

Real Time Water Quality Monthly Report: Lower Humber River @ Humber Village Bridge July-August 2005

General

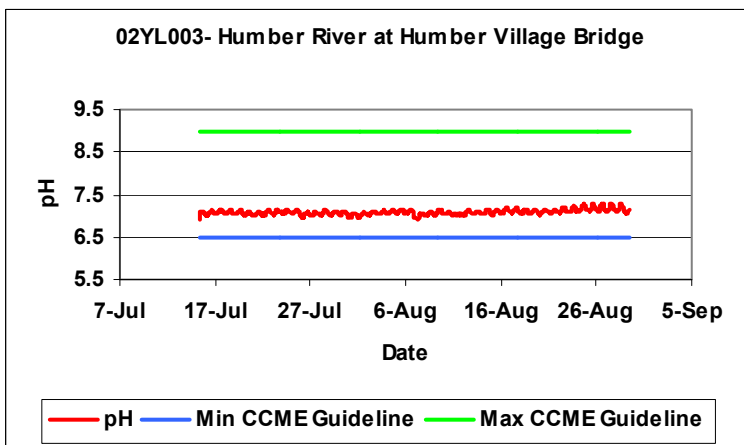
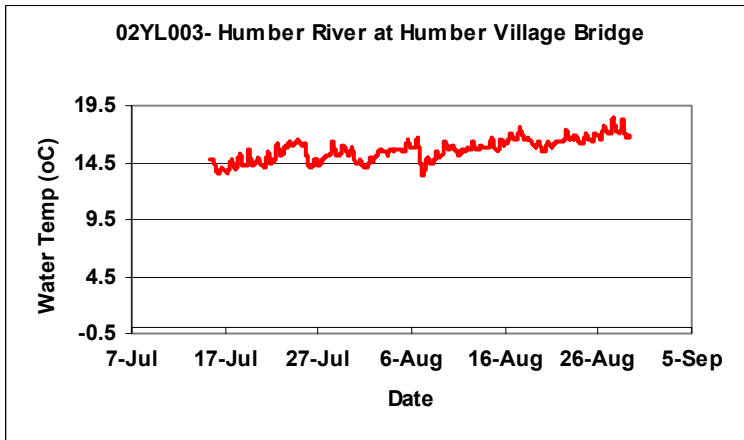
- The Water Resources Management Division staff monitor the real-time web page on a daily basis.

Maintenance and Calibration of Instrumentation

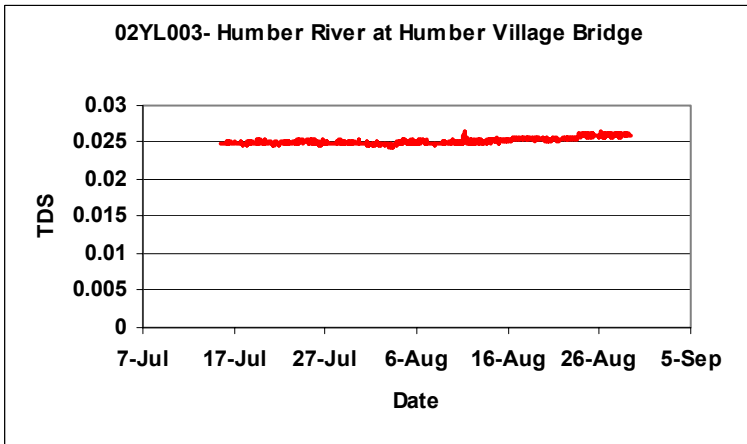
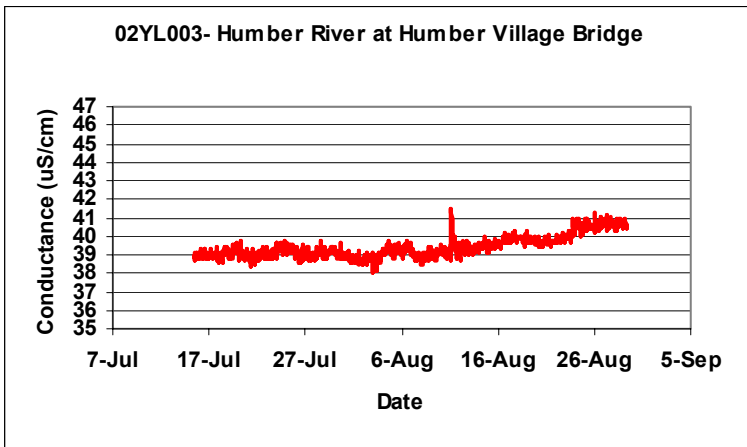
- All sensors calibrated without problem.
- Comparative water quality readings were taken with a Minisonde during removal and reinstallation of the Datasonde to ensure readings were correct. This procedure is also required as part of the QA/QC protocol. The Minisonde was calibrated before use.
- A water sample was taken for laboratory analysis as part of QA/QC procedures on reinstallation.

