

York Region Drinking Water System Schedule 22 Summary Report

**Mandated under Schedule 22 of the Ministry of the Environment's
Drinking Water Systems Regulation (O. Reg. 170/03)**

2006 Reporting Year

**Presented to the York Region Transportation and Works Committee and
York Regional Council**



Table of Contents

1.0	Introduction.....	4
2.0	Executive Summary.....	5
3.0	Legislative Requirements.....	7
3.1	The Safe Drinking Water Act (2002)	
3.2	The Drinking Water Systems Regulations	
3.2.1	Drinking-Water Systems Regulation (O.Reg. 170/03)	
3.2.2	Requirements of the Drinking Water Systems Regulation.....	8
3.2.3	Exemptions for the York Water System.....	9
3.3	Training and Certification.....	10
3.3.1	OITs	
3.3.2	Grandparented Operators.....	11
3.3.3	Certified Operators	
3.3.4	Facility Classification.....	12
3.3.5	Proposed DWQMS Standard.....	12
4.0	Drinking Water Systems Information	
4.1	Ansnoerveldt.....	14
4.1.1	Water Taking	
4.1.2	Measuring Points	
4.1.3	Water Withdrawal.....	15
4.2	Aurora.....	18
4.2.1	Water Taking	
4.2.2	Measuring Points	
4.2.3	Water Withdrawal.....	19
4.3	Ballantrae.....	26
4.3.1	Water Taking	
4.3.2	Measuring Points	
4.3.3	Water Withdrawal.....	27
4.4	Georgina.....	30
4.4.1	Water Taking	
4.4.2	Measuring Points	
4.4.3	Water Withdrawal.....	31
4.5	Keswick.....	33
4.5.1	Water Taking	
4.5.2	Measuring Points	
4.5.3	Water Withdrawal.....	34
4.6	King City.....	36
4.6.1	Water Taking	
4.6.2	Measuring Points	
4.6.3	Water Withdrawal.....	37
4.7	Kleinburg.....	40
4.7.1	Water Taking	
4.7.2	Measuring Points.....	41

York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

	4.7.3	Water Withdrawal	
4.8		Mount Albert.....	45
	4.8.1	Water Taking	
	4.8.2	Measuring Points	
	4.8.3	Water Withdrawal.....	46
4.9		Newmarket/East Gwillimbury.....	49
	4.9.1	Water Taking	
	4.9.2	Measuring Points	
	4.9.3	Water Withdrawal.....	50
4.10		Nobleton.....	64
	4.10.1	Water Taking	
	4.10.2	Measuring Points	
	4.10.3	Water Withdrawal.....	65
4.11		Schomberg.....	68
	4.11.1	Water Taking	
	4.11.2	Measuring Points	
	4.11.3	Water Withdrawal.....	69
4.12		Stouffville.....	72
	4.12.1	Water Taking	
	4.12.2	Measuring Points	
	4.12.3	Water Withdrawal.....	73
4.13		Yonge Street Aquifer.....	79
4.14		York Water System.....	80
	4.14.1	Water Taking.....	81
	4.14.2	Measuring Points	
	4.14.3	Water Withdrawal	

1.0 Introduction

The purpose of this “Summary Report” is to provide the owners with an understanding of the Regional Municipality of York’s (York Region) drinking-water systems status and capacities for the reporting period of January 1 – December 31, 2006. It has been created to fulfill the requirements mandated under Schedule 22 of the Ministry of the Environment’s Drinking Water Systems Regulation O. Reg. 170/03.

The “Annual Water Quality Report”, which details the quality of York Region’s drinking water, has been completed separately in order to fulfill Section 11 of O.Reg. 170/03. This report will be available on request through the Water and Wastewater Branch, available on-line through the York Region website, as well as distributed to the Local Municipalities serviced by the water system after February 28th, 2007.

