

Real Time Water Quality Monthly Report: Lower Humber River @ Humber Village Bridge May-June 2005

General

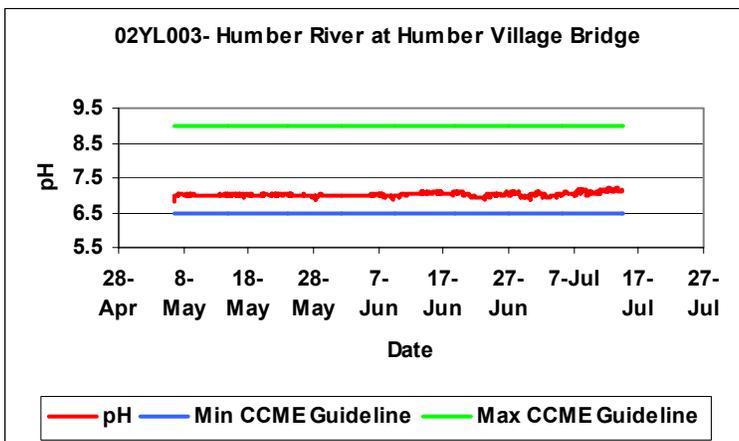
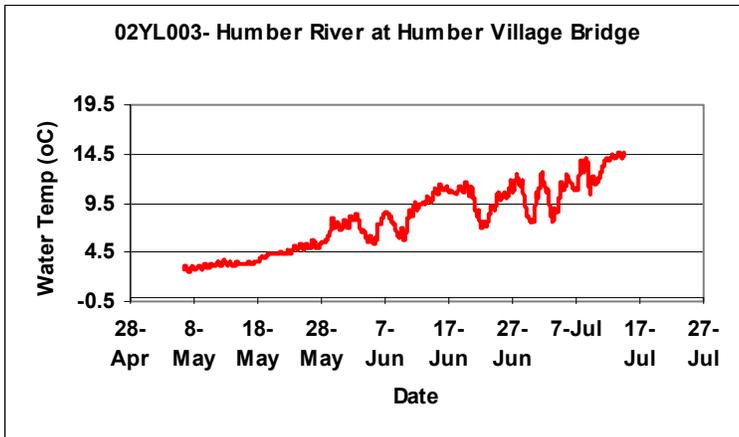
- The Water Resources Management Division staff monitor the real-time web page on a daily basis.

Maintenance and Calibration of Instrumentation

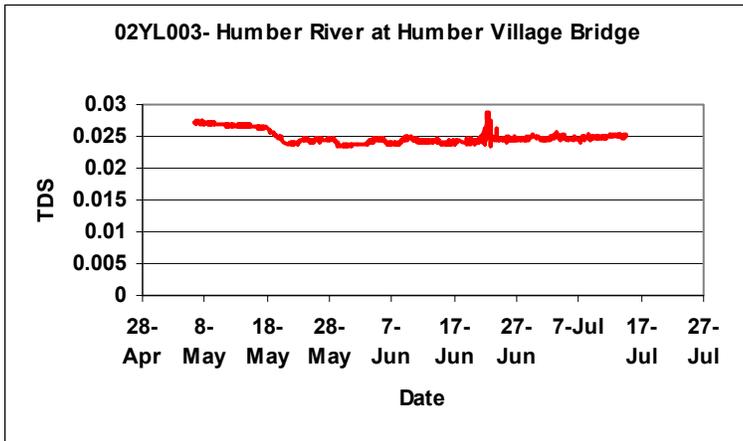
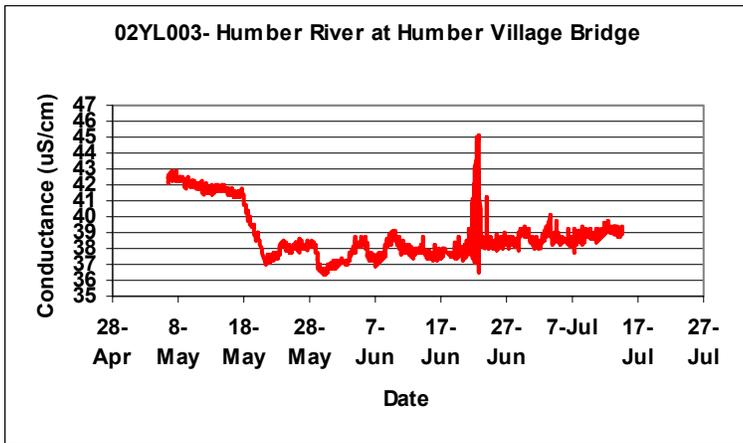
- All sensors calibrated without problem.
- Comparative water quality readings were taken with a Minisonde during removal and reinstallation of the Datasonde to ensure readings were correct. This procedure is also required as part of the QA/QC protocol. The Minisonde was calibrated before use.
- A water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

