

## Real Time Water Quality Monthly Report Lower Humber River at Humber Village Bridge June - July 2006

### General

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

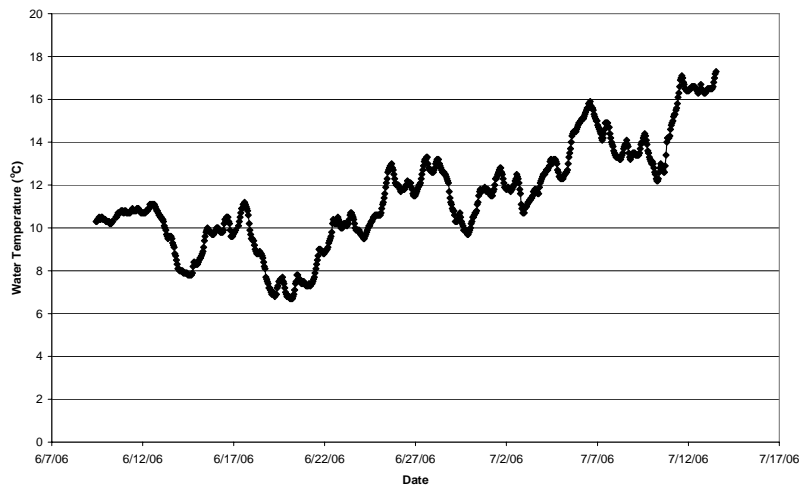
### Maintenance and Calibration of Instrumentation

- All sensors calibrated with no problem.
- Comparative water quality readings were taken with a Minisonde during the reinstallation of the Datasonde to ensure readings were correct. This procedure was 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 upon reinstallation.

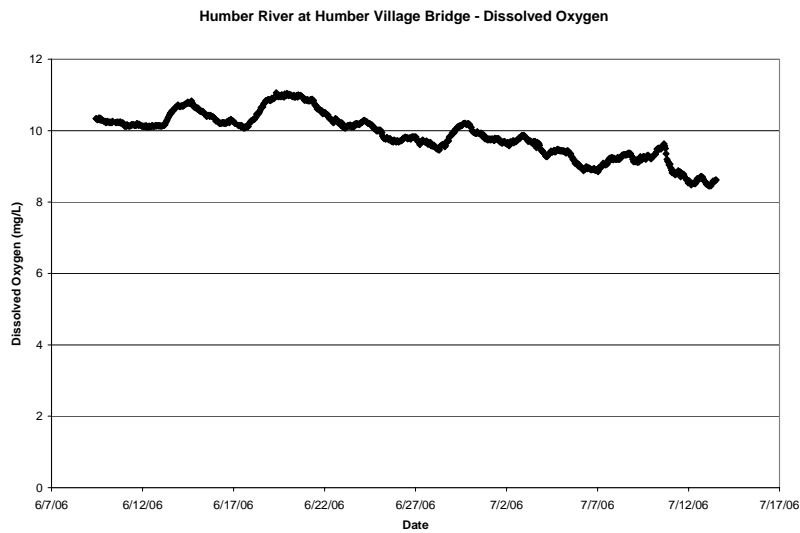
### Data Interpretation

- During the period of time between June 9 and July 13, 2006 the water quality remained relatively stable.
- There was some fluctuation in water temperature during the months of June and July but there was an increasing trend during this time period as is expected during the summer months.

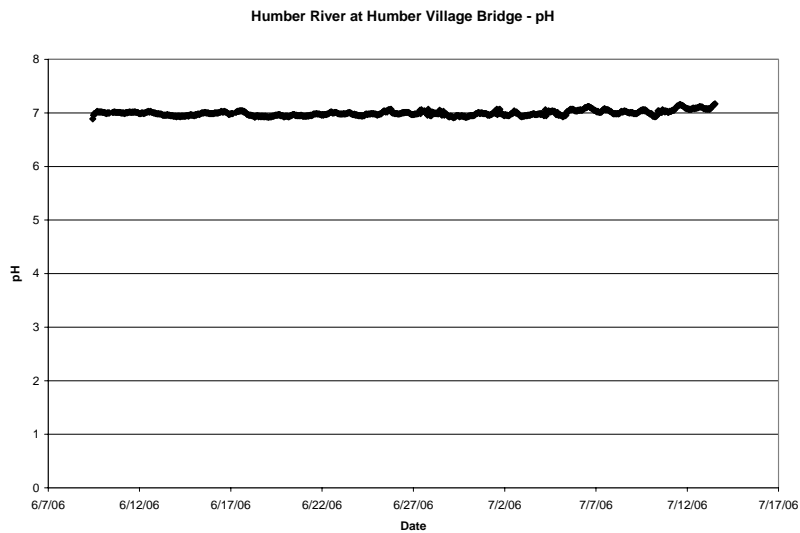
Humber River at Humber Village Bridge - Water Temperature



- Dissolved oxygen decreased during the months of June and July which is expected during the summer months. This decrease corresponds to the increase in water temperature as oxygen levels are affected by temperature. Fluctuations seen in the temperature can also be seen in the dissolved oxygen readings.