2.0 Executive Summary

York Region is responsible for the production, treatment and storage of drinking water to the communities of Georgina, Aurora, East Gwillimbury, Newmarket, Whitchurch-Stouffville, King Township, and parts of the City of Vaughan. York Region is also responsible for the transmission of drinking water from the City of Toronto and Regional Municipality of Peel to the communities of Richmond Hill, Markham, City of Vaughan and Aurora.

This report has been created to fulfill the requirements outlined under Schedule 22 of the Ministry of the Environment's Drinking Water Systems Regulation O. Reg. 170/03.

The report provides a summary of the general legislative requirements in relation to the Safe Drinking Water Act and associated regulations, a review of the individual drinking water systems and a series of figures on the 2006 pumping history for the individual wells and systems in York Region.

In 2006, the Yonge Street Aquifer met all of the limits imposed by the Permit to Water (PTTW) with the only exception of the annual daily average, which was less than 1% above the allowable limit. In the 2005 report, it was stated that the York Region would investigate opportunities with the Ministry of the Environment to amend the annual average in the interim. However, the Ministry of the Environment determined that an interim amendment was not required as the Region of Peel lake-based supply would reduce the demand on the well supply. Currently, the project schedule indicates project completion in early 2008.

Instantaneous peak flow rates have been plotted for all York Region Drinking Water Systems. Within York Region's Drinking Water System there were 22 out of 37 wells in which the instantaneous peak flow rate was over the PTTW limit for the period of January 1 – December 31, 2006. On average the recorded peak flows over the PTTW limit were less than 5 minutes and are associated with operational pump start up. The peak flows over the PTTW limit are identified and explained in each of the '*Daily Instantaneous Peak Flow*' graphs. Scheduled operational maintenance contributed to the reduction of the peak flow rates, improving the overall operations of the water system.

In 2006, the York Region Water and Wastewater division had identified mechanical issues with wells in Newmarket, Kleinburg and King City communities. Increased outdoor water use had put extra pressure on these wells, and magnified the mechanical issues in Kleinburg and King City. In order to ensure that residential demands and fire fighting capabilities could be met throughout the summer with diminished supply capacity, it was necessary for York Region to issue a Stage I Voluntary Water Ban in both communities. A

subsequent Stage II Mandatory Water Ban was issued for the community of Kleinburg. At this time, water production was limited from Kleinburg Well 3, King City Well 3 and Newmarket Well 16 as a result of blocked well screens, a natural process due to the water hardness in York Region. All three wells were taken off line, rehabilitated and are currently producing water at acceptable rates. Further work was undertaken by Regional staff to identify wells at risk and implement a monitoring program to support the existing maintenance program.

There have been no Orders issued by the Ministry of the Environment under the Safe Drinking Water Act (2002) or the Ontario Regulation 170/03 for the period of January 1 – December 31, 2006.

In 2006, all of York Region's Drinking Water Systems met the limits imposed by the Permit to Take Water. The maximum daily withdrawal flow data for the reporting period of January 1, 2006 to December 31, 2006 for each drinking water system is contained within the respective appendix.

3.0 Legislative Requirements

3.1 The Safe Drinking Water Act (2002)*

In the Part Two Report of the Walkerton Inquiry, Commissioner Dennis O'Connor recommended that the Ontario government enact a Safe Drinking Water Act to deal with matters related to treatment and distribution of drinking water. As articulated by Commissioner O'Connor, the purpose of the Safe Drinking Water Act is to gather in one place all legislation and regulations relating to the treatment and distribution of drinking water.

As recommended by Commissioner O'Connor, the Ministry of the Environment has passed a Safe Drinking Water Act, which expands on existing policy and practice and introduces new features to protect drinking water in Ontario. The act's purpose is to protect human health through the control and regulation of drinking-water systems and drinking-water testing. The act also provides legislative authority to implement 50 of the 93 recommendations made in Commissioner O'Connor's Part Two Report.

