

**Real Time Water Quality Monthly Report
Lower Humber River at Humber Village Bridge
April – May 2007**

General

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

Maintenance and Calibration of Instrumentation

- The instrument at Humber River was removed on April 17th, 2007 for cleaning and calibration and then reinstalled on April 19th. The results from comparing the Minisonde values to the Datasonde values during removal and reinstallation on April 17th/19th, 2007 can be seen in **Table 1**.

Table 1: QA/QC Data Comparison Rankings upon removal/reinstallation on April 17th/19th, 2007

Station	Date	Action	Minisonde vs. Datasonde Comparison Ranking			
			Temperature	pH	Conductivity	Dissolved Oxygen
Humber River at Humber Village Bridge	April 17 th , 2007	Removal	Excellent	Excellent	Marginal	Poor
	April 19 th , 2007	Installation	Excellent	Excellent	Good	Marginal

- The instrument was deployed until May 16th (28-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 May 16th, 2007 can be seen in **Table 2**.

Table 2: QA/QC Data Comparison Rankings upon removal on May 16th, 2007

Station	Date	Action	Minisonde vs. Datasonde Comparison Ranking			
			Temperature	pH	Conductivity	Dissolved Oxygen
Humber River at Humber Village Bridge	May 16 th , 2007	Removal	Excellent	Fair	Excellent	Marginal

Data Interpretation

- During the deployment period of April 19th – May 16th, 2007 the water quality remained relatively stable for most parameters.
- The water temperature (**Figure 1**) increased slightly over the deployment period. This is typical for this time of the year with a temperature range of 0.9°C to 3.5°C.

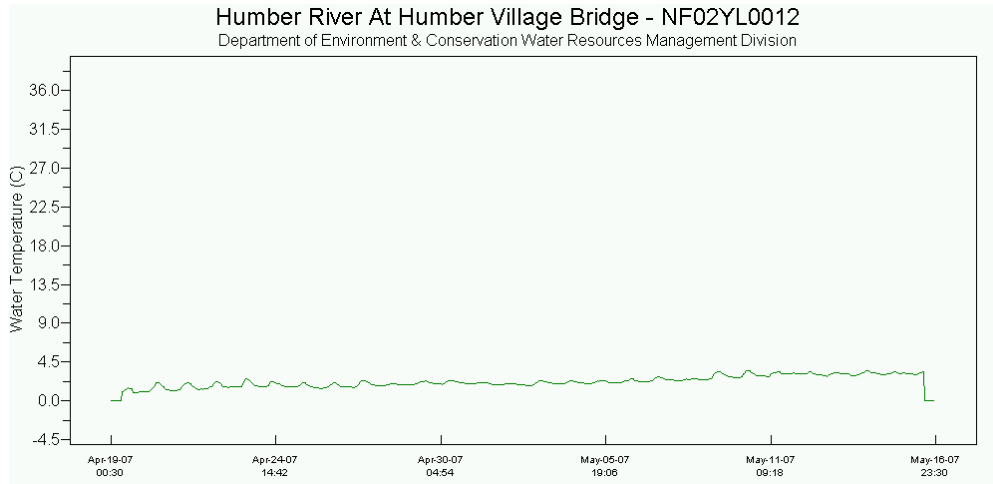


Figure 1

- The dissolved oxygen (**Figure 2**) remained relatively consistent over the deployment period with a slight decrease in values. The DO values ranged from 13.20mg/L to 12.79mg/L.

