

DEWATERING COMPLAINT REVIEW COMMITTEE

Wednesday, April 9, 2008

Agenda

- Background
- CRC Process
- Past Cases
- Ongoing Cases
- Aquifer Recovery

Background

- Implementation of infrastructure sometimes requires dewatering.
- Dewatering can cause a temporary impact on private wells.
- Region attempts to proactively mitigate private well impacts.
- Un-anticipated impacts are addressed through the Region's 24 hour call centre and subsequent investigations.
- The CRC process was developed to review cases of residents who remain un-satisfied with the Region's assessment of their well complaint.
- It was established for the 16th Avenue Trunk Sewer Project to provide a process of appeal in 2003.

CRC Process

- Resident requests a review by CRC.
- The Region contacts resident to gather information and provide options for review date.
- The CRC Review is held.
- Regional Council then reviews CRC recommendation and renders final decision.
- The decision is communicated to the resident within 3 days of the Regional Council decision.

Past Cases

Case #1

- CRC meeting July 21, 2003.
- It was concluded that the resident should have his well cleaned out and request another CRC meeting if this did not resolve his problem.
- The resident's well was cleaned out at the Region's expense and with the Region's assistance.
- No further requests for an additional CRC meeting.

Past Cases

Case #2

- CRC meeting August 21, 2003.
- It was concluded that the resident should have a water treatment system installed at their own expense.
- Regional staff was asked to take water quality samples.
- The resident was told to request another CRC meeting if their problem was not resolved.
- No further requests for an additional CRC meeting.

Past Cases

Case #3

- CRC meeting August 21, 2003.
- It was concluded that their temporary water system would be discontinued after reasonable notice was given.
- York Region was asked to re-commission their existing well and conduct water quality samples.
- Bottled water was to be supplied until existing well was in working order.
- No further requests for an additional CRC meeting.

Past Cases

Case #4

- CRC meeting July 19, 2005.
- The CRC decided not to take any further action on this case.
- No further requests for an additional CRC meeting.

Ongoing Cases - Thompson

Background Information

- Ron and Julia Thompson
- 4133 Bethesda Road in Stouffville, Ontario
- Call placed on August 26, 2005 to call centre.
- Currently have two wells; original well and new drilled well.

Ongoing Cases - Thompson

Initial Investigation

- Field technician from Inspec-Sol was sent out same day call was placed.
- Follow-up investigation on September 19, 2005.
- Inspec-Sol sent a letter on October 31, 2005 detailing results.