3.2 The Drinking Water Systems Regulations

3.2.1 Drinking-Water Systems Regulation (O.Reg. 170/03)

The Ontario government enacted the several new regulations under the Act. The Drinking-Water Systems Regulation (O.Reg. 170/03) came into effect on June 1, 2003. This regulation replaced the regulations 459/00 and 505/00 under the Ontario Water Resources Act (OWRA), which previously governed the operation of municipal drinking water systems. In addition, O.Reg. 169/03 was released to support O.Reg. 170/03 and prescribes the standards for 161 chemical/physical, microbiological and radiological parameters for testing which was previously detailed in the Ontario Drinking Water Standards (ODWS) under the OWRA.

The O.Reg. 170/03 distinguishes between municipal and non-municipal drinking water systems. There are four types of municipal drinking water systems classified under the regulation outlined in Table 1.

Table 1: Municipal Residential Drinking Water System Classification and Definition under O.Reg. 170/03

System Classification	Definition
Small residential systems	Serving less than 100 homes
Large residential systems	Serving more than 101 homes
Small non-residential systems	• does not serve a major residential development • is not capable of supplying drinking water at a rate of more than 2.9 litres per second, and • serves a designated facility or public facility
Large non-residential systems	• Serving a major residential development (4 or more homes) • a trailer park or campground that has more than five service connections

York Region is responsible for operating both small and large municipal systems. The only small municipal residential system within York Region's operational jurisdiction is the Ansnorveldt system in King Township. All remaining municipal systems, with the exception of the York Water System, are considered large municipal residential drinking water systems.

The York Water System is a further delineation of municipal residential drinking water systems in O.Reg. 170/03 called the 'large municipal system receiving water from a large municipal drinking water system'. The York Water System is strictly a transmission system that receives all of its water from the City of Toronto and the Region of Peel. As such, there are special considerations under the Act and regulations for this situation.

3.2.2 Requirements of the Drinking Water Systems Regulation

Owners and operators of municipal drinking water systems must:

- *Sample and test* – a frequency of testing has been outlined within the regulation specific to the type and size of each system classification
- *Use an accredited laboratory* – an accredited laboratory must be used for the testing of municipal drinking water samples. A specific regulation for laboratories was released and came into effect on

October 1, 2003 (O.Reg. 248/03) which details their responsibilities for QA/QC.

- *Report adverse test results* – any standards from Schedules 1 – 3 in O.Reg. 169/03 that have been exceeded are required to be reported to the Medical Officer of Health and the Ministry of the Environment both verbally and in writing upon detection and upon completion of corrective action.
- *Obtain an approval and permit to take water* – an approval must be obtained from the Ministry of the Environment for all municipal drinking water systems.
- *Have a professional engineer certify some systems* – municipal non-residential systems are required to have an engineer certify compliance with the regulations.
- *Have certified operators or trained persons* – certification of staff is required depending on the category of the system in which they are working. A proposed regulation regarding certification and training of waterworks operators has been released but is not yet in force.
- *Prepare an annual report* – An Annual Report (Section 11, O.Reg. 170/03) must be prepared and made available to the public. This report replaces the Quarterly Reports that existed under the OWRA previously. This report details the quality of the water in a system during the reporting period.
- *Prepare an annual summary report* – Schedule 22 requires a Summary Report to be produced annually for drinking water system owners and operators, including members of council or municipal service boards. This report must summarize the requirements of the SDWA, the regulations, system approvals and any order that the system failed to meet during the reporting period. For any failures, the report must detail the corrective actions taken. The report must also include information about system capacities enabling owners and operators to determine future capabilities.

**Adapted from the Ministry of the Environment's Backgrounder Document entitled "4478e Roles and responsibilities of owners and operators of municipal drinking-water systems".*

3.2.3 Exemptions for the York Water System

The York Water System has a unique classification under the SDWA and O.Reg. 170/03 – it is considered a 'large municipal residential system that obtains all of its water from a large municipal residential system'. As such, there are many requirements of O.Reg. 170/03 that do not apply to its operation as a drinking water system.

