Real Time Water Quality Monthly Report
Aur Resources Inc.
October-December 2006

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 future in the form of a monthly report.

Maintenance and Calibration of Instrumentation

- The instrument at Gills Pond Brook was removed on October 25th, 2006 for cleaning and calibration and then reinstalled on the same day, October 25th. The results from comparing the Minisonde values to the Datasonde values during removal and reinstallation on October 25th can be seen in **Table 1**.
- The instrument at East Pond Brook was removed on October 26th, 2006 to evaluate/assess nitrate calibration and sensor performance in the lab. It was not reinstalled until November 30th, 2006. The results from comparing the Minisonde values to the Datasonde values during removal on October 26th can be seen in **Table 1**.

Table 1: QA/QC Data Comparison Rankings upon removal/reinstallation on October 25th/26th, 2006

Station	Date	Action	Minisonde vs. Datasonde Comparison Ranking			
			Temperature	pH	Conductivity	Dissolved Oxygen
Tributary to Gills Pond Brook	October 25th, 2006	Removal	Excellent	Poor	Good	Excellent
	October 25th, 2006	Installation	Excellent	Good	Good	Excellent
East Pond Brook	October 26th, 2006	Removal	Excellent	Excellent	Fair	Poor

- The Gills Pond Brook instrument was deployed until December 6th, 2006 (42-day deployment period) at which point it was removed for maintenance and calibration. The results from comparing the Minisonde values to the Datasonde values during removal on December 6th can be seen in **Table 2.**
- The East Pond Brook instrument was out of the water during the period of October 26th to November 30th.

Table 2: QA/QC Data Comparison Rankings upon removal on December 6th, 2006

Station	Date	Action	Minisonde vs. Datasonde Comparison Ranking			
			Temperature	pH	Conductivity	Dissolved Oxygen
Tributary to Gills Pond Brook	December 6th, 2006	Removal	NA*	Excellent	Poor	Poor

* Temperature probe was not reading after December 1, 2006 therefore, QA/QC could not be completed for temperature.

Data Interpretation

- This monthly report interprets the data from the Gills Pond Brook station for the period of October 26th – December 6th, 2006.

TRIBUTARY TO GILLS POND BROOK

- The water temperature **(Figure 1)** fluctuated between 2.45°C – 16.18 °C and showed both increases and decreases throughout the deployment period. A very strong diurnal pattern is detected in the data.

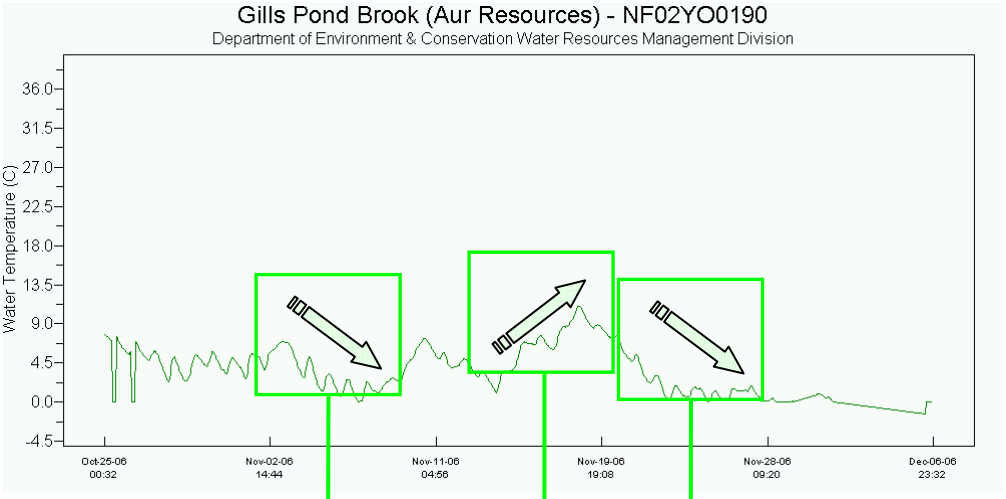

Figure 1

- The dissolved oxygen values (**Figure 2**) fluctuated throughout the deployment period as was also seen in temperature depicted in **Figure 1**. The dissolved oxygen values ranged from 9.43 mg/L to 13.14 mg/L. There is an obvious increase in dissolved oxygen levels throughout the deployment period as would be expected during this time of the year. As is the case in most NL water, these values fall within the recommended CCME Protection of Aquatic Life guidelines for dissolved oxygen in most cases (cold water/other life stages – above 6.5; warm water/other life stages – above 5.5; warm water/early life stages – above 6); however, a few of the lower values during this period fall below the most conservative limit for cold water/early life stages – 9.5 mg/L.

