

Real Time Water Quality Monthly Report: Lower Humber River @ Humber Village Bridge September 2004

General

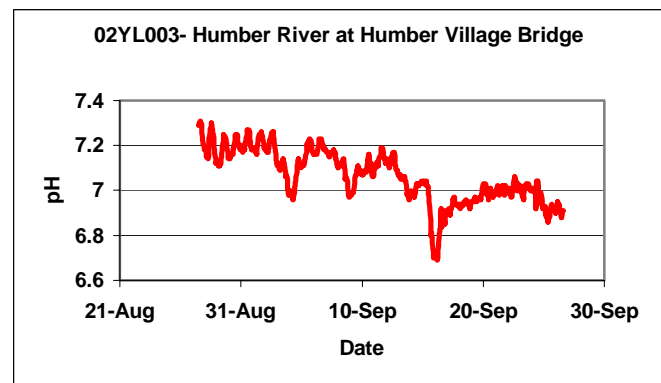
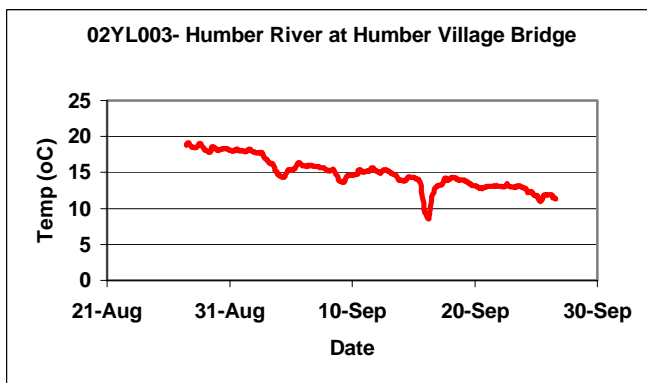
- The Water Resources Management Division staff monitor the real-time web page on a daily basis.

Maintenance and Calibration of Instrumentation

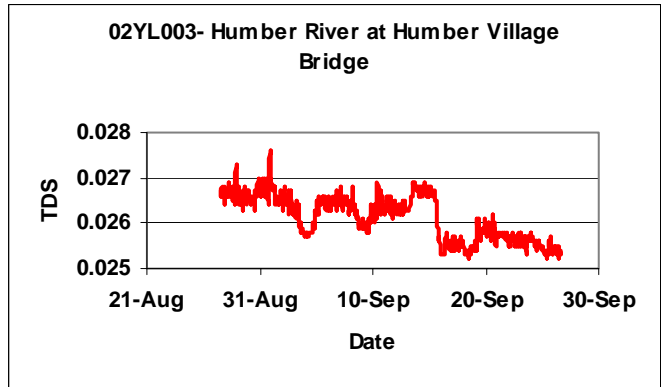
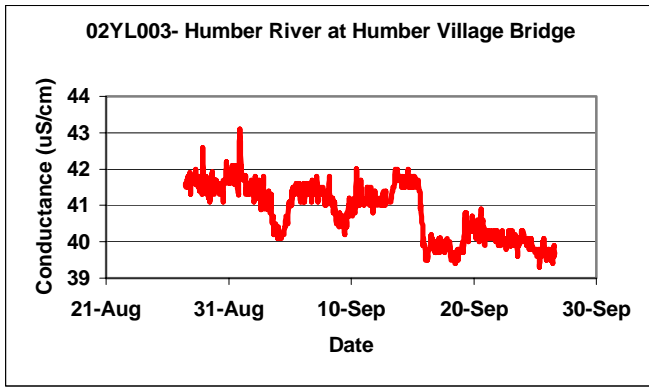
- All sensors calibrated without problem.
- Comparative water quality readings were taken with a Minisonde during the reinstallation of the Datasonde to ensure readings were correct. This procedure is also required as part of the QA/QC protocol. The Minisonde was calibrated before use.
- A water sample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