Ongoing Cases - Thompson

Conclusion from Initial Investigation Letter of October 31, 2005

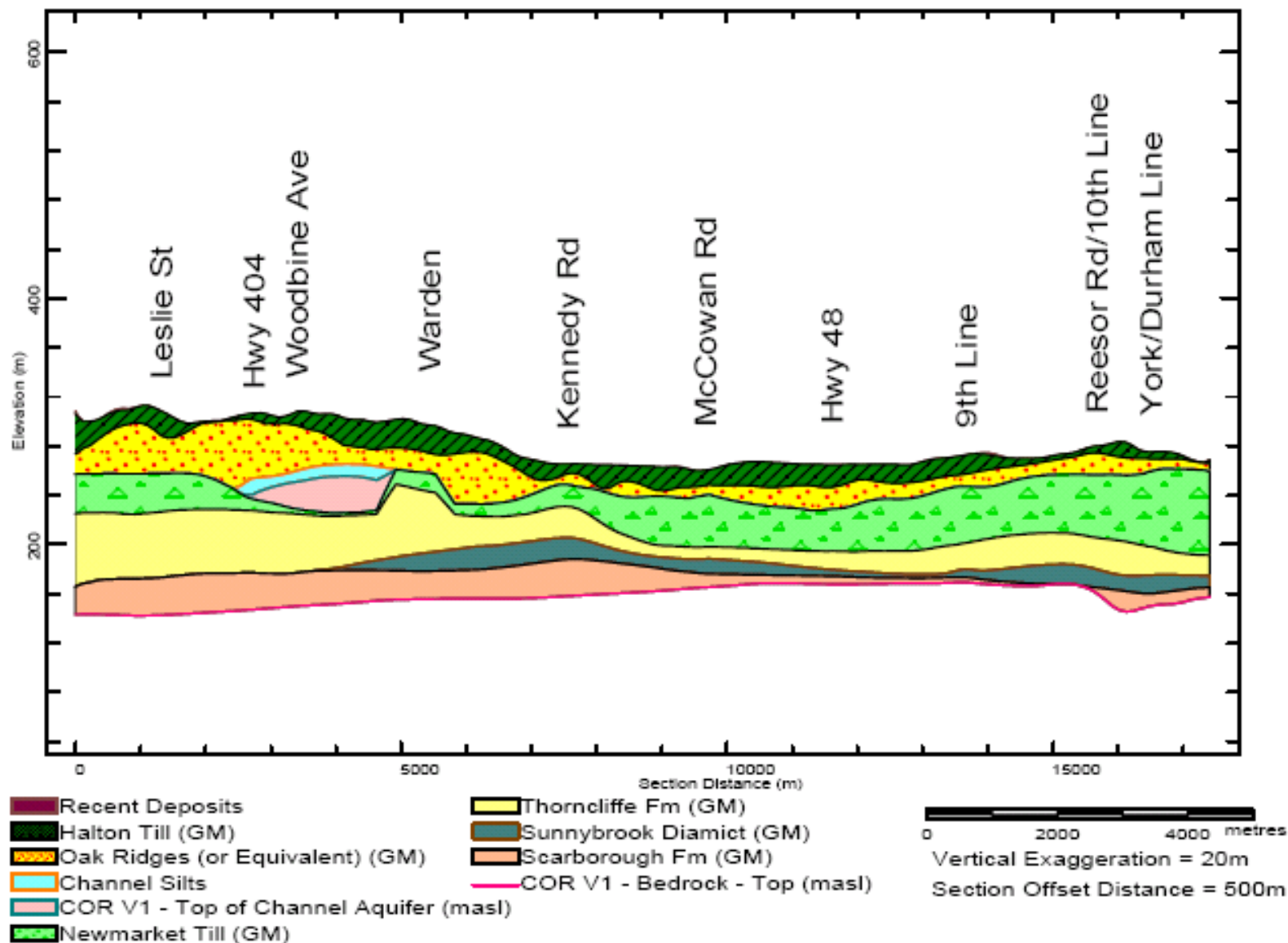
- The Thompson's well water issue was not caused by dewatering activities along 16th Avenue.
- Water issues were due to poor yield from their well, a condition which existed before the dewatering took place.