Data Interpretation

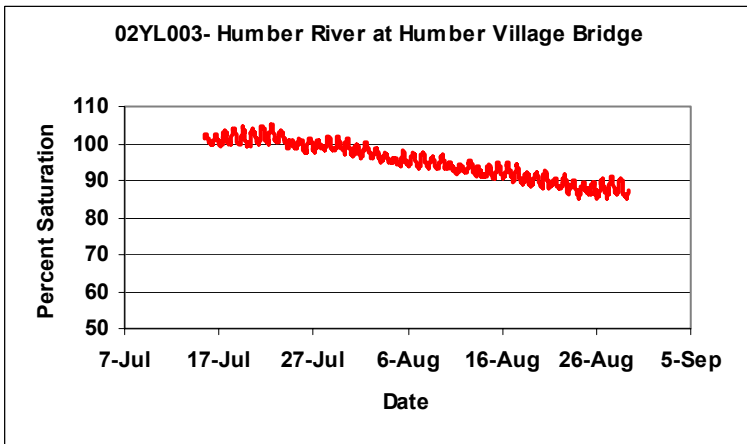
- During the period from July 15th, 2005 to Aug 29th, 2005 all parameters displayed normal behaviour reflective of conditions.
- Water temperature continued to increase during this period.
- PH remained constant during this period.

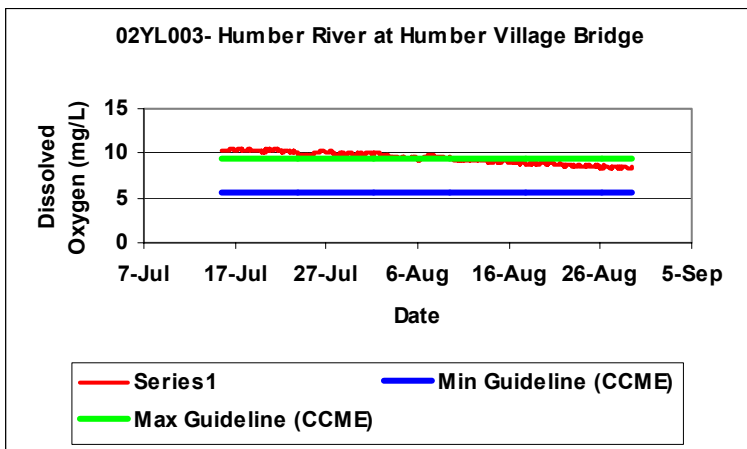


- Conductance and TDS values for this period fell within normal range for the Humber River. Both conductance and dissolved solids displayed a slight increasing trend towards the end of August.

