Real Time Water Quality Monthly Report
Aur Resources Inc.
March 2007 - April 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 March 21st, 2007 for cleaning and calibration and then reinstalled on March 26th. This hydrolab station did not transmit data from February 21 to March 21; therefore QA/QC comparisons during removal of the hydrolab on March 21 could not be made. The results from comparing the minisonde values to the datasonde values during reinstallation on March 21st/26th can be seen in **Table 1**.
- The instrument at East Pond Brook sustained damage during the previous deployment period and has been shipped to the supplier for repairs.

Table 1: QA/QC Data Comparison Rankings upon removal/reinstallation on March 21st/26th

Station	Date	Action	Minisonde vs. Datasonde Comparison Ranking			
			Temperature	pH	Conductivity	Dissolved Oxygen
Tributary to Gills Pond Brook	March 26th, 2007	Re-installation	Excellent	Good	Excellent	Excellent

- The Gills Pond Brook instrument was deployed until April 17th, 2007 (22-day deployment period) at which point it was removed for maintenance and calibration. The results from comparing the Minisonde values to the Gills Pond Brook instrument values during removal on April 17th can be seen in **Table 2.**

Table 2: QA/QC Data Comparison Rankings upon removal on April 17th, 2007

Station	Date	Action	Minisonde vs. Datasonde Comparison Ranking			
			Temperature	pH	Conductivity	Dissolved Oxygen
Tributary to Gills Pond Brook	April 17th, 2007	Removal	Excellent	Poor	Marginal	Excellent

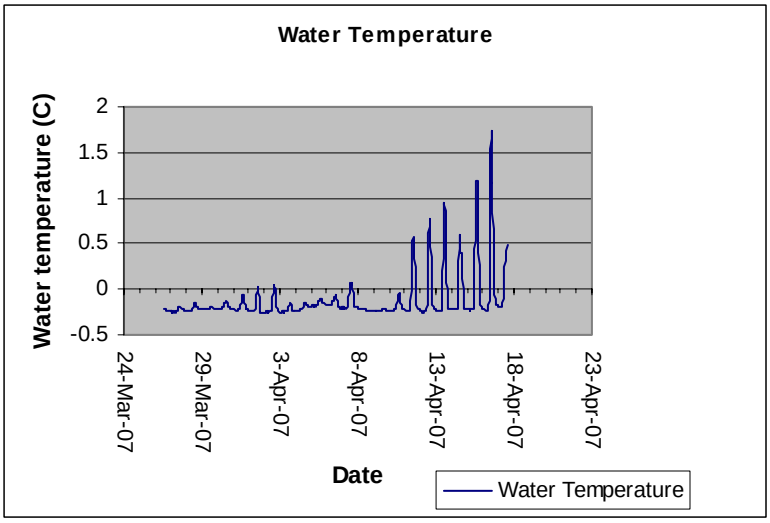
Data Interpretation

- This report interprets data from the Gills Pond Brook station for the period of March 26th – April 17th, 2007. The East pond Brook hydrolab was removed from operation during this period.

TRIBUTARY TO GILLS POND BROOK

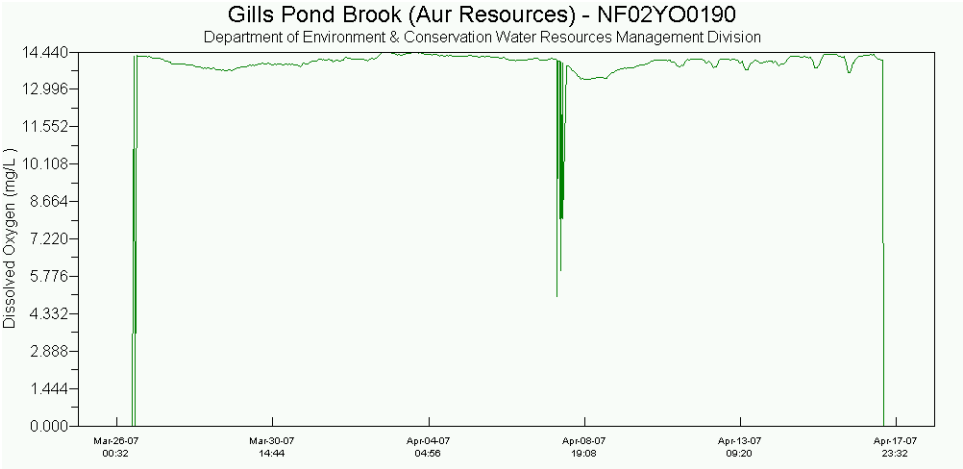
- The water temperature (**Figure 1**) remained fairly stable over the deployment period with values ranging from -0.25˚C to 1.74˚C. A thick snow and ice cover remained over the entire surface of the brook in the deployment area.