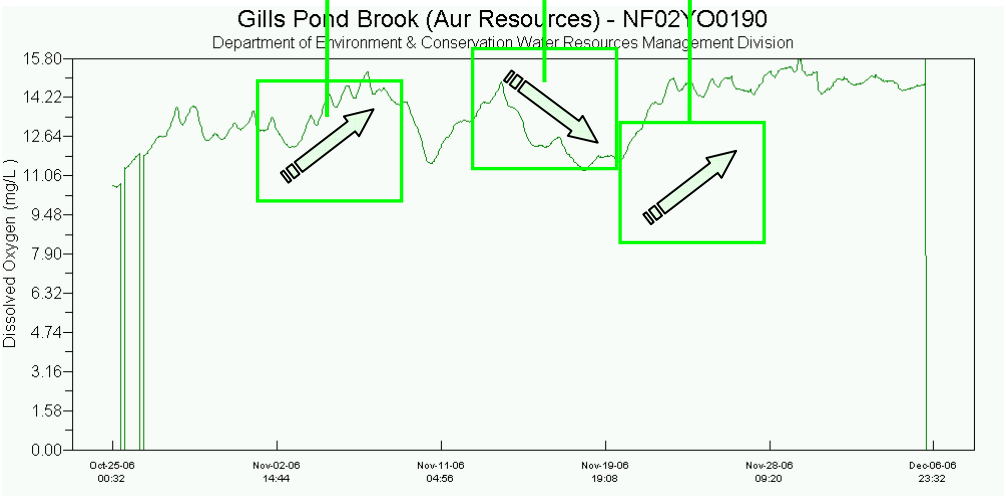

Figure 2

- The pH values **(Figure 3)** for the Gills Pond Brook station fluctuates over the deployment period. There are a number of decreases in pH values over the deployment period which corresponds to periods of heavy rainfall as can be seen in **Appendix A**. The pH values ranged from 5.71 – 6.89 with many of the values falling slightly outside the recommended range (6.5 – 9.0) for the CCME Protection of Aquatic Life guidelines due to the naturally acidic nature of NL waters.

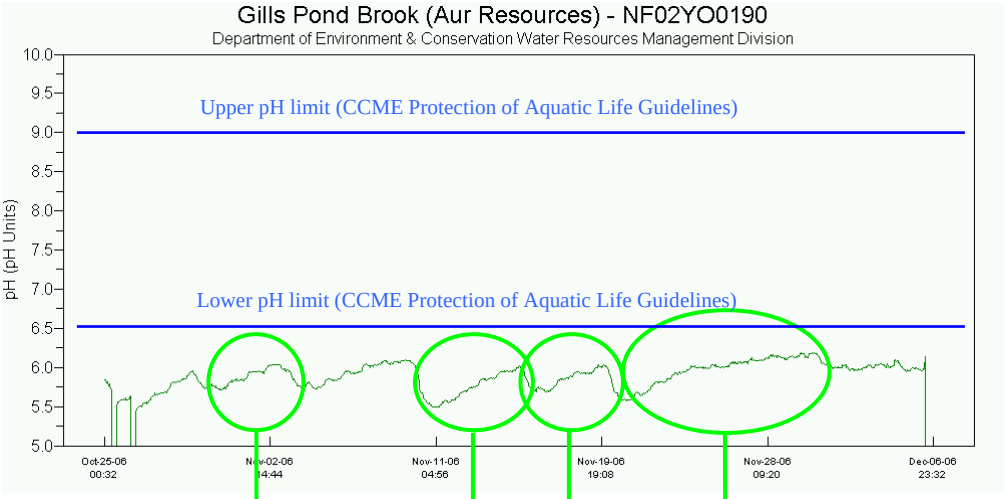

Figure 3

- The specific conductivity values (**Figure 4)** fluctuated throughout the deployment period. The conductivity values fluctuated between 37.1 and 14.6 µS/cm over the deployment period**.** As seen previously, conductivity values show decreases/increases throughout the deployment period which corresponds to periods of heavy rainfall events (**Appendix A**).