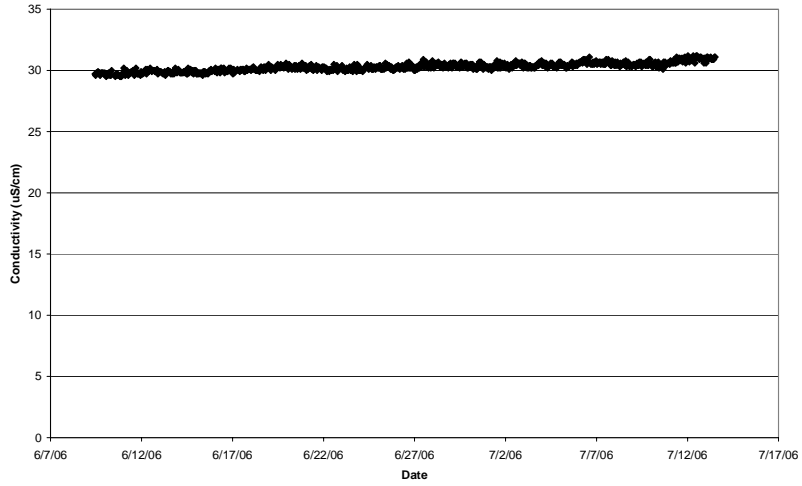


- pH values during the months of June and July remained stable at approximately 7.0 units.



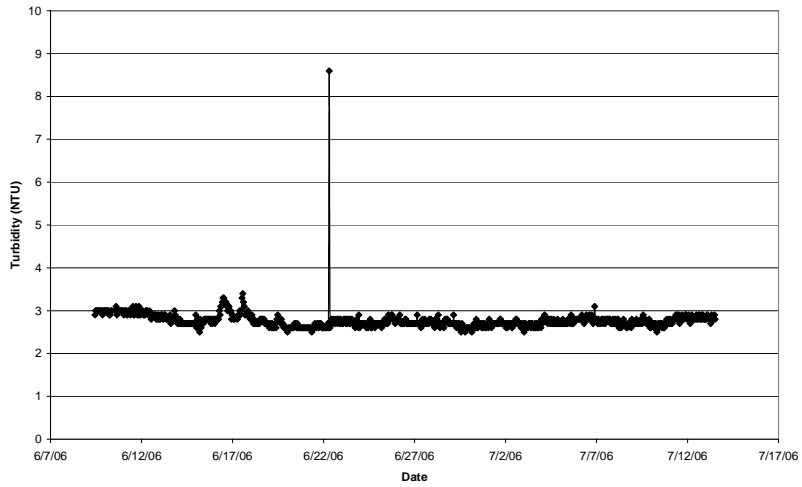
- Conductivity remained at approximately 30 uS/cm throughout the period of time between June and July. There was a slight increase throughout the period as conductivity was raised from 29.8 uS/cm to 31.1 uS/cm.

Humber River at Humber Village Bridge - Conductivity



- The turbidity values generally remained at approximately 3 NTU which is typical of this station. There was one spike in turbidity of 8.6 NTU on June 22 but only remained at this level for one hour.

Humber River at Humber Village Bridge



**Additional Information:**

- For the most part, water quality in Humber River behaved normally for the period of June 9 to July 13, 2006.
- The following table provides summary statistics on water quality parameters of the Humber River for this time period June 9 to July 13, 2006.

	<b>Temp- Water (°C)</b>	<b>pH</b>	<b>Conductance (uS/cm)</b>	<b>Diss- Solids (g/L)</b>	<b>% Saturation</b>	<b>Dissolved Oxygen (mg/L)</b>	<b>Turbidity (NTU)</b>
<b>Max</b>	17.4	7.46	32.1	0.0206	107.9	11.36	8.6
<b>Min</b>	6.8	6.89	29.5	0.0189	98.2	9.49	2.5
<b>Average</b>	11.5	7.14	30.7	0.0197	102.2	10.39	2.8
<b>Standard Deviation</b>	2.5	0.11	0.6	0.0004	2.1	0.40	0.2

- The following table provides summary statistics on water quality parameters for the Humber River RTWQ station going back to December 2003.

	<b>Temp- Water (°C)</b>	<b>pH</b>	<b>Conductance (uS/cm)</b>	<b>Diss- Solids (g/L)</b>	<b>% Saturation</b>	<b>Dissolved Oxygen (mg/L)</b>	<b>Turbidity (NTU)</b>
<b>Max</b>	20.7	7.68	44.9	0.0287	148.1	20.01	955.0
<b>Min</b>	-0.1	5.44	29.5	0.0189	87.7	8.50	0.0
<b>Average</b>	7.1	6.82	37.1	0.0238	100.0	12.16	2.7
<b>Standard Deviation</b>	5.6	0.32	3.0	0.0019	8.5	2.01	7.3

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