Figure 1: Water Temperature



- Dissolved oxygen levels (**Figure 2**) were fairly consistent throughout most of the deployment period. A sudden drop in dissolved oxygen occurred on April 8 and lasted for a couple of hours, as shown below in Figure 2. This may have been caused by slush or ice temporarily being lodged in the immediate area of the DO sensor. Dissolved oxygen values range from 13.38 mg/L to 14.44 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; cold water/early life stages – 9.5 mg/L).

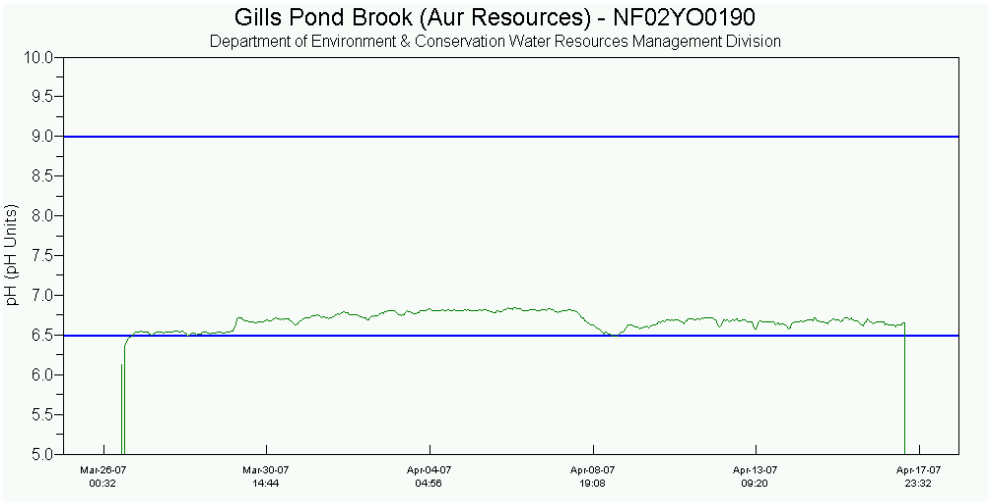
Figure 2: Dissolved Oxygen



- The pH values (**Figure 3**) for the Gills Pond Brook station remained consistent for most of the deployment period. pH values dropped slightly on April 7, corresponding to a small increase in stage height on the same day. Precipitation and increased air temperatures causing snow melt, shown below in **Appendix A,** may have resulted in lowering pH in the brook. The pH values ranged from 6.13 – 6.84 with most of the values falling within the recommended range (6.5 – 9.0) for the CCME Protection of Aquatic Life guidelines due to the naturally acidic nature of Gills Pond Brook waters.

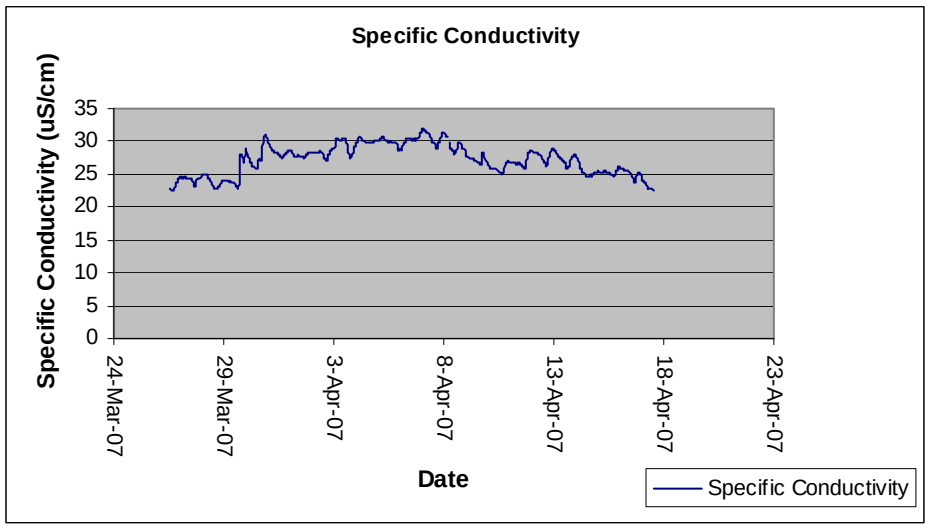
This brook, like most surface freshwater bodies in the province, tends to be naturally acidic on the pH scale.

Figure 3:pH



- The specific conductivity values (**Figure 4)** fluctuated throughout the deployment period. The increase in conductivity between March 30th and April 8th is most likely due to the decrease in stage height (**Figure 6**) over the same period. Conductivity values decrease for the remainder of the deployment period, most likely as the result of the increasing stage height, which would have a dilution effect on ion concentration in the brook. Conductivity values ranged from 22.4 mg/L to 31.9 mg/L.

