommended range (6.5 – 9.0) for the CCME Protection of Aquatic Life guidelines.

**Figure 3: pH**



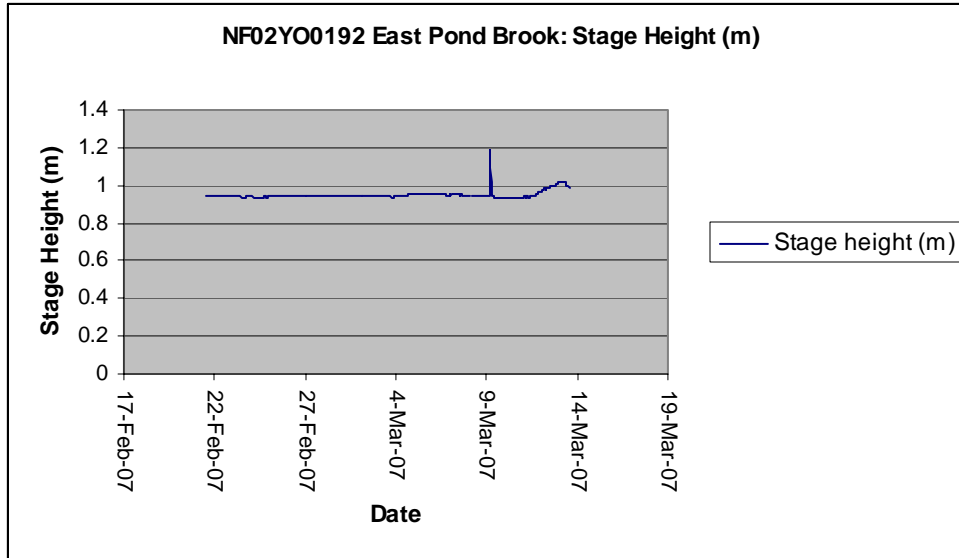
- The specific conductivity values (and associated total dissolved solids) increased slightly over the deployment period (**Figure 4**) with values ranging from 28.6 to 30.1 $\mu$ S/cm. These are expected background levels for this site, showing little variation during the deployment period.

**Figure 4: Specific Conductivity**



- The raw data indicates that the turbidity sensor sustained damage on February 23, thus the data cannot be analysed for this deployment period.
- Stage height (**Figure 5**) remained quite constant during the deployment period. The sudden peak and immediate drop indicated on March 9 is most likely a data transmission issue rather than a water event, based on the immediate resolution of the spike.

**Figure 5: Stage Height**



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