The exemptions that the York Water System is afforded due to the type of system include the exemption from some of the corrective action

requirements under Schedule 17 of O.Reg. 170/03 in response to an adverse test result. An approval exemption was obtained from the MOE by York Region and the City of Toronto. The original exemption obtained had a one year approval and expired on July 1, 2004, later extended to July 2, 2006. Currently the exemption has been incorporated into the York Water Systems Certificate of Approval.

The York Water System does not provide any treatment to the drinking water it supplies. The system follows a drinking water testing schedule, as outlined in O.Reg. 170/03, and monitors its chlorine residual on a daily basis.

3.3 Training and Certification

A regulation regarding training and certification for operators of drinking-water systems was released in May 2004.

Ontario Regulation 128/04 (O.Reg. 128/04), Certification of Drinking-water System Operators and Water Quality Analysts, under the SDWA revoked and replaced the previous regulation, Ontario Regulation 435/93 (OWRA) for waterworks operators.

O.Reg. 128/04 was introduced with the intention that portions of the regulation were in effect immediately, while others would be phased in over a two year window. Significant changes were made from O.Reg. 435/93 to O.Reg. 128/04 with regards to Operators in Training (OITs), Grandparented operators and training hours.

3.3.1 OITs

Under the new regulation, OITs issued on or after August 1, 2005 under O.Reg. 128/04 will be valid for 16 months (without successful completion of the MOE's Entry Level Drinking Water Operator course). Upon successful completion of this course, the OIT will be extended to 3 years from the date it was originally issued. The Entry Level Drinking Water Operator course is offered through the Walkerton Clean Water Centre and is the equivalent of 2 weeks in duration; 1 week of self-study and 1 week of in-class training. Each of the 2 components of the course requires the operator to pass a test in order to complete the course successfully.

At the point of the OIT expiration, the operator must obtain a Class I certificate or apply for an extension of the OIT provided that there was not enough direct experience obtained in any one discipline to obtain a

Class I certificate. One year of direct experience in a water discipline (Treatment, Distribution, or Distribution and Supply) must be demonstrated to obtain a Class I certificate in the respective discipline. OITs issued prior to August 1, 2005 are valid for 3 years. At the point of the OIT expiry, the operator must obtain a Class I certificate or will be subject to the new OIT requirements under O.Reg. 128/04.

A special classification of OIT has been designed for summer students (temporary OITs). The temporary OIT issued for summer students will not require that the MOE Entry Level Drinking Water Operator course be completed and will be valid only for those students working four months or less in a seven month period. The temporary OIT is valid for twelve months from issue, and will be issued only 4 times. To be eligible to renew the temporary OIT the individual must pass an exam and take the MOE's new certificate renewal course, Preventing Waterborne Illnesses (described in section 3.3.3 of this report). This portion of the regulation came into effect on August 1, 2005.

3.3.2 Grandparented Operators

'Grandparented' operators refer to operators that had their certificates granted under previous regulations without the requirement to complete and pass examinations. Under O.Reg. 128/04, any grandparented operator is required to submit to an examination as prescribed by the MOE by May 2006. If an operator is designated the 'Overall Responsible Operator' under O.Reg. 128/04 (these are typically the Team Leads in York Region) and they have been grandparented under previous legislation, they were required to complete and pass an examination by May 2005 to maintain their certificates. All other grandparented operators had until May 2006 to complete and pass an examination to maintain their certificates.

3.3.3 Certified Operators

Operators that were certified under O.Reg. 435/93 will automatically be given the same certification level under O.Reg. 128/04. There has been an additional type of certificate named under O.Reg. 128/04 – Water Distribution and Supply. All certificates granted as 'Water Distribution' under O.Reg. 435/93 will be considered 'Water Distribution and Supply' certificates under O.Reg. 128/04.

