

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

General

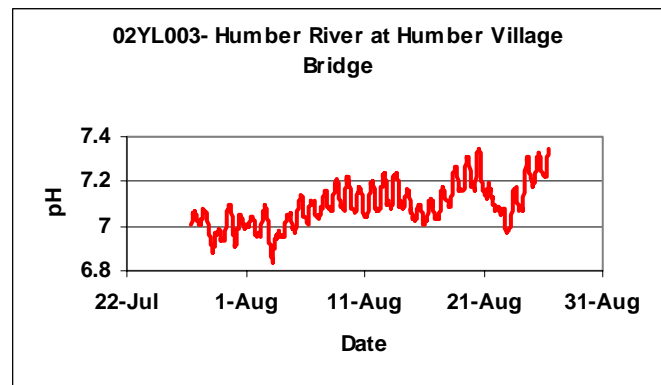
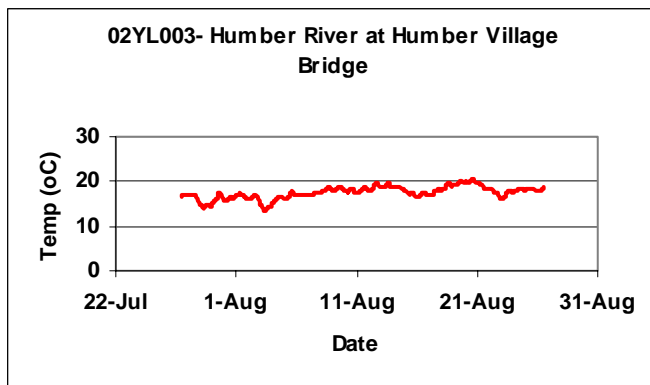
- The Water Resources Management Division staff monitor the real-time web page on a daily basis.

Maintenance and Calibration of Instrumentation

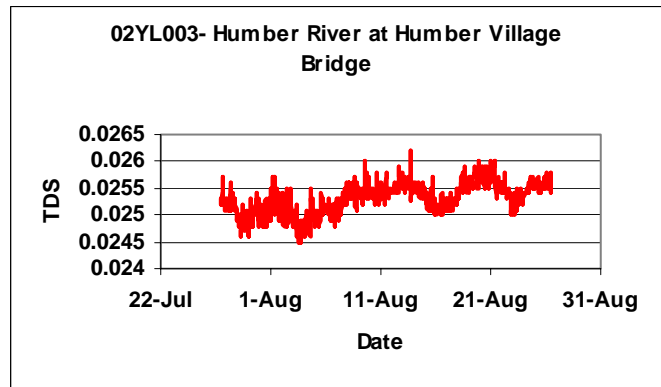
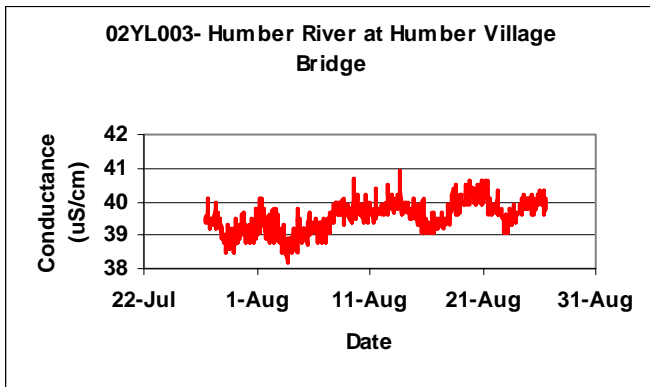
- All sensors seemed to calibrate without problems, however, once the Datasonde was removed for this period it was found that the turbidity probe had somehow lost its calibration.
- Comparative water quality readings were taken with a Minisonde during the reinstallation of the Datasonde to ensure readings 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