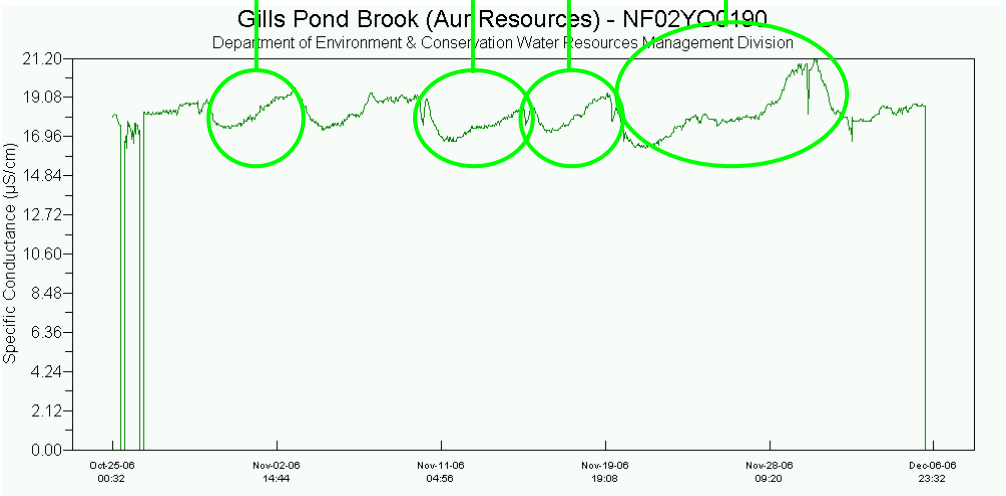

Figure 4

- The turbidity values (**Figure 5**) remained relatively consistent throughout the deployment period with the exception of a couple of water quality events. As seen previously, turbidity values show increases/decreases throughout the deployment period which corresponds to periods of heavy rainfall events (**Appendix A**).