Training requirements for certified operators has changed from the mandatory 40 hours under O.Reg. 435/93 to the following, under O.Reg. 128/04:

Facility/System Classification	Annual Training Requirements
Class I	30 hours (7 continuous education, 23 on-the-job)
Class II	35 hours (12 continuous education, 23 on-the-job)
Class III	40 hours (14 continuous education, 26 on-the-job)
Class IV	50 hours(14 continuous education, 36 on-the-job)

Training hours have been broken down by facility classification, as well as into specific learning formats (continuing education and on-the-job training). This portion of O.Reg. 128/04 is effective from August 1, 2005. Continuing education is academic type courses that have been evaluated and approved by the MOE. Such courses are given the designation of "Director Approved" and have continuing education units (CEU's). On-the-job training refers to other training received by operators that relates to drinking water and meets specific criteria outlined in the regulation.

As part of the continuing education training requirement, operators are required to successfully complete the MOE certificate renewal course, Preventing Waterborne Illnesses, once during their 3 year certificate renewal period. This course is offered by the Walkerton Clean Water Centre and is 1 day in duration.

3.3.4 Facility Classification

As a requirement under O.Reg. 128/04, York Region applied for facility classification under the new regulation and all facilities have been reclassified by the MOE. In many cases, the facility classification was not changed.

3.3.5 Proposed DWQMS Standard

The MOE, in conjunction with the Canadian Standards Association (CSA), has developed the draft Drinking Water Quality Management Standard (DWQMS) to which operating authorities will be required to be accredited to by a third party. The Draft document has been under review since 2004 and is scheduled for final release in spring 2007.

The Part II Report of the Walkerton Inquiry recommended that the Ministry move towards an approval framework that would incorporate the concepts of the ISO 9001:2000 standard and specific industry best-practices.

Recommendation No. 71 (Walkerton Part II Report):

The Ministry of the Environment should require the owners of municipal water systems to obtain an owner's license for the operation of their waterworks. In order to obtain a license, an owner should have:

- *A Certificate of Approval for the facility (in SDWA as a Drinking Water Works Permit);*
- *A Permit to Take Water;*
- *Approved Operational Plans;*
- *An approved Financial Plan; and*
- *An accredited Operating Agency (or Authority)*

The DWQMS is modelled after the ISO 9001:2000 standard which York Region currently has in place. This Quality Management System was initially registered in 2002, and as a result has evolved into a well managed and comprehensively documented system.

York Region has reviewed its current QMS, and compared it to the pending drinking water quality management system to produce a Gap Analysis that identified one key area that needs attention; namely, Hazards Analysis and Critical Control Points (HACCP) scheduled to be completed in the New Year, 2007. All other key element of the QMS and licensing requirements are already in place.

The Region through its Regulatory Compliance & Policy group is positioned favourably to complete the outstanding Hazards Analysis and Critical Control Points (HACCP) identified through the gap analysis and is moving forward in this regard.

Upon Complete of the Hazards Analysis and Critical Control Points, York Region will submit a voluntary application for the QMS Operational Plan to be audited by the Ministry against the DWQMS. Upon a successful external audit by a third party auditor, the Region will be licensed by the Ministry under the DWQMS. Overall York Region is ready to adapt to the DWQMS, submitting early submission for licensing.

4.0 Drinking-Water Systems Information

4.1 Ansnorveldt

York Region operates a water supply system to service Ansnorveldt, Township of King, under authority of a Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE). The C of A includes reference to the valid Permit To Take Water (PTTW) also issued by the MOE. Details of the C of A and PTTW and other relevant classification information are presented in Table 1. All system upgrades required by C of A have been completed.

TABLE 1: Ansnorveldt Water Supply – Summary of Approvals and Permit

Current Certificate of Approval Number: Issue Date:	3419-6CCP6P May 27, 2005
Current Permit to Take Water Number: Issue Date: Expiry Date:	02-P-3050 June 21, 2002 March 31, 2012
MOE Waterworks Number:	260002213
System Classification:	Water Distribution II

4.1.1 Water Taking

The PTTW for the Ansnorveldt Water Supply System allows York Region to withdraw up to 285,120 litres per day from production wells 1 and 2.