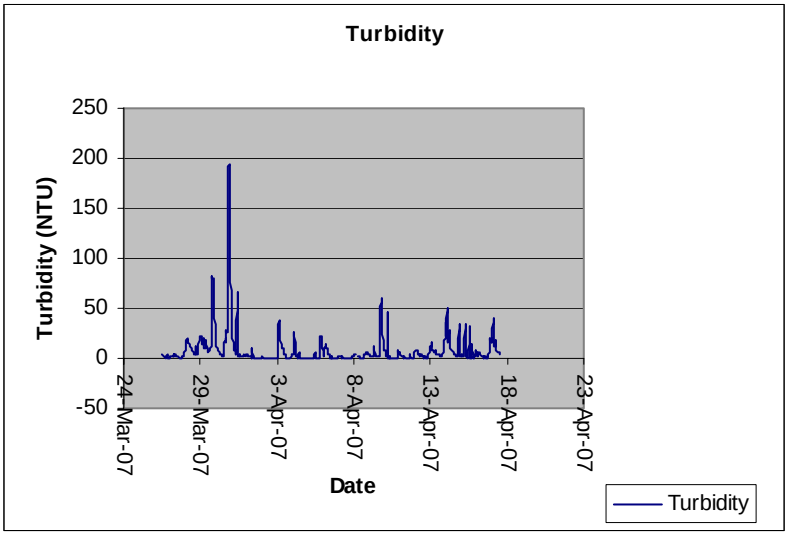
Figure 4: Specific Conductivity



- Turbidity values (**Figure 5)** fluctuated for most of the deployment period. The CCME Guidelines for the Protection of Freshwater Aquatic Life recommend that turbidity should not change more than 8 NTU from natural background levels. No water was discharged from the polishing pond during this deployment period, and the variations in turbidity were influenced by changing stage

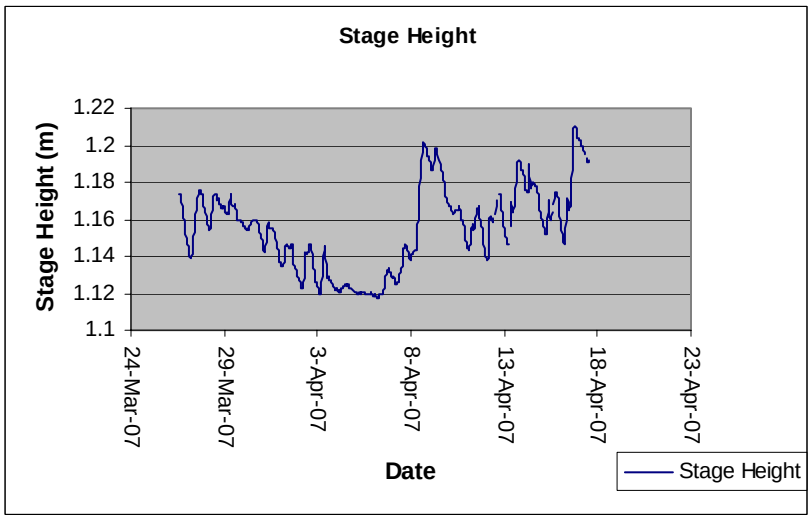
height, precipitation, runoff from melting snow, and ice and slush moving down the brook. Turbidity values range from 0 to 193.6 NTU during this deployment.

Figure 5: Turbidity



- Stage height varied slightly during this deployment period ranging from 1.19 to 1.21 m. Even slight changes in stage height have an impact on water quality parameters, as indicated above in this report.

Figure 6: Stage Height



- Due to calibration issues the data for nitrate and ammonium are considered to be unreliable. For this reason the graphs representing these parameters have been excluded from the report.

- Environment Canada climate and precipitation data for this deployment is listed in the charts below:

Appendix A – Climate Data for Badger, NL (March 2007 & April 2007)