Ongoing Cases - Thompson

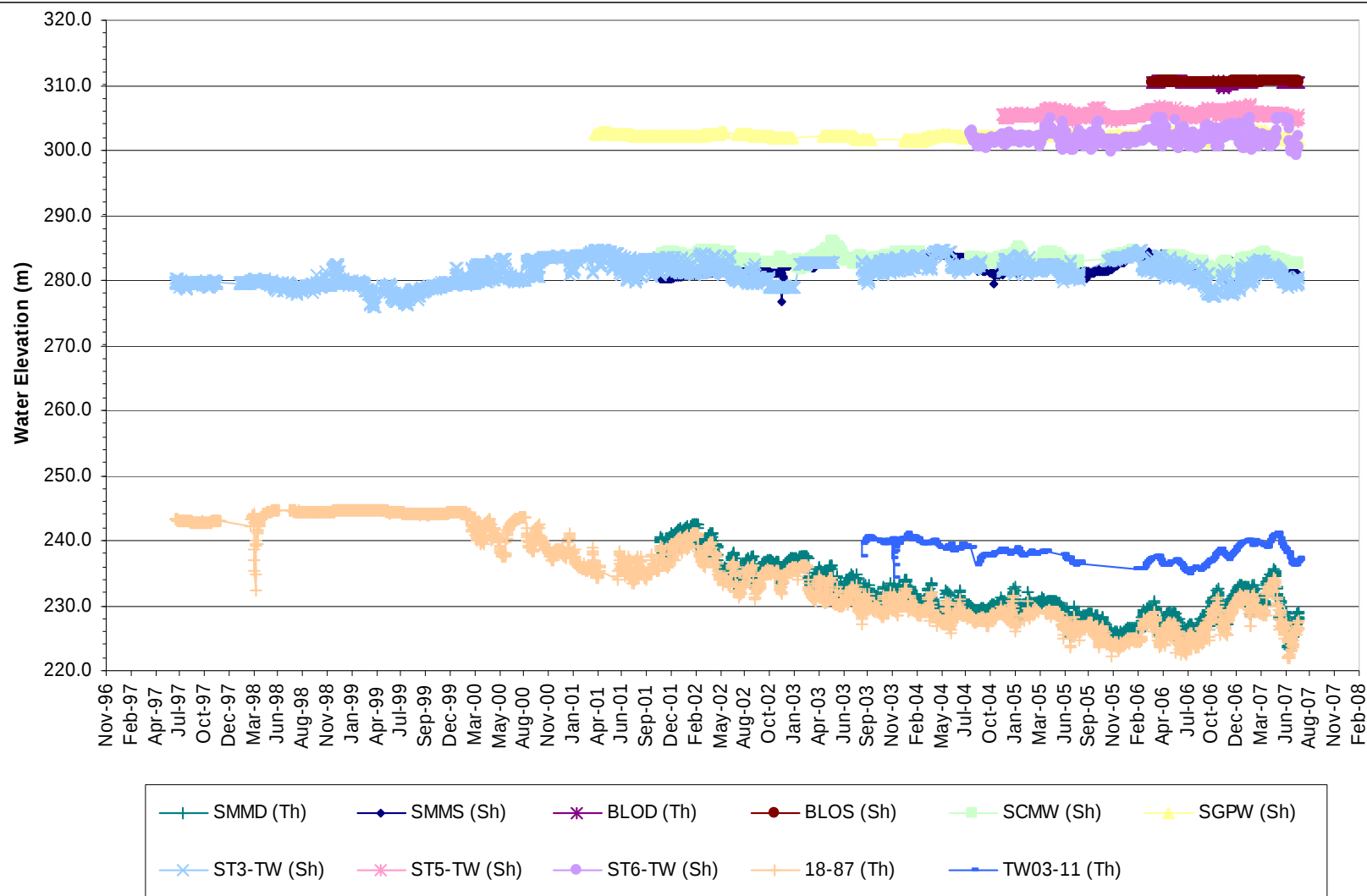
CRC Meeting

- Ron and Julia Thompson requested a meeting.
- Retained Mr. Garry Hunter as their hydrogeologist.
- Meeting held April 11, 2007.
- The CRC instructed that additional monitoring be carried out during the aquifer recovery period and that the respective hydrogeologists meet in the interim order to exchange any relevant data.
- Following the CRC, Inspec-Sol completed additional monitoring and met with Mr. Hunter on May 4, 2007.