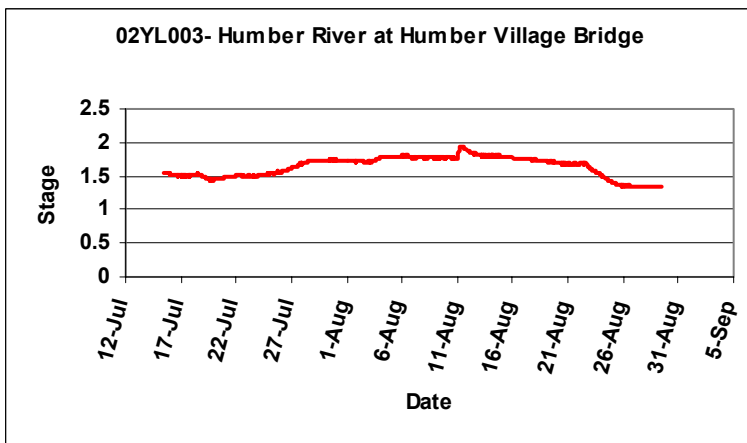
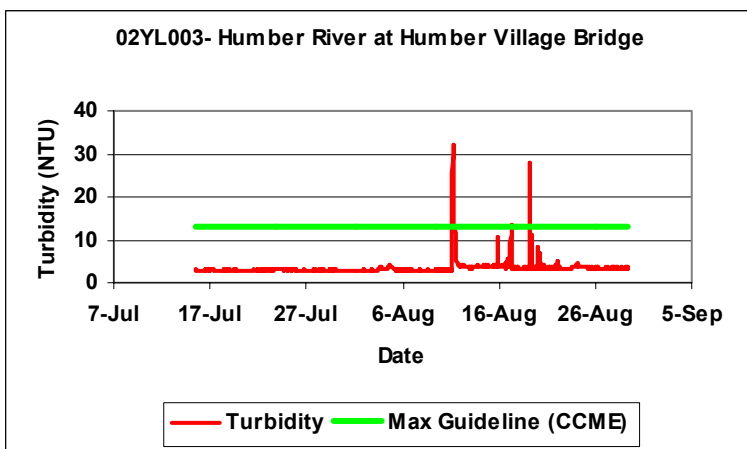


- Dissolved oxygen levels and percent saturation decreased over this period with increasing water temperatures.
- DO fell below the maximum CCME guideline for dissolved oxygen. High DO values are normal in the Humber River.





- Background turbidity levels stayed around 3 NTU throughout this entire period, except for two significant peaks of approximately 30 NTU in mid-August. The spikes in turbidity coincide with a slight rise in streamflow during this period.
- The CCME guideline for turbidity allows for an increase of 8 NTU above background levels. Background levels on the Humber River were taken as the long-term average of turbidity. Two of the observed spikes exceed the guideline.



Additional Information

- For the most part, water quality readings behaved normally over this period. Water temperature continued to increase during this period as dissolved oxygen continued to decrease. pH was

constant, while conductivity and dissolved solids displayed a slight increasing trend. There were two major spikes in turbidity over the guideline value, which coincided with an increase in streamflow for that period.

- The following table provides summary statistics on water quality parameters of the Humber River from this period.

	Temp-Water (oC)		Conductance (uS/cm)	Diss-Solids (g/L)	Percent-Saturation	Diss-Oxy (mg/L)	Turbidity (NTU)
Max	18.53	7.18	39.29	0.0252	107.38	10.66	31.90
Min	13.37	6.85	35.53	0.0228	96.28	9.37	2.80
Average	15.69	7.03	37.06	0.0238	101.38	10.08	3.43
Standard Deviation	1.01	0.06	0.98	0.0006	1.91	0.31	1.89

- The following table provides long-term summary statistics on water quality parameters from the Humber River RTWQ station going back to Dec 2003.

	Temp-Water (oC)		Conductance (uS/cm)	Diss-Solids (g/L)	Percent-Saturation	Diss-Oxy (mg/L)	Turbidity (NTU)
Max	20.67	7.31	44.85	0.0287	108.60	15.35	955.00
Min	-0.10	5.44	31.38	0.0203	87.71	8.50	0.00
Average	6.80	6.77	37.64	0.0241	98.34	12.16	2.80
Standard Deviation	5.91	0.24	2.82	0.0017	4.02	1.71	8.69

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