

THE REGIONAL MUNICIPALITY OF YORK

**REPORT NO. 10
OF THE REGIONAL
COMMISSIONER OF TRANSPORTATION AND WORKS**

**For Consideration by
The Council of The Regional Municipality of York
on December 6, 2001**

1**NINTH LINE TRUNK SANITARY SEWER
TENTH LINE WELL COMPLAINT
TOWN OF MARKHAM, PROJECT 79780****1. RECOMMENDATION**

It is recommended that:

1. This report be received for information purposes.

2. PURPOSE

This report is to inform of the status of discussions concerning potential impacts on a private well in the area of the Ninth Line Trunk Sanitary Sewer Project.

3. BACKGROUND

The Ontario Federation of Agriculture made a deputation to the Transportation and Works Committee on November 28, 2001 regarding a well on property owned by Public Works Canada and leased by Mr. John Bigioni.

Mr. Bigioni is experiencing trouble with the well, which he attributes to the dewatering activities necessary for the Region's construction of the Ninth Line Trunk Sanitary Sewer. These concerns were first brought to the attention of the Region's contractor in November 2000. The Region's contractor supplied water on a temporary basis while the contractor's technical experts investigated the well complaint.

A subsequent investigation by the Ministry of the Environment was also carried out on behalf of the owner of the well, Public Works Canada.

3.1 Ninth Line Trunk Sanitary Sewer Project

Construction of the Ninth Line Trunk Sanitary Sewer was identified as a strategic project in the 1997 York Durham Sewage System (YDSS) Master Plan. This trunk sewer is the first component of the new parallel system for the existing YDSS to service new development in the Town of Markham and to accommodate future growth throughout York Region.

The timing for construction of this project has been advanced through Development Charge pre-payments by area developers in Markham and Stouffville. Construction started in July of 2000 and is scheduled for completion in December 2003.

The sewer is approximately 50 metres deep and is being constructed by tunnelling. It is necessary to pump water from the ground (dewater) in order to stabilize soil conditions and permit construction of the sewer and manhole structures.

A protocol for handling complaints related to the dewatering operation was established in the construction contract. The contractor is required to provide a temporary water supply upon receiving the complaint. The contractor investigates the complaint to determine if the dewatering operation has caused the problem. If it is determined that the problem is not related to construction of the Ninth Line Trunk Sewer the temporary water supply is removed. If it is determined that the problem is the responsibility of the contractor an alternate water supply is provided.

To date, the contractor has documented complaints from 15 residences related to water levels in private wells. Following the appropriate investigations, the contractor is providing a temporary water supply to six of those residences on an ongoing basis.

3.2 Tenth Line Well Complaint and Action to Date

Mr. Bigioni leases property from Public Works Canada. The property is located at 9769 Reesor Road, which is approximately two kilometres east of the work being done on the Ninth Line Trunk Sanitary Sewer. (*See Attachment 1*)

3.2.1 Contractor's Investigation

The contractor received a complaint from Mr. Bigioni on November 7, 2000. As required in the contractor's contract with the Region, a temporary water supply was provided while the complaint was investigated.

On November 8, 2000 the contractor inspected the well and conducted two pump tests. When the contractor visited the site there was water in the well. A pump was installed into the well. It took ten minutes to pump the well dry. The well was allowed to recharge for 15 minutes. The well was then pumped dry a second time in seven minutes. From the contractor's investigation it was determined that while there was still sufficient groundwater surrounding the well, the water could not get into the well fast enough. This would be due to either "insufficient groundwater recharge or the well screen was clogged". The contractor's

representatives concluded that both of these conditions relate to the well itself and are not related to the dewatering program on the Ninth Line.

The contractor provided a written response to Mr. Bigioni in a letter dated November 21, 2000 explaining the results of the investigation and concluding that the contractor was not responsible for the problems Mr. Bigioni was experiencing with the well. On that basis, the tank was to be removed on December 1, 2000.

3.2.2 Subsequent Investigation on Behalf of Public Works Canada

In a November 29, 2000 letter Public Works Canada, as owner of the leased property and the well in question, requested that the temporary water supply tank remain in service until they had an opportunity to investigate the situation.

On February 5th 2001, Public Works Canada requested the Ministry of the Environment to investigate the well.

In a February 7, 2001 letter the Ministry of the Environment (MOE) responded to Public Works Canada. The MOE noted the following:

- The groundwater in the well was likely impacted by the Region's activities to a limited degree, lowering the level by approximately 1.5 metres.
- At this groundwater level there should still be more than 42 metres of water within the Bigioni well.
- Unfortunately, many small-diameter unscreened wells gradually silt up with time.
- Given the age and apparent unsanitary condition of this supply, any attempts to rehabilitate and upgrade this well would be costly and potentially ineffective depending on the condition of the casing.
- Construction of the well does not comply with the Ministry's Regulation 903, which requires the installation of a control device to prevent any uncontrolled flow at the well site. Uncontrolled flow is considered a loss of a valuable resource.

Due to the free flow nature of the well, The Ministry of the Environment concluded, "any action to restore this supply must be the responsibility of the owners".

In subsequent communications with the Ministry of the Environment it was confirmed that the owner was responsible for restoring water supply to date. However, Public Works Canada has only acknowledged the limited impact that the dewatering program may have had on the site, and has not indicated that it would carry out any remedial work.

The contractor continued to supply water for over four months while communications continued between York Region, the contractor, and Public Works Canada. On June 21, 2001, the temporary water supply was discontinued.

3.2.3 Current Status

Since the time when the temporary water supply was removed, Public Works Canada has provided water to Mr. Bigioni for domestic uses only. Mr. Bigioni requires additional water supply for his cattle.

The Region's dewatering will continue until construction of the Ninth Line Sewer is completed in the area, now anticipated in December 2003.

4. ANALYSIS AND OPTIONS

In an effort to resolve this matter as equitably as possible York Region will retain an independent firm to carry out an investigation on the well complaint. All existing documentation and any new information that may be obtained will be supplied to the independent firm. The independent investigation and recommendations regarding interim action will be completed by the end of the 2001. Regional staff will then meet with Mr. Bigioni and/or his representatives to try to resolve any outstanding issues and will report back to the Region's Transportation and Works Committee.

Mr. Bigioni has indicated through Mr. Stevenson that he feels this is the correct approach to this problem. Concurrence is also being sought from Public Works Canada, as it is the owner of the well in question.

5. FINANCIAL IMPLICATIONS

There are sufficient funds available from savings on other projects identified in the Transportation and Works, 2001 Budget, to carry out this additional investigation.

6. LOCAL MUNICIPAL IMPACT

An independent investigation into this private well is necessary to determine if the Region's project has had an impact on a farming operation in the Town of Markham. There are no other significant local municipal impacts. The existing well complaint/impact protocol is considered appropriate and has addressed all other well complaints raised to date.

7. CONCLUSION

In order to ensure that any potential Regional impact on the farming operation in question is appropriately quantified, an independent hydrogeological investigation of this private well is now being initiated. Furthermore, Regional staff will implement any recommended mitigation measure and will report back to the Region's Transportation and Works Committee early in 2002.

(A copy of the attachment referred to in the foregoing is included with this report and is also on file in the Office of the Regional Clerk.)

Respectfully submitted,

**Newmarket, Ontario
December 5, 2001**

**K. Schipper
Commissioner of
Transportation and Works**

(Report No. 10 of the Commissioner of Transportation was adopted, without amendment, by Regional Council at its meeting on December 6, 2001.)