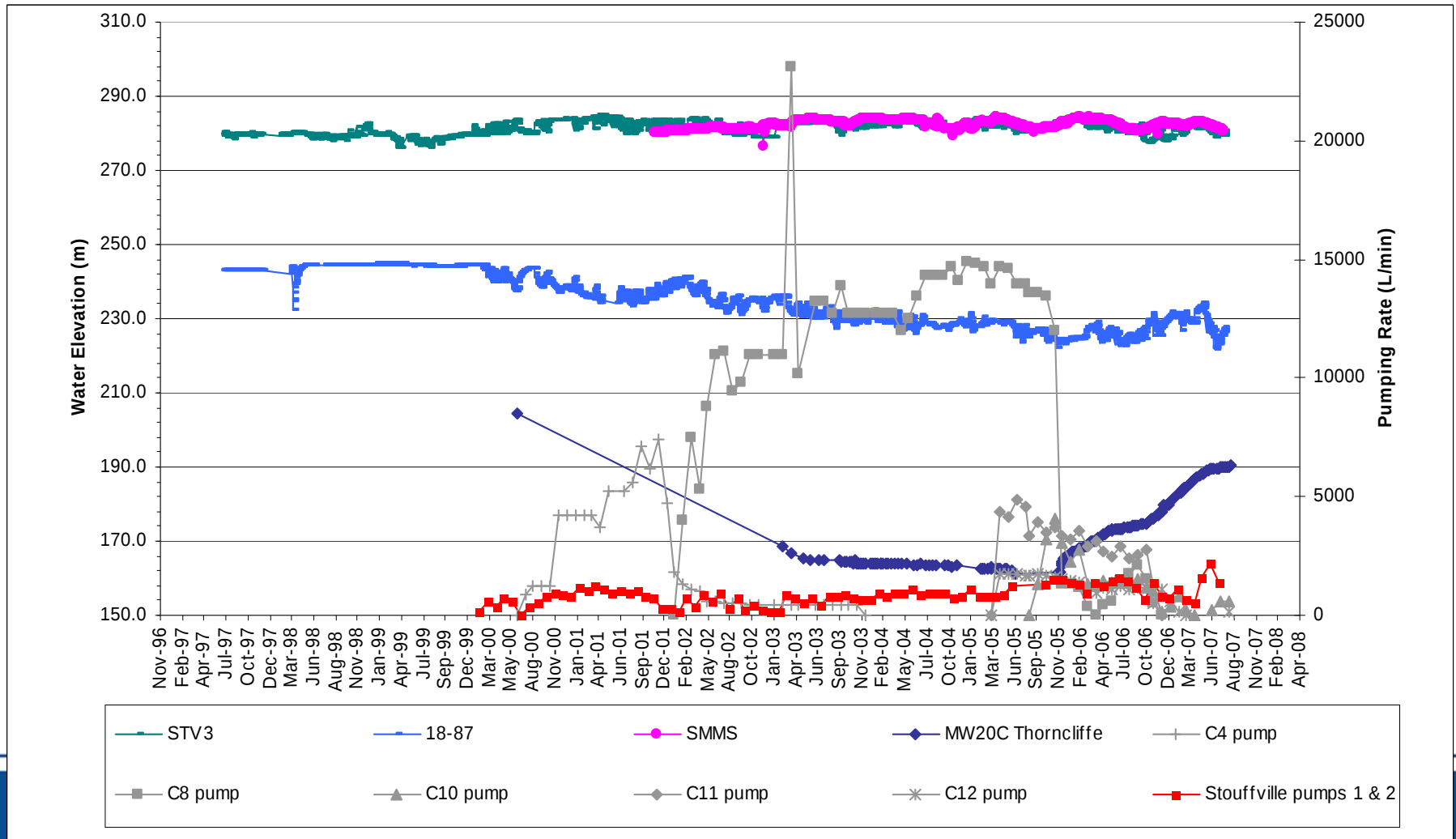
Cross Section B Stratigraphy



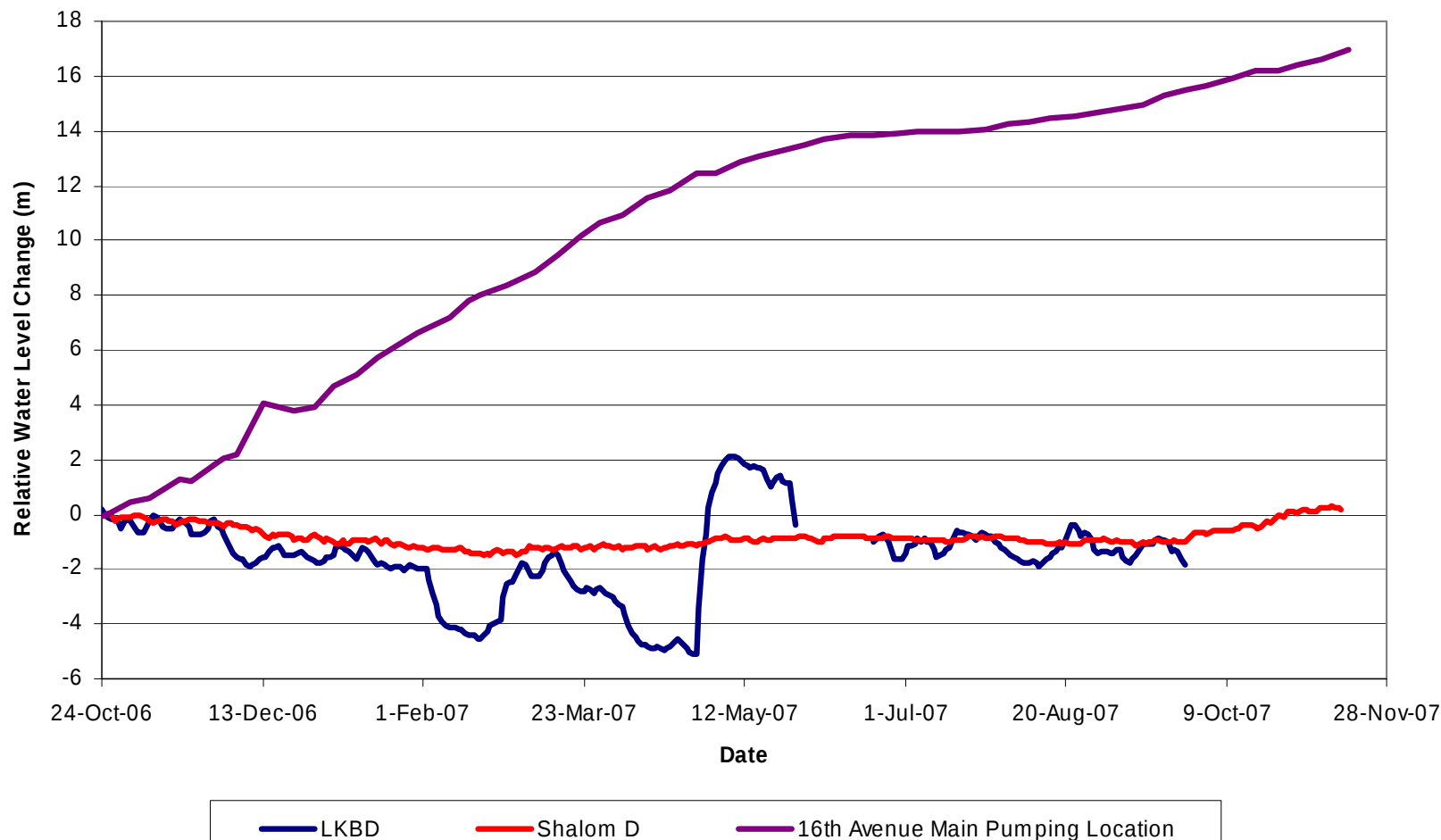