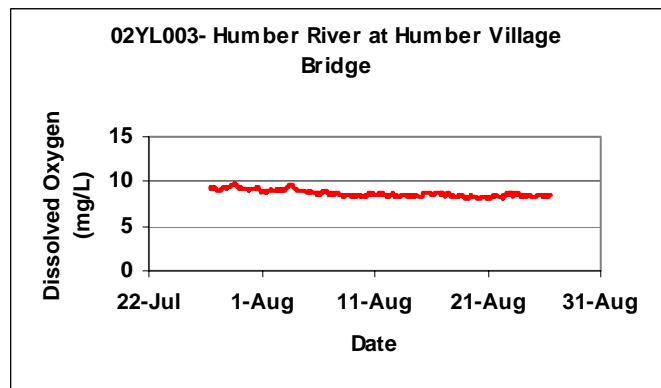
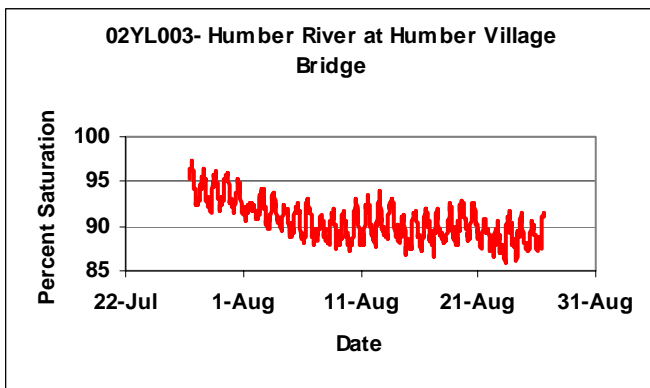
- During the period from July 27th, 2004 to Aug 26th, 2004 parameters displayed normal behaviour except for turbidity which lost its calibration.
- Water temperature continued to increase as ambient air temperature increased. Diurnal fluctuations in water temperature due to daytime warming and nighttime cooling effects were less pronounced during this period. pH displayed normal fluctuations in range with typical pH values for the Humber River. pH also showed greater diurnal variation and a tendency to drift upward.



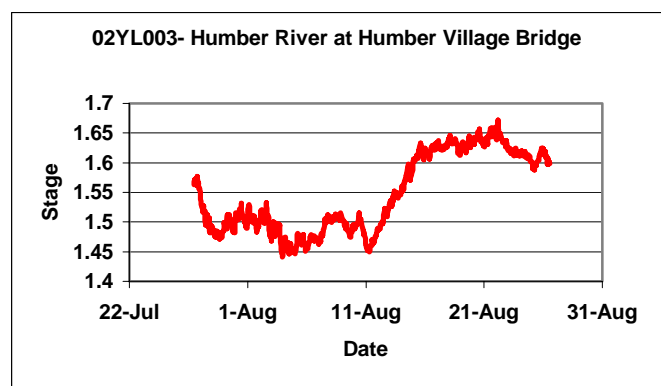
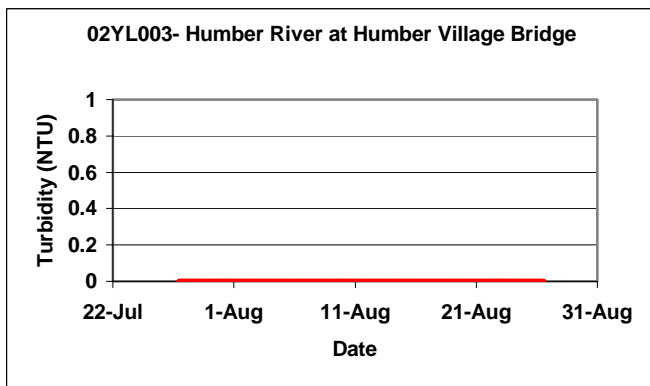
- Conductance values for this period fell within normal range for the Humber River. Both conductance and dissolved solids displayed slight increasing trends over this period. Dissolved solids tend to become more concentrated with decreased runoff. The dips in conductivity and TDS coincide with the dips observed in pH and the increase of runoff noted on the Stage graph during the latter period of August.



- Oxygen levels decreased over the first part of this period corresponding to the increase in water temperature.



- Background turbidity levels read 0 NTU throughout this entire period due to a calibration error with the turbidity sensor. Streamflow was low, only seeing an increase by mid-August with rainier weather.



Additional Information

- Full summer conditions seem to predominate water quality variables, especially temperature, pH, conductance and oxygen levels. Light rainfall events after the middle of August lead to increased runoff and slight corresponding effects on certain parameters. The error in calibrating turbidity resulted in a continuous reading of 0 NTU.

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