York Region monitors the water taking through flow meters placed downstream of each production well. The flow is monitored on a continuous basis by SCADA to ensure that the regulated flows are not exceeded.

4.1.2 Measuring Points

A flow meter is in place downstream of each production before the water is combined. The flow meters record the instantaneous flow rate and the total volume of water that has passed through the meter. The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A. Flow data is retrieved and stored by two methods in York Region. This approach provides York Region with the opportunity to compare and contrast data should one method suddenly fail due to power failures or by other means.

1. York Region staff manually record the flow rates and total flow data on regular operational visits to the well sites. Average flow rates are also calculated using records of total flow and number of operating pump

hours. This ‘manual’ data was used to generate the maximum daily withdrawal and monthly average flow tables and figures.

2. The flow meters are also connected to the Supervisory Control and Data Acquisition (SCADA) system so that data can be monitored remotely and stored electronically. This data was used to generate the instantaneous peak flow rate figures.

4.1.3 Water Withdrawal

The total volume of water taken from the production wells of the Ansnorveldt Water Supply system for the reporting period of January 1 – December 31, 2006 was 19,506,000 litres. This volume is less than the maximum permitted withdrawal as prescribed in the PTTW.

The maximum allowable daily water taking and the actual maximum recorded daily water taking are presented in Table 2.

TABLE 2: Allowable and Actual Maximum Daily Withdrawal from the Ansnorveldt Production Wells for January 1 – December 31, 2006

Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)
Well 1	100,800	32,000
Well 2	184,320	64,500

The monthly average flows, the maximum daily withdrawals, and the allowable daily withdrawal for the reporting period of January 1 – December 31, 2006 are shown in Figure 1a and 1b. The actual dates of the peak monthly demands are summarized in the Appendices.

York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1a: Ansnorveldt Well No. 1
Monthly Average Flow and Monthly Maximum Flow
2006

