

Real Time Water Quality Monthly Report: Lower Humber River @ Humber Village Bridge March-April-May 2004

General

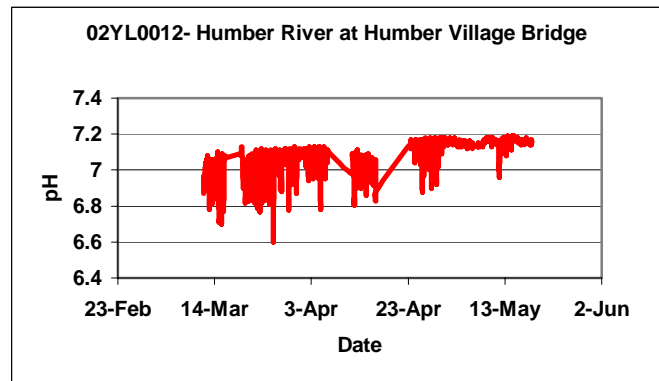
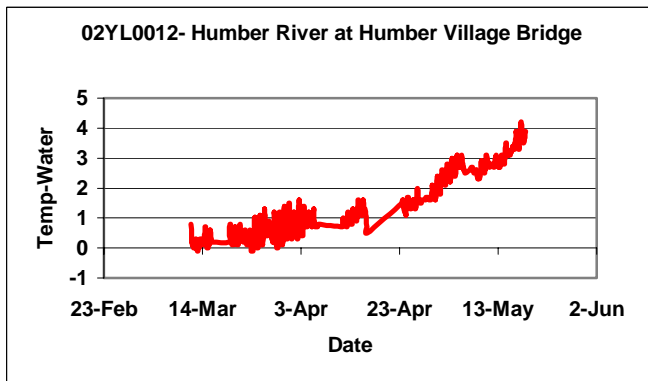
- The Water Resources Management Division staff monitor the real-time web page on a daily basis.

Maintenance and Calibration of Instrumentation

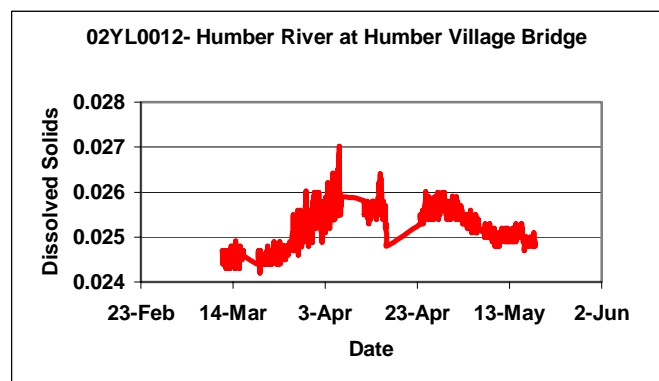
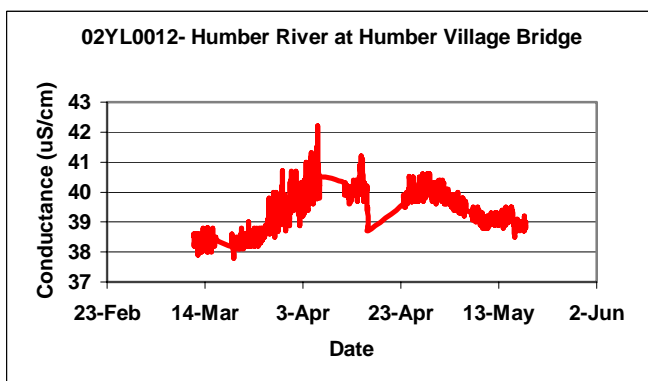
- All sensors calibrated without problems.
- Comparative water quality readings were taken with a Minisonde during the reinstallation of the Datasonde to ensure readings were correct. This procedure is also required as part of the QA/QC protocol. The Minisonde was calibrated before use.
- The Hydrolab Datasonde was left in situ for twice as long as recommended for calibration purposes due to a public service sector strike in April.

