

Real Time Water Quality Monthly Report: Lower Humber River @ Humber Village Bridge March-April 2005

General

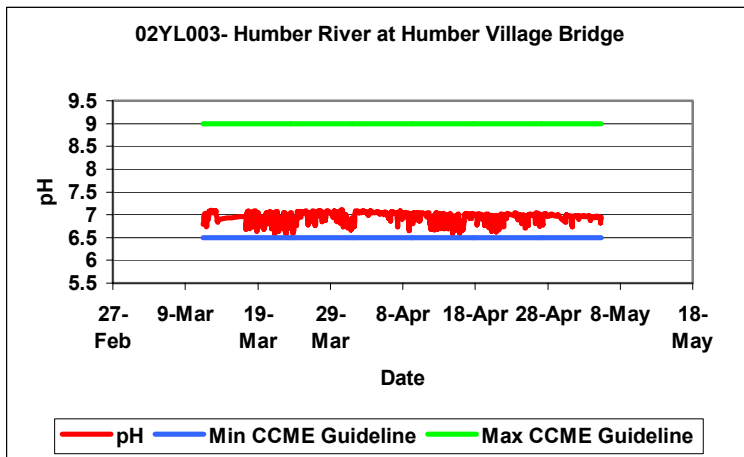
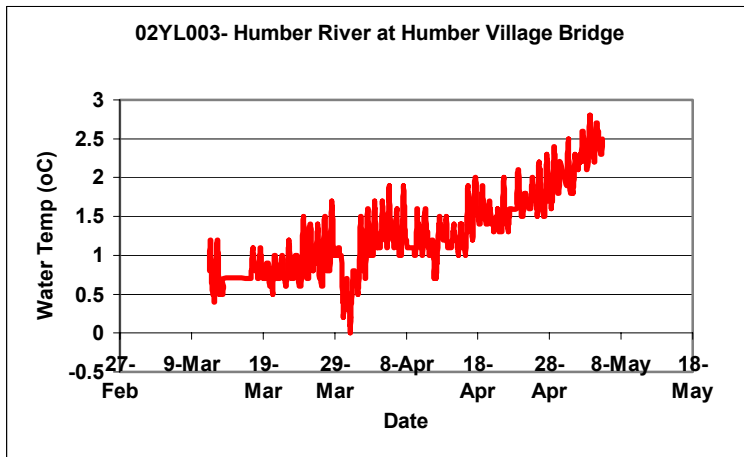
- The Water Resources Management Division staff monitor the real-time web page on a daily basis.

Maintenance and Calibration of Instrumentation

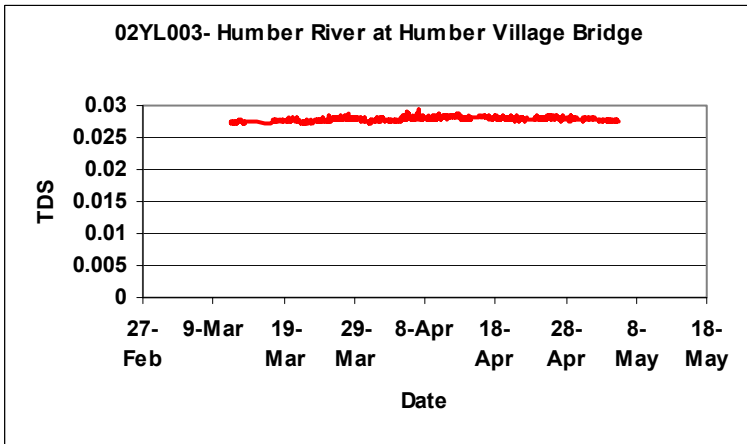
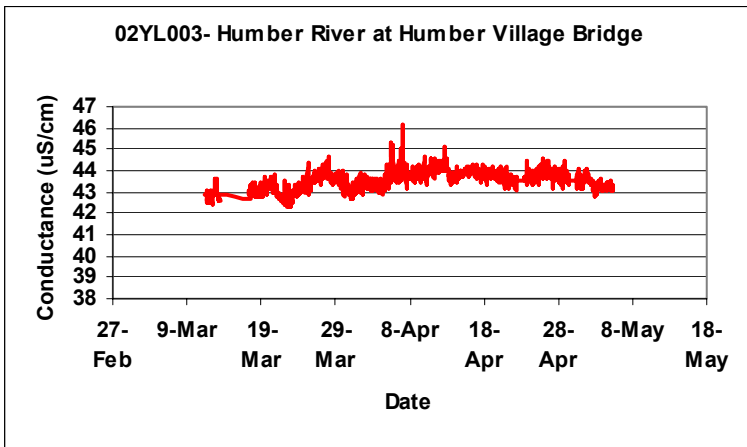
- All sensors calibrated without problem.
- Comparative water quality readings were taken with a Minisonde during removal and reinstallation of the Datasonde to ensure readings were correct. This procedure is also required as part of the QA/QC protocol. The Minisonde was calibrated before use.
- A water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

Data Interpretation

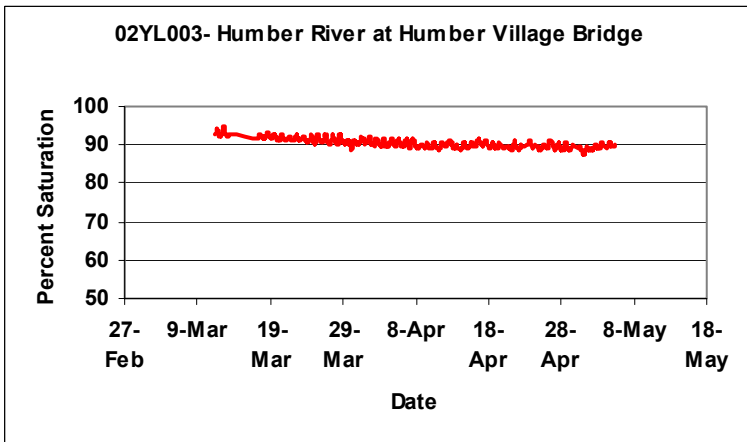
- During the period from Mar 11th, 2005 to May 5th, 2005 all parameters displayed normal behaviour reflective of conditions.
- Water temperature began to increase towards the end of March.
- PH varied over a range of 0.5, but otherwise remained constant.