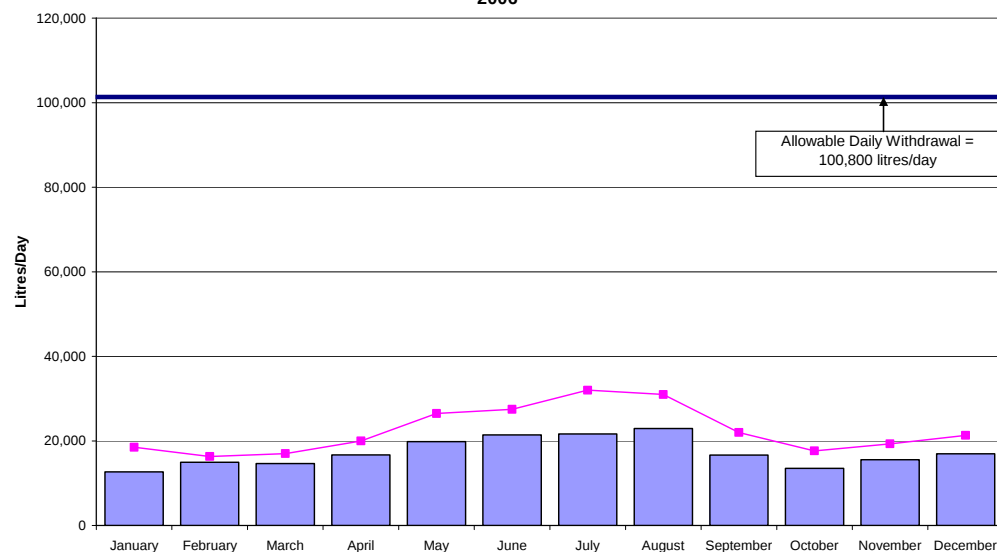
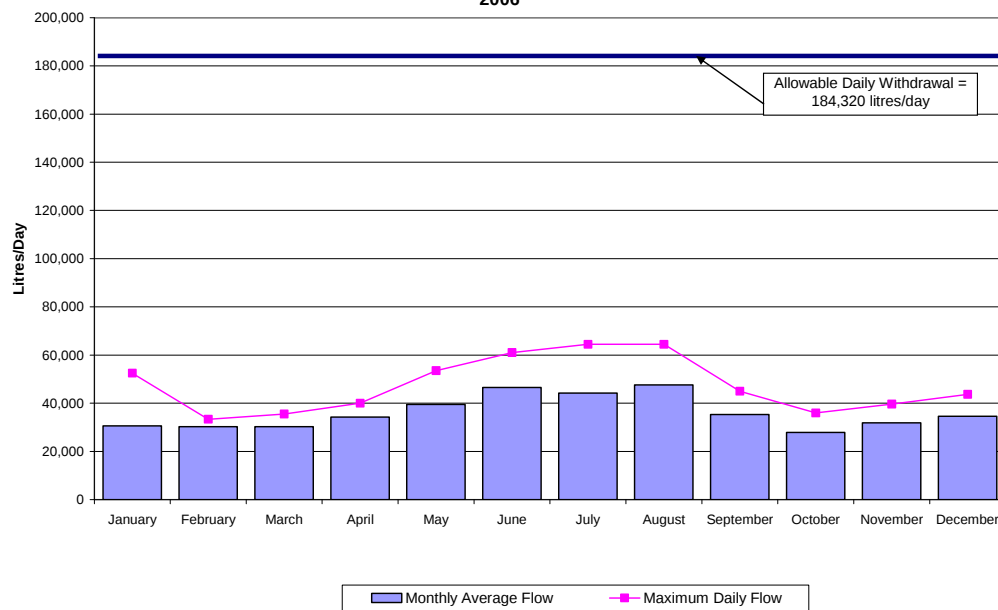


Figure 1b: Ansnorveldt Well No. 2
Monthly Average Flow and Maximum Daily Flow
2006



The actual volumes of water taken from the Ansnorveldt production wells during January 1 – December 31, 2006 did not exceed the allowable daily withdrawal volumes.

Figure 2a and 2b below show the 'Daily Instantaneous Peak Flow (litres)' for January 1 to December 31, 2006 for Ansnorveldt production wells 1 and 2.