Daily Data Report for March 2007

Day	Max Temp °C	Min Temp °C	Mean Temp °C	Heat Deg Days C	Cool Deg Days C	Total Rain mm	Total Snow cm	Total Precip mm	Snow on Grnd cm	Dir of Max Gust 10's Deg	Spd of Max Gust km/h
01	0.7	-13.2	-6.3	24.3	0.0			0.0	57		
02	0.5	-11.4	-5.5	23.5	0.0			0.0	56		
03	-2.8	-17.3	-10.1	28.1	0.0			4.6	56		
04	3.3	-10.0	-3.4	21.4	0.0			0.7	62		
05	1.4	-5.0	-1.8	19.8	0.0			0.0	63		
06	0.7	-15.0	-7.2	25.2	0.0			0.0	61		
07	-7.9	-19.5	-13.7	31.7	0.0			0.6	60		
08	-8.4	-16.1	-12.3	30.3	0.0			0.0	60		
09	-8.2	-31.6E	-19.9E	37.9E	0.0E			0.0	60		
10	0.5	-18.4	-9.0	27.0	0.0			0.0	60		
11	7.0	-11.8	-2.4	20.4	0.0			1.3	60		
12	2.5	1.1	1.8	16.2	0.0			0.0	54		
13	0.0	-14.6	-7.3	25.3	0.0			0.7	53		
14	5.0	-18.5	-6.8	24.8	0.0			0.6	53		
15	4.9	3.2	4.1	13.9	0.0			1.3	50		
16	2.7	-0.9	0.9	17.1	0.0			0.0	43		
17	1.8	-7.8	-3.0	21.0	0.0			0.6	42		
18	8.8	-2.8	3.0	15.0	0.0			2.0	42		
19	1.5	-2.6	-0.6	18.6	0.0			0.6	30		
20	2.1	-9.7	-3.8	21.8	0.0			3.7	30		
21	-6.7	-9.2	-8.0	26.0	0.0			0.0	34		
22	5.1	-17.1	-6.0	24.0	0.0			1.1	36		
23	8.6	-1.0	3.8	14.2	0.0			1.3	33		
24	-2.7	-5.7	-4.2	22.2	0.0			0.0	30		
25	1.2	-18.4	-8.6	26.6	0.0			0.0	29		
26	4.4	-17.2	-6.4	24.4	0.0			0.0	29		
27	8.0	-14.5	-3.3	21.3	0.0			0.0	29		
28	10.7	-8.0	1.4	16.6	0.0			4.7	27		
29	1.1	-1.0	0.1	17.9	0.0			6.9	31		
30	2.8	-1.1	0.9	17.1	0.0			1.0	33		
31	2.7	-7.5	-2.4	20.4	0.0			0.6	29		
Sum				694.0E	0.0E			32.3			
Avg	1.7	-10.4E	-4.4E								
Xtrm	10.7	-31.6E									

Daily Data Report for April 2007

Day	Max Temp °C	Min Temp °C	Mean Temp °C	Heat Deg Days C	Cool Deg Days C	Total Rain mm	Total Snow cm	Total Precip mm	Snow on Grnd cm	Dir of Max Gust 10's Deg	Spd of Max Gust km/h
01†	-3.3	-9.3	-6.3	24.3	0.0	M	M	0.6	31	34	43
02†	-1.1	-14.7	-7.9	25.9	0.0	M	M	0.0	28	32	32
03†	-2.5	-14.9	-8.7	26.7	0.0	M	1.0	0.7	28	2	35
04†	1.0	-2.6	-0.8	18.8	0.0	0.0	1.0	0.6	30	2	37
05†	0.6	-1.4	-0.4	18.4	0.0	M	M	0.0	29		<31
06†	3.6	-3.4	0.1	17.9	0.0	M	M	2.1	29	18	33
07†	6.7	-4.7	1.0	17.0	0.0	0.0	1.0	3.9	28		<31
08†	4.0	-0.8	1.6	16.4	0.0	M	M	8.0	29	19	67
09†	2.8	-2.3	0.3	17.7	0.0	M	M	0.0	26	21	54
10†	2.4	-6.1	-1.9	19.9	0.0	M	M	0.0	27	28	39
11†	3.5	-10.7	-3.6	21.6	0.0	M	M	0.0	27	30	33
12†	4.8	-11.7	-3.5	21.5	0.0	M	M	M			<31
13†	6.7	-10.0	-1.7	19.7	0.0	M	M	0.0	25		<31
14†	3.8	-4.5	-0.4	18.4	0.0	M	M	0.0	21	2	33
15†	2.3	-4.9	-1.3	19.3	0.0	M	M	0.0	20	4	35
16†	6.2	-4.9	0.7	17.3	0.0	M	M	0.0	19	2	33
17†	2.6	-0.4	1.1	16.9	0.0	M	M	0.0	17	5	41
18†	1.2	-0.8	0.2	17.8	0.0	M	M	0.6	15	2	48
19†	1.7	-1.8	-0.1	18.1	0.0	M	M	0.0	16	7	48
20†	12.3	-3.0	4.7	13.3	0.0	M	M	0.0	15		<31
21											
22†	5.4	-4.8	0.3	17.7	0.0	M	M	0.0	8	30	37
23†	12.2	-2.8	4.7	13.3	0.0	M	M	0.7	6	23	39
Sum				417.9*	0.0*	0.0*	3.0*	17.2*			
Avg	3.5*	-5.5*	-1*								
Xtrm	12.3*	-14.9*								19*	67*

Days when heavy precipitation was recorded during the deployment period of March 26th to April 17th, 2007 are highlighted in red.

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