Data Interpretation

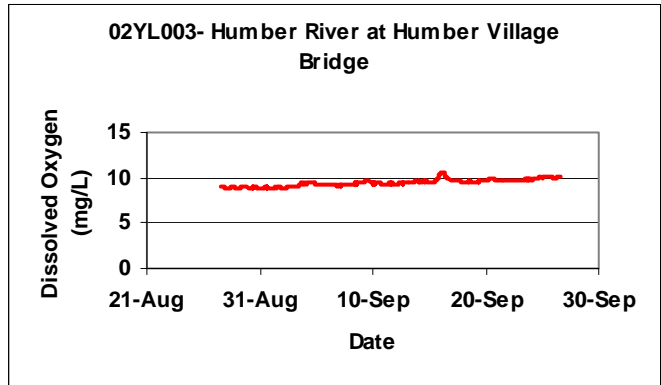
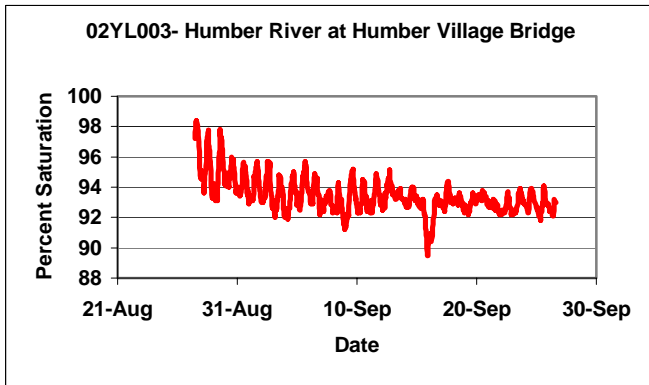
- During the period from Aug 27th, 2004 to Sep 27th, 2004 all parameters displayed normal behaviour reflective of conditions.
- Water temperature began to decrease, coinciding with the autumnal cooling of ambient air temperature, particularly at nighttime. pH displayed a decreasing trend for the month, more pronounced than the usual fluctuations observed in pH; values were still within normal range however. Generally, pH shows a tendency to drift upward so this downward trend might indicate extra acidity from decaying vegetation as we enter fall.



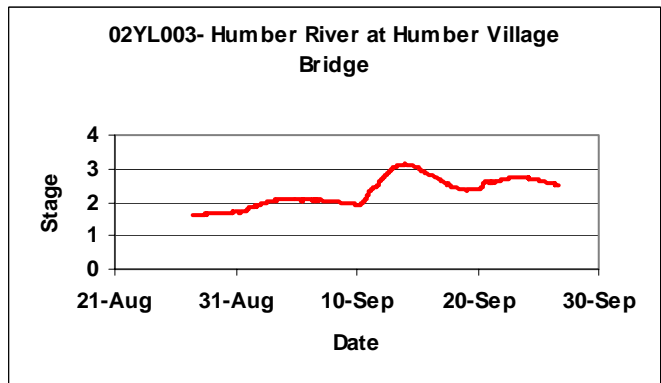
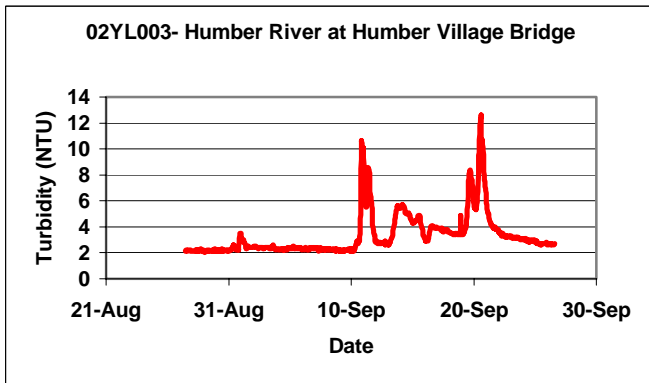
- Conductance values for this period fell within normal range for the Humber River. Both conductance and dissolved solids displayed decreasing trends over this period coinciding with the observed increase in stage or streamflow. Dissolved solids tend to become less concentrated with increased runoff. The step in conductivity and TDS around mid-September coincides with the step observed in pH and the increase in runoff noted on the Stage graph.



- Dissolved oxygen levels increased over this period corresponding to the decrease in water temperature. Percent saturation levels did not mirror DO levels very closely, and one significant dip occurred corresponding to the increase in stage observed.



- Background turbidity levels stayed around 2.5 NTU throughout this entire period, but were disrupted by two major storm events, both remnants of tropical hurricanes. Two spikes between 10-13 NTU were observed, corresponding to the rising limbs of these runoff events as observed on the Stage graph.



Additional Information

- The influence of the start of fall seemed to predominate all water quality variables with decreasing temperature and conductance, increasing oxygen levels, and turbidity spikes as a result of fall storms.

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