Stouffville Monitoring Wells



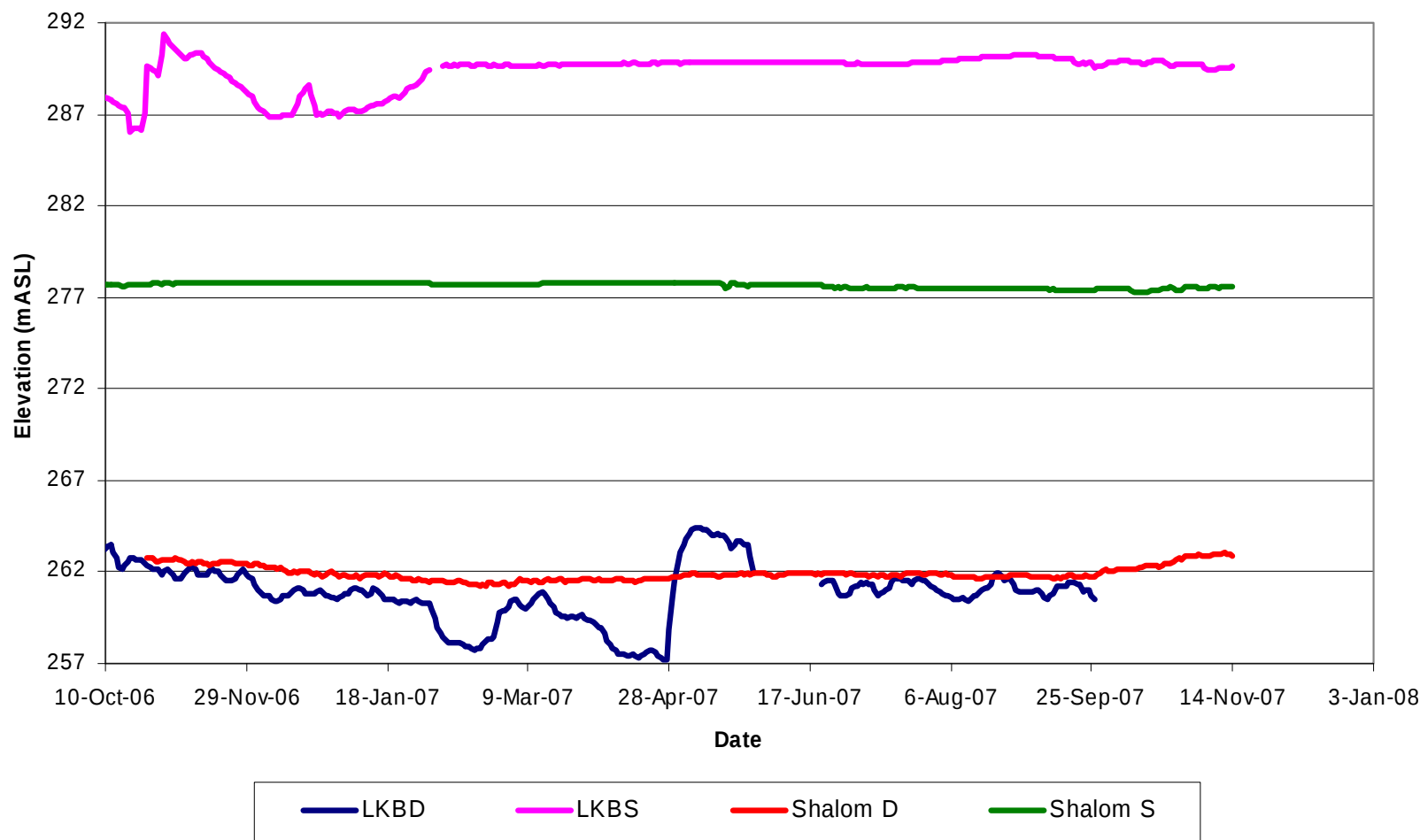
Comparison of Water Level Trend at 16th Avenue vs. Stouffville