Data Interpretation

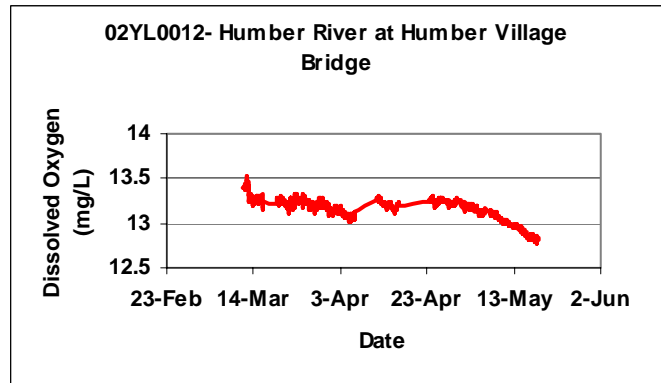
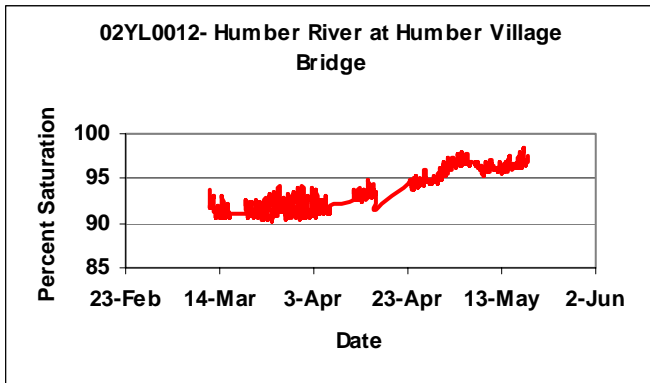
- During the period from Mar 12th, 2004 to May 18th, 2004 most parameters displayed normal behaviour. Water temperature began to increase starting in April with milder weather. pH displayed normal fluctuations in range with typical pH values for the Humber River. A slight tendency of the data to drift upward towards the end of April indicated the need for calibration.



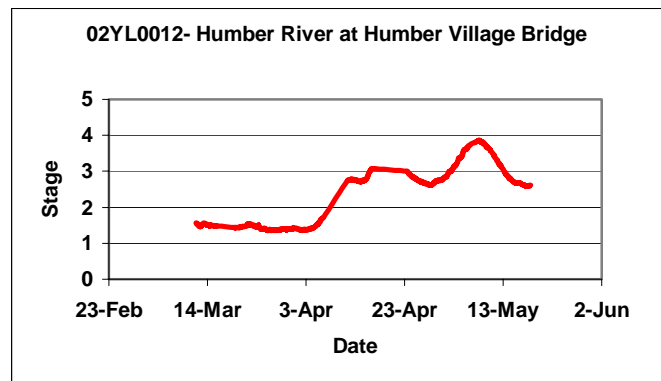
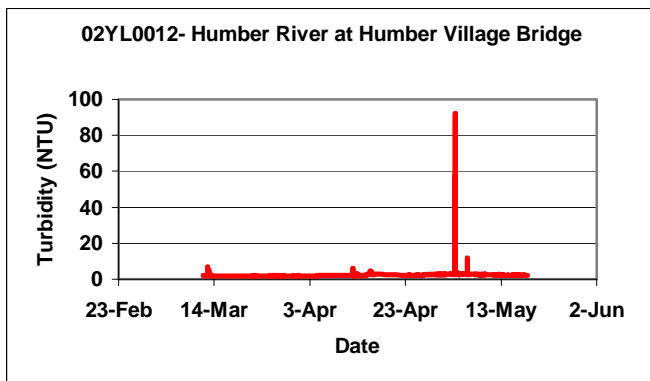
- Conductance values for this period fell within normal range for the Humber River and remained fairly constant. A rise in conductance starting at the beginning of April corresponds with increased water temperatures and milder weather. Runoff from snowmelt at this time acts as a sort of first flush, depositing accumulated materials into waterways after the winter.



- Percent saturation of oxygen increased while dissolved oxygen decreased over this period. The decrease in DO corresponds to increasing water temperatures. The need for calibration could also help explain these results.



- Background turbidity levels increased to slightly above 0 NTU during this period. A large spike in turbidity occurred in early May corresponding to a rising leg in stage or streamflow. First flush spring runoff, and heavy spring rains can account for the increase in turbidity observed during this period compared with winter months.



Additional Information

- A public service sector strike meant that the Hydrolab Datasonde was left in the water twice as long as it should have been without calibration. Even though, sensor readings did not drift excessively. The impact of spring melt, and heavy spring rainfalls were observed on a number of different parameters.

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