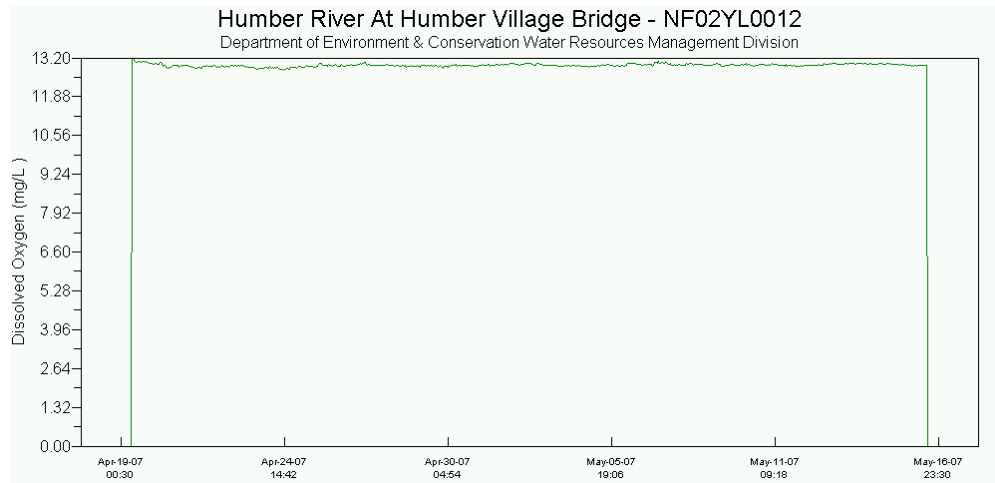


Figure 2

- pH values (**Figure 3**) remained relatively stable at approximately 7.0 units. The range for pH was 6.79 – 7.04 with all values falling within the recommended range (6.5 – 9.0) for the CCME Protection of Aquatic Life guidelines.

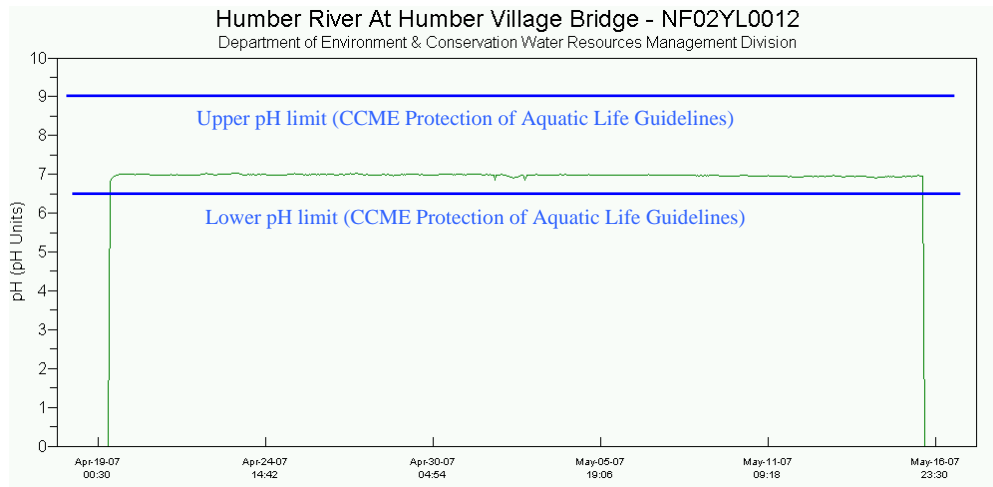


Figure 3

- Conductivity (**Figures 4**) remained consistent at background levels throughout the deployment period. The conductivity values ranged from 34.5 μ S/cm to 36.0 μ S/cm.

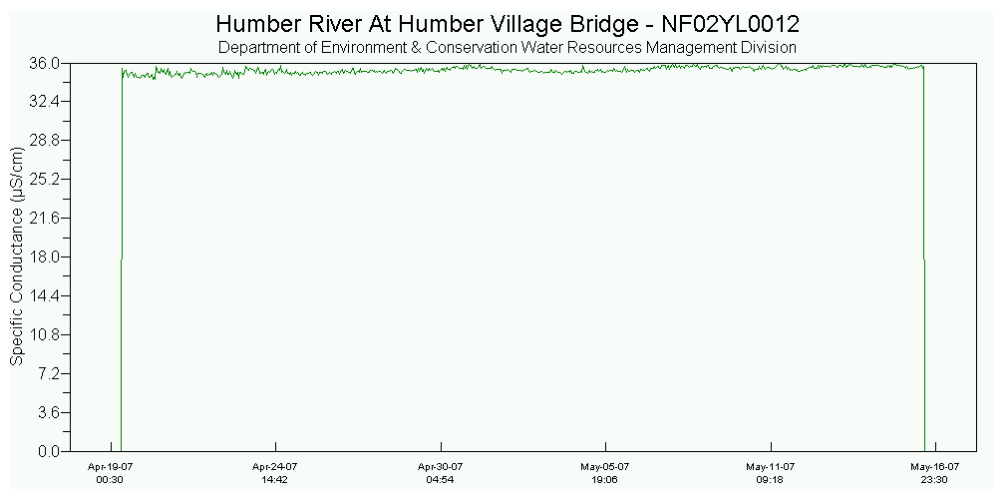


Figure 4

- The turbidity values (**Figure 5**) remained below 4.5 NTU which is within typical background concentrations for this station. Figure 5 shows a spike in turbidity on April 1st, 2007 of 10.9 NTU. This spike only occurred over a one hour period and is likely not a water quality event due to its short duration.