Comparison of Water Level Trend at 16th Avenue vs. Stouffville



York Region New Monitoring Wells Near Bethesda Road



Ongoing Cases - Thompson

Conclusions from Second Investigation

- Based on new information gathered, it was concluded again that the Thompson's well was not affected by the dewatering on the 16th Avenue tunnelling project.
- This assessment was articulated to the Thompsons in a letter on November 1, 2007.

Ongoing Cases - Empringham

Background Information

- Kim Empringham
- 12900 Kennedy Road Stouffville, Ontario
- Call placed on September 8, 2005 to call centre.
- Currently have two wells; original flowing well and new drilled flowing well.

Ongoing Cases - Empringham

Initial Investigation

- Field technician from Inspec-Sol was sent out same day call was placed.
- Inspec-Sol sent a letter on October 31, 2005 detailing results.

Ongoing Cases - Empringham

Conclusion from Initial Investigation Letter of October 31, 2005

- Kim Empringham's well water issue was not caused by dewatering activities along 16th Avenue.
- Water issues were due to poor yield from her well.

Ongoing Cases - Empringham

Initial Investigation: MOE

- In addition to Inspec-Sol's initial investigation, the MOE conducted their own assessment of the well.
- This assessment resulted in the same conclusion; the well was not affected by the dewatering activities along 16th Avenue.

Ongoing Cases - Empringham

CRC Meeting

- Kim Empringham requested a meeting.
- Retained Mr. Ray Blackport as her hydrogeologist.
- Meeting held April 11, 2007
- The CRC instructed that additional monitoring be carried out during the aquifer recovery period and that the respective hydrogeologists meet in the interim order to exchange any relevant data.
- Following the CRC, Inspec-Sol completed additional monitoring and met with Mr. Blackport on May 4, 2007.