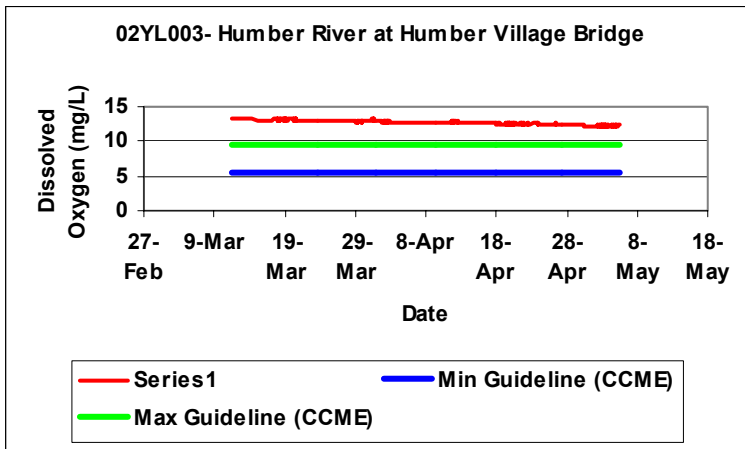


- Conductance and TDS values for this period fell within normal range for the Humber River. Both conductance and dissolved solids displayed a slight increasing trend over this period.

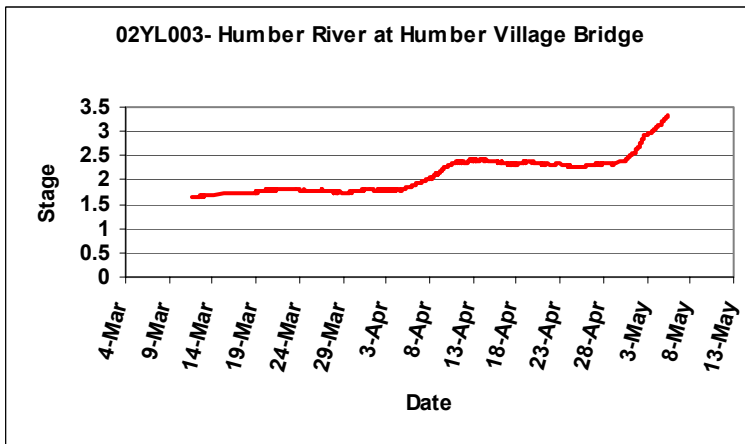
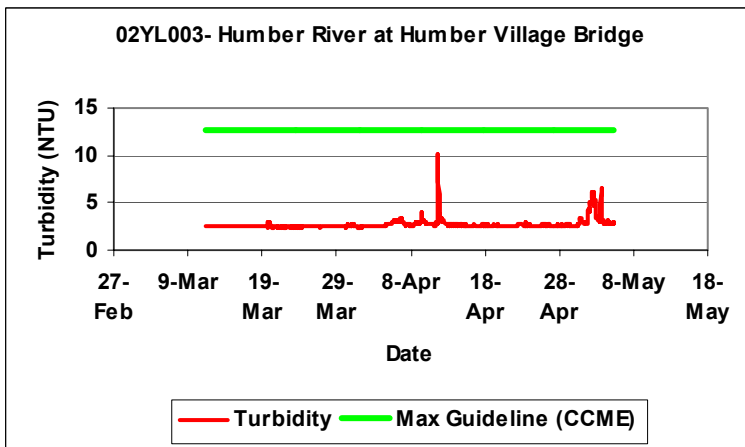


- Dissolved oxygen levels and percent saturation decreased slightly over this period with increasing water temperatures.
- DO was above the maximum CCME guideline for dissolved oxygen, however, high DO values are normal in the Humber River especially coupled with colder water temperatures.





- Background turbidity levels stayed around 3 NTU throughout this entire period, except for one minor peaks of approximately 10 NTU. The spikes in turbidity coincide with rises in streamflow.
- 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. None of the observed spikes exceed the guideline.



Additional Information

- For the most part, water quality readings behaved normally over this period, particularly DO. Water temperature began to increase during the latter part of this period. Conductivity and

dissolved solids displayed a slight increasing trend. There was one minor spike in turbidity, which coincided with an increase in streamflow

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

	Temp-Water (oC) pH		Conductance (uS/cm)	Diss-Solids (g/L)	Percent-Saturation	Diss-Oxy (mg/L)	Turbidity (NTU)
Max	2.97	7.09	44.85	0.0287	100.36	13.72	10.10
Min	0.06	6.31	40.04	0.0258	91.77	13.18	2.40
Average	1.39	6.75	42.08	0.0270	95.48	13.42	2.70
Standard Deviation	0.57	0.16	0.76	0.0005	2.13	0.13	0.48

- 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) pH		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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