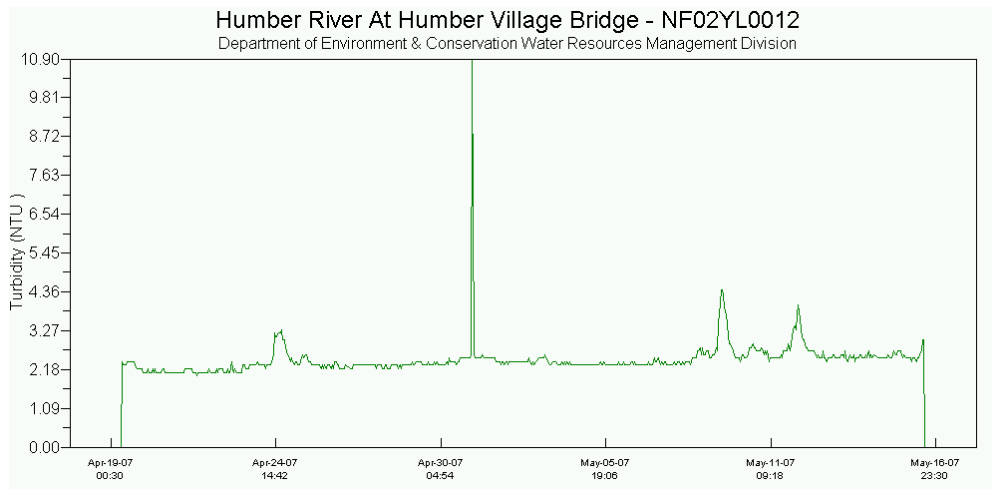


Figure 5

- **Figure 6** shows an increase in stage values over the deployment period which is common at this time of the year. Increased precipitation seen in the climate data (**Appendix A**) is consistent with this increase of stage.

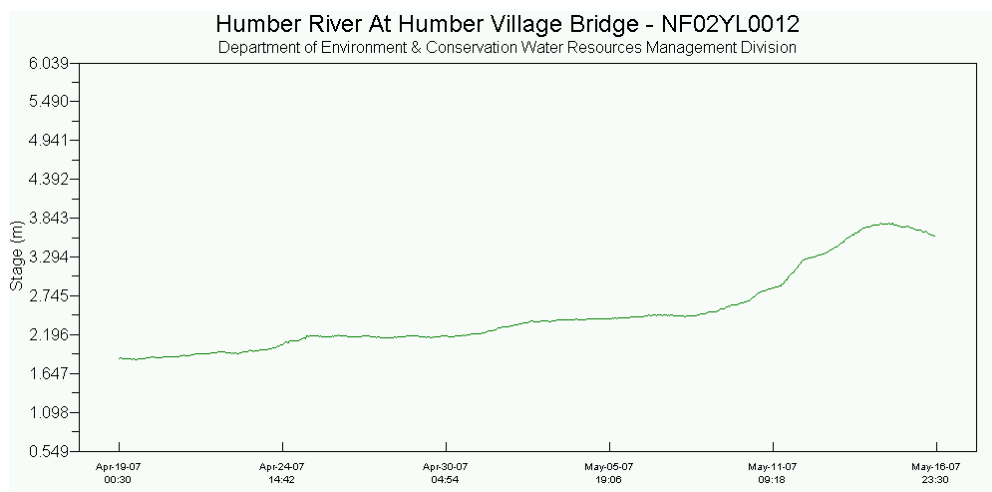


Figure 6

Prepared by: Annette Tobin
 Department of Environment and Conservation
 Environmental Scientist
 Ph: (709) 637-2431
 Fx: (709) 637-2541
 Email: annettetobin@gov.nl.ca
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