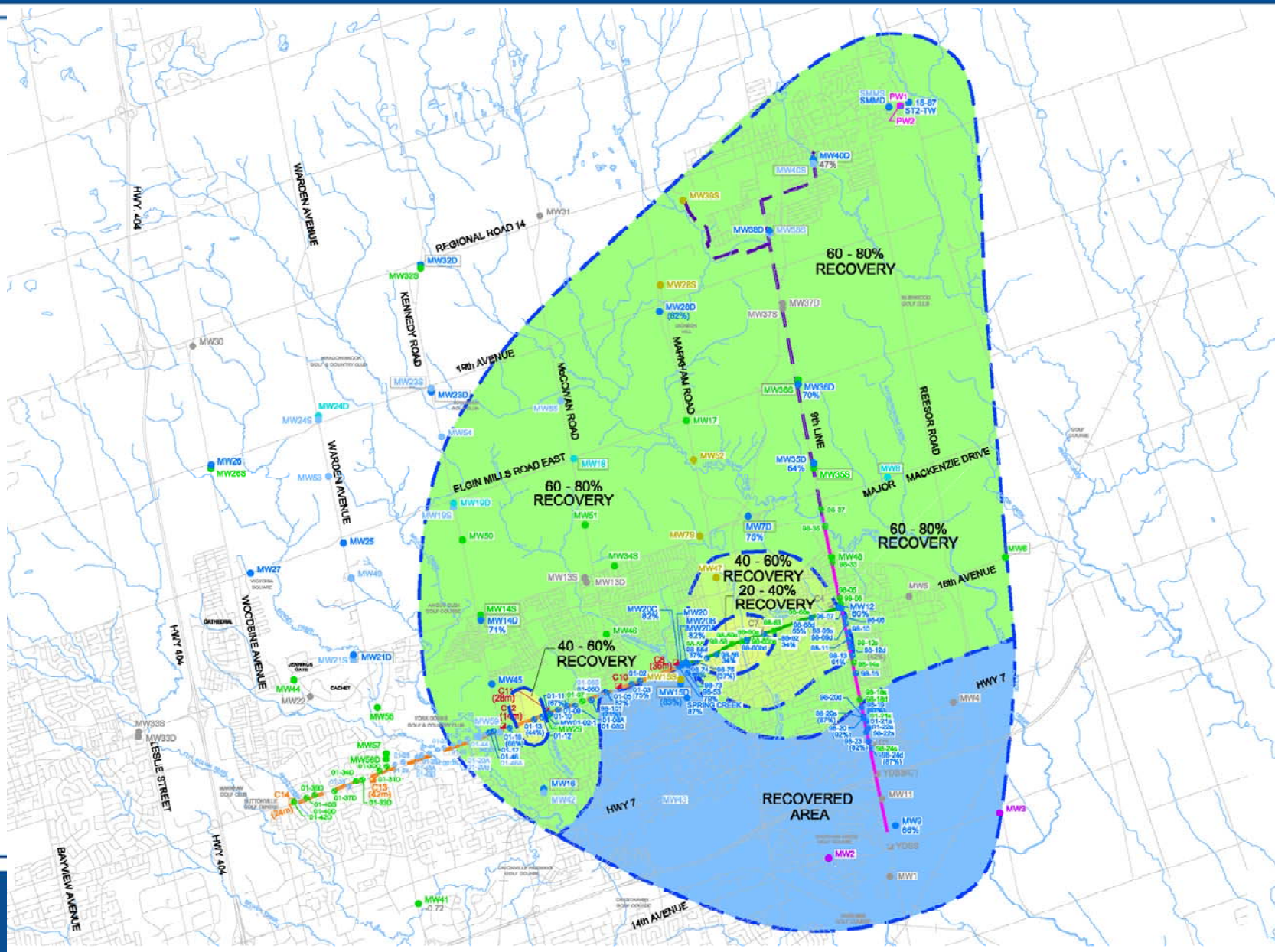
Ongoing Cases - Empringham

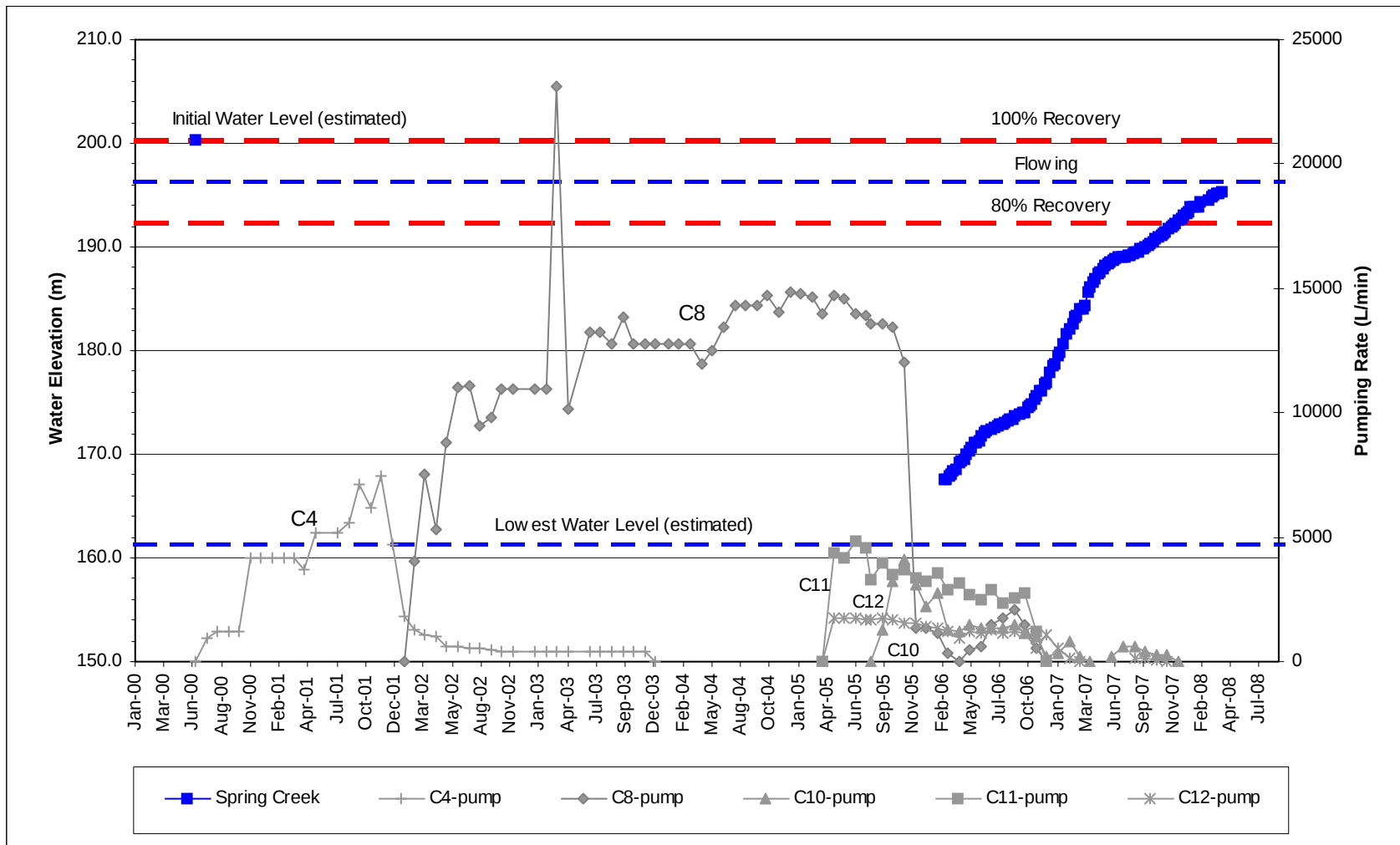
Conclusions from Second Investigation

- Based on new information gathered, it was concluded again that Kim Empringham's well was not affected by the dewatering on the 16th Avenue tunnelling project.
- This assessment was articulated to the Empringhams in a letter on November 23, 2007.
- MOE staff concurred with the Regional Team's findings.

16th Avenue Dewatering – Aquifer Recovery

- Aquifer has been recovering more quickly than expected.
- Full recovery is likely to occur by the end of the year.
- Spring Creek should begin to flow again in May.





Questions?

Ongoing Cases - Thompson

Summary of Initial Investigation Letter of October 31, 2005

- 6-inch diameter drilled well. It is approximately 45.05 metres below the top of the well casing (m BTOC).
- Submersible pump located approximately 38 m BTOC.
- Two water level measurements were taken. On August 26, 2005 the water level was 21.0 m BTOC and on September 19, 2005 it was 28.5 m BTOC.
- Available drawdown in the Thompson's well ranges from about 10 to 20 metres.
- A loss of water was observed after 10 minutes of pumping with a slow but steady recovery.
- The Thompson's had previously called Wilson Water Wells about a sand issue. After an investigation, Wilson Water Wells was unable to resolve the issue.
- Inspec-Sol concluded well is located in the shallow aquifer.

Ongoing Cases - Thompson

CRC Meeting Follow-Up Investigation Results

- Based on past drillers invoices, the Thompson's well had yield problems prior to the start of dewatering on the 16th Avenue tunneling project.
- It is likely the well in question was drilled into clay soils which generally would result in poor water yield.
- Static water levels were collected after the Thompsons stopped using their old well. These measurements were between 0.42 and 0.85 m BTOC. This indicates that the well was full when not in use.