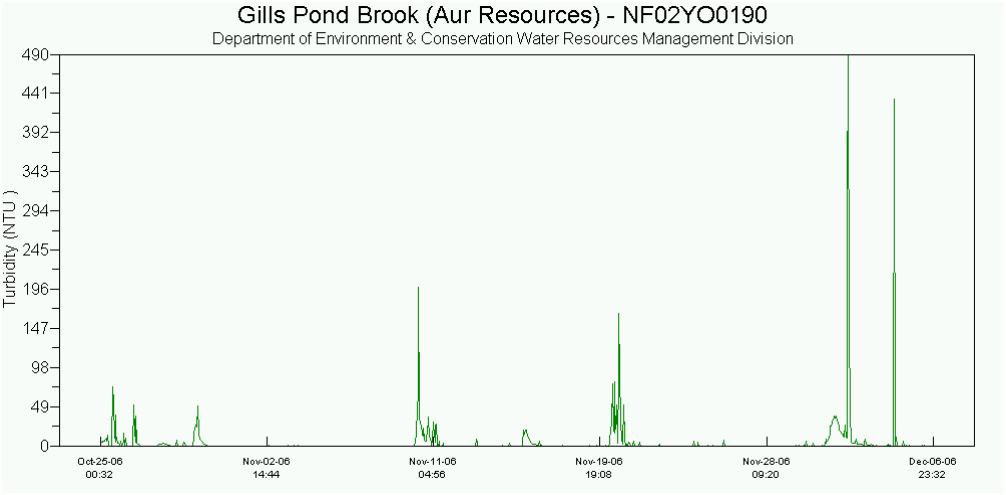

Figure 5

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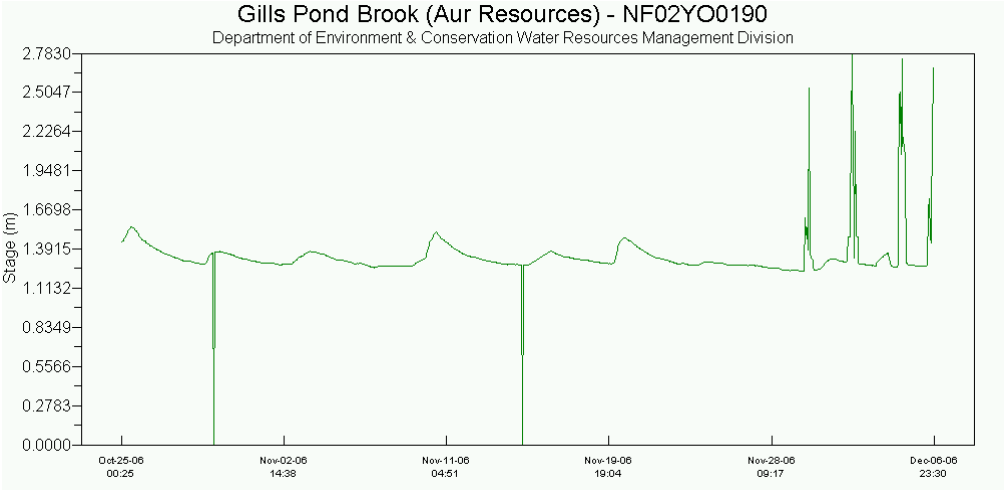
Appendix A – Stage and Climate Data for Badger, NL (October, November & December 2006)



Daily Data Report for October 2006

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	14.3	-1.5	6.4	11.6	0.0			0.0	0		
02	10.8	2.6	6.7	11.3	0.0			5.2	0		
03	14.9	8.6	11.8	6.2	0.0			0.0	0		
04	17.1	4.4	10.8	7.2	0.0			0.7	0		
05	7.4	6.3	6.9	11.1	0.0			0.0	0		
06	9.1	-1.1	4.0	14.0	0.0			0.0	0		
07	15.2	-3.7	5.8	12.2	0.0			0.0	0		
08	13.7	6.1	9.9	8.1	0.0			0.0	0		
09	18.1	4.3	11.2	6.8	0.0			0.0	0		
10	12.6	3.5	8.1	9.9	0.0			0.0	0		
11	11.6	-2.1	4.8	13.2	0.0			0.0	0		
12	10.1	-2.8	3.7	14.3	0.0			9.2	0		
13	13.6	6.9	10.3	7.7	0.0			28.1	0		
14	20.3	11.8	16.1	1.9	0.0			0.0	0		
15	17.8	7.1	12.5	5.5	0.0			0.6	0		
16	13.1	-2.2	5.5	12.5	0.0			0.0	0		
17	9.9	-3.8	3.1	14.9	0.0			0.0	0		
18	9.7	-3.9	2.9	15.1	0.0			0.0	0		
19	9.0	1.6	5.3	12.7	0.0			0.0	0		
20	7.4	-3.5	2.0	16.0	0.0			0.0	0		
21	10.0	3.2	6.6	11.4	0.0			13.9	0		
22	8.5	5.4	7.0	11.0	0.0			3.9	0		
23	10.7	7.0	8.9	9.1	0.0			13.2	0		
24	12.1	7.3	9.7	8.3	0.0			16.8	0		
25	6.8	3.8	5.3	12.7	0.0			1.7	0		
26	7.7	4.1	5.9	12.1	0.0			3.2	0		
27	5.4	2.5	4.0	14.0	0.0			1.9	0		
28	6.6	-3.3	1.7	16.3	0.0			0.0	0		
29	9.8	-1.5	4.2	13.8	0.0			9.8	0		
30	7.9	1.8	4.9	13.1	0.0			1.8	0		
31	7.8	-1.5	3.2	14.8	0.0			0.0	0		
Sum				348.8	0.0			110.0			
Avg	11.3	2.2	6.7								
Xtrm	20.3	-3.9									