Data Interpretation

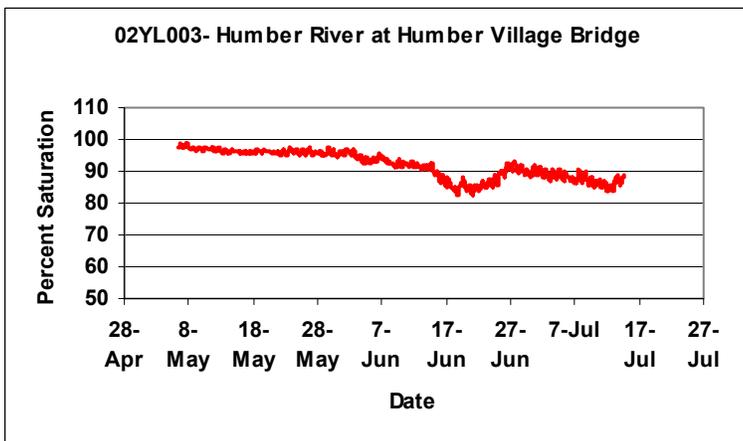
- During the period from May 6th, 2005 to July 14th, 2005 all parameters displayed normal behaviour reflective of conditions.
- Water temperature increased steadily during this period with warmer summer air temperatures.
- pH remained constant over this period.

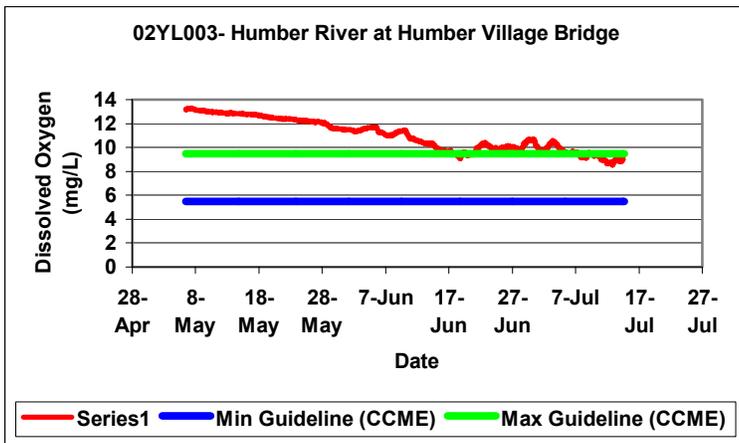


- Conductance and TDS values for this period fell within normal range for the Humber River. Both conductance and dissolved solids displayed a decrease around mid-May and a small spike around June 22nd.

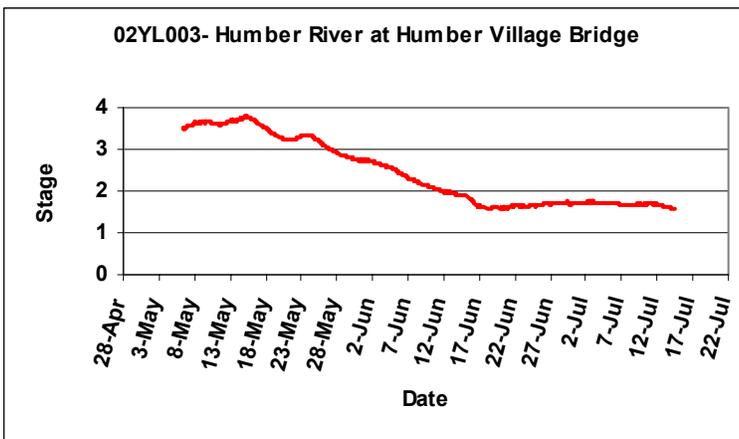
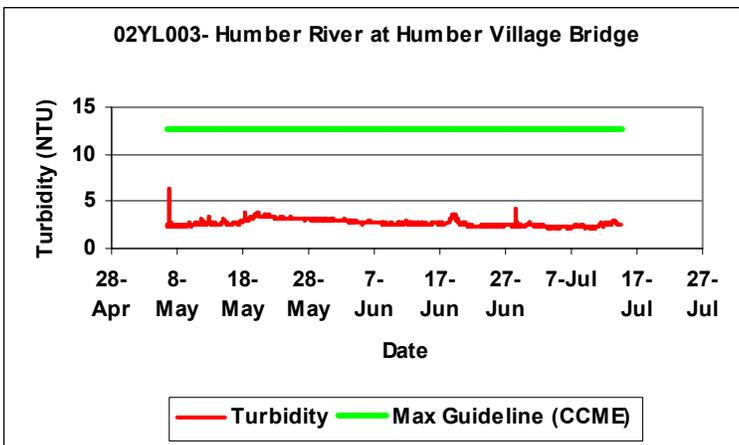


- Dissolved oxygen levels and percent saturation decreased over this period with increasing water temperatures.
- DO fell below the maximum CCME guideline for dissolved oxygen. High DO values are normal in the Humber River.





- Background turbidity levels stayed around 3 NTU throughout this entire period with one very minor spike to around 7 NTU. Water levels steadily decreased till around June 20th, and then stabilized at likely baseflow levels.
- 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. Water temperature continued to increase during the latter part of this period as dissolved oxygen continued to

decrease. pH held constant, while conductivity and dissolved solids displayed some slight variation. Turbidity showed little change as streamflow declined steadily.

- 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	14.95	7.03	42.83	0.0275	105.58	13.31	6.30
Min	2.50	6.57	31.38	0.0203	92.59	10.10	2.10
Average	7.92	6.83	35.32	0.0227	100.32	11.87	2.70
Standard Deviation	3.39	0.10	3.09	0.0019	2.30	0.89	0.33

- 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

Prepared by: Paula Dawe
 Department of Environment
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 Ph: (709) 637-2542
 Fx: (709) 637-2541
 Email: PaulaDawe@gov.nf.ca