- The Thompson's new well was installed in the Thorncliffe aquifer and has a reported water level of 10.8 m BTOC.
- A loss of water after approximately 10 minutes of pumping was observed, with a slow but steady recovery, consistent with a poor yielding or plugged well.

Ongoing Cases - Empringham

Summary of Initial Investigation Letter of October 31, 2005

- 2-inch diameter well with a 28.5 m BTOC drilled portion and a 2.5 m BTOC dug portion.
- Dug portion of the well has an overflow pipe approximately 2 m BTOC which is connected to an adjacent reservoir (800 gallons). An overflow outlet is also located near the top of the concrete casing.
- The static water level measurement was 1.96 m BTOC.
- The well has loose sediment between 22 m BTOC and the bottom of the well. Fine blue sediment was also found on the water level meter on retrieval.
- The well flows under natural artesian conditions from the drilled portion into the dug portion.
- Ms. Empringham's well and reservoir are equipped with jet pumps to service her house and barn.

Ongoing Cases - Empringham

CRC Meeting Follow-Up Investigation Results

- 2-inch diameter flowing well. These types of wells are prone to plugging with age.
- It was concluded that both wells were in the same aquifer. The water level in the new well was several meters above that shown in her old well, confirming that the old well was plugged.
- Significant quantities of fine sediment were found in the old well.
- MOE reviewed Ms. Empringham's case and concluded she was not affected by 16th Avenue dewatering.
- The dewatering on 16th Avenue did not significantly impact the deep Thorncliffe aquifer in the area of Ms. Empringham's house.
- The shallow aquifer in which both of Ms. Empringham's wells draw from is protected from impacts to the deeper aquifer by approximately 15 to 40 m of clay till aquitard.