Daily Data Report for November 2006

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	10.4	-2.2	4.1	13.9	0.0			0.0	0		
02	11.6	-1.6	5.0	13.0	0.0			9.6E	0		
03	7.6	4.7	6.2	11.8	0.0			5.1E	0		
04	5.8	-3.3	1.3	16.7	0.0			0.0	0		
05	5.6	-4.7	0.5	17.5	0.0			0.7	0		
06	4.6	-7.1	-1.3	19.3	0.0			0.0	0		
07	5.5	-11.8	-3.2	21.2	0.0			0.0	0		
08	8.2	1.7	5.0	13.0	0.0			1.2	0		
09	12.6	8.9	6.5	11.5	0.0			16.5	0		
10	12.9	6.6	9.8	8.2	0.0			1.3	0		
11	7.7	4.0	5.9	12.1	0.0			0.0	0		
12	5.9	-1.1	2.4	15.6	0.0			0.6	0		
13	2.7	-0.9	0.9	17.1	0.0			0.0	0		
14	8.6	-6.9	0.9	17.1	0.0			0.0	0		
15	11.6	3.4	7.5	10.5	0.0			4.3	0		
16	12.5	10.6	11.6	6.4	0.0			0.0	0		
17	15.4	4.9	10.2	7.8	0.0			0.0	0		
18	16.4	12.2	14.3	3.7	0.0			0.7	0		
19	9.0	6.6	7.8	10.2	0.0			15.6	0		
20	9.1	5.5	7.3	10.7	0.0			0.0	0		
21	5.5	2.0	3.8	14.2	0.0			0.6	0		
22	5.5	-1.5	2.0	16.0	0.0			0.0	0		
23	6.8	-8.7	-1.0	19.0	0.0			0.0	0		
24	4.0	-1.8	1.1	16.9	0.0			2.6	0		
25	1.0	-6.7	-2.9	20.9	0.0			0.0	0		
26	5.6	-5.9	-0.2	18.2	0.0			0.6	0		
27	4.1	0.3	2.2	15.8	0.0			0.0	0		
28	-0.4	-3.8	-2.1	20.1	0.0			0.0	0		
29	-2.1	-6.4	-4.3	22.3	0.0			6.3	0		
30	8.2	-9.6	-0.7	18.7	0.0			2.3	8		
Sum				439.4	0.0			69.0E			
Avg	7.4	-0.7	3.4								
Xtrm	16.4	-11.8									

Daily Data Report for December 2006

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	4.3	-3.1	0.6	17.4	0.0			4.6	2		
02	-1.8	-5.2	-3.5	21.5	0.0			14.7	5		
03	-2.7	-3.5	-3.1	21.1	0.0			0.7	18		
04	-2.0	-16.0E	-9.0E	27.0E	0.0E			10.7	14		
05	-2.1	-3.3	-2.7	20.7	0.0			3.2	28		
06	-2.8	-14.6E	-8.7E	26.7E	0.0E			0.6	33		
07	3.9	-18.6E	-7.4E	25.4E	0.0E			10.4	30		
08	3.2	1.0	2.1	15.9	0.0			15.7	20		
09	-5.6	-12.4	-9.0	27.0	0.0			0.0	23		
10	1.5	-18.1E	-8.3E	26.3E	0.0E			2.9	22		
11	-0.8	-3.4	-2.1	20.1	0.0			0.0	22		
12	-4.5	-12.2	-8.4	26.4	0.0			0.0	21		
13	1.5	-12.0	-5.3	23.3	0.0			0.0	20		
14	5.5	-1.1	2.2	15.8	0.0			0.0	21		
15	5.4	1.4	3.4	14.6	0.0			0.0	17		
16	3.5	-0.9	1.3	16.7	0.0			9.3	16		
17	2.7	0.3	1.5	16.5	0.0			1.1	14		
18	3.3	-3.7	-0.2	18.2	0.0			0.6	14		
19	-3.6	-10.0	-6.8	24.8	0.0			0.0	15		
20	-2.6	-11.1	-6.9	24.9	0.0			0.0	15		
21	1.4	-8.9	-3.8	21.8	0.0			1.5	15		
22	-2.7	-8.1	-5.4	23.4	0.0			0.0	17		
23	-0.7	-8.4	-4.6	22.6	0.0			3.4	15		
24	4.1	-12.6E	-4.3E	22.3E	0.0E			3.1	17		
25	0.5	-1.1	-0.3	18.3	0.0			0.0	17		
26	0.0	-3.7	-1.9	19.9	0.0			3.7	16		
27	-3.5	-4.5	-4.0	22.0	0.0			0.6	22		
28	-7.2	-15.0	-11.1	29.1	0.0			0.0	22		
29	-9.9	-14.4	-12.2	30.2	0.0			0.0	21		
30	-4.7	-16.6	-10.7	28.7	0.0			0.0	21		
31	-3.1	-13.9	-8.5	26.5	0.0			0.0	21		
Sum				695.1E	0.0E			86.8			
Avg	-0.6	-8.2E	-4.4E								
Xtrm	5.5	-18.6E									

Days when heavy precipitation was recorded during the deployment period