Figure 2a: Ansnorveldt Well No. 1
Daily Instantaneous Peak Flow
2006

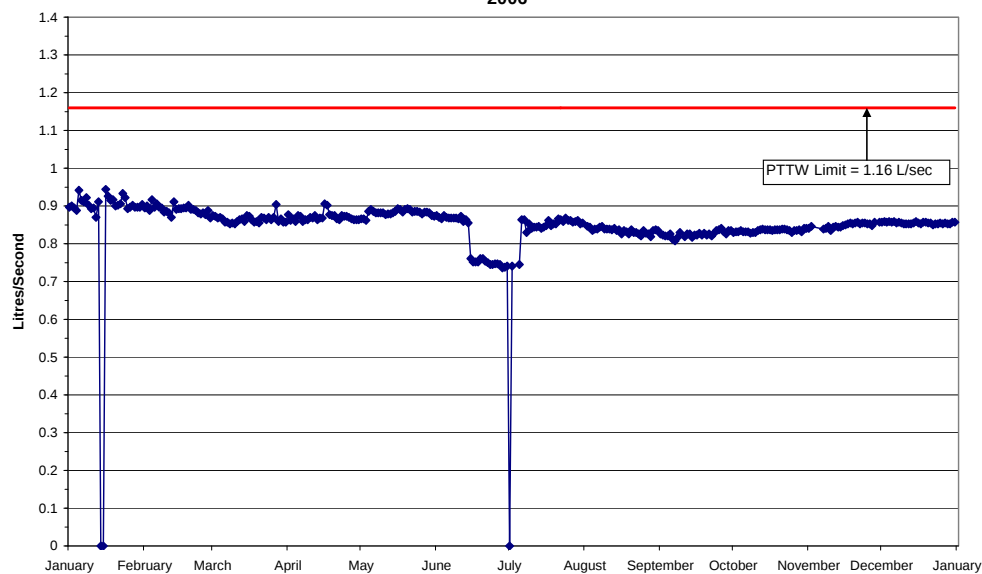
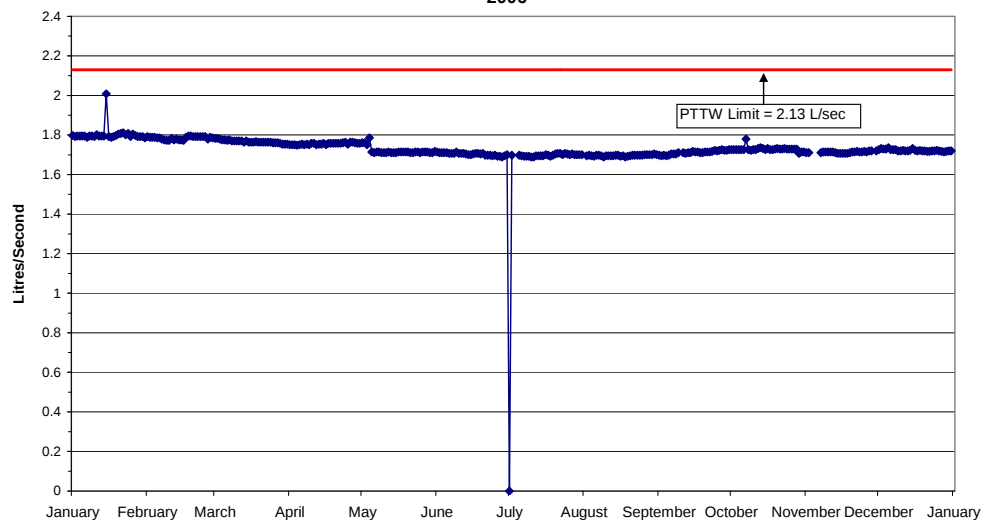


Figure 2b: Ansnorveldt No. 2
Daily Instantaneous Peak Flow
2006



4.2 Aurora

York Region operates a water supply system to service the Town of Aurora under authority of a Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE). The C of A includes reference to the valid Permit To Take Water (PTTW) also issued by the MOE. Details of the C of A and PTTW and other relevant classification information are presented in Table 1. All system upgrades required by C of A have been completed.

TABLE 1: Aurora Water Supply – Summary of Approvals and Permit

Current Certificate of Approval Number: Issue Date:	2603-6U8LCV November 10, 2006
Current Permit to Take Water Number: Issue Date: Expiry Date:	6623-68QQ6L March 10, 2005 March 31, 2015
MOE Waterworks Number:	220002440
System Classification:	Water Distribution & Supply III

4.2.1 Water Taking

The PTTW for the Aurora Water Supply System allows York Region to withdraw up to 31,618,944 litres per day from all production wells.

York Region monitors the water taking through flow meters placed downstream of each production well. Flow is monitored on a continuous basis to ensure that the regulated flows are not exceeded.

4.2.2 Measuring Points

Flow meters are in place downstream of each production well. The flow meters record the instantaneous flow rate and the total volume of water that has passed through the meter. The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A.

Flow data is retrieved and stored by two methods in York Region. This approach provides York Region with the opportunity to compare and contrast data should one method suddenly fail due to power failures or by other means.

1. York Region staff manually record the flow rates and total flow data on regular operational visits to the well sites. Average flow rates are also calculated using records of total flow and number of operating pump hours. This ‘manual’ data was used to generate the maximum daily withdrawal and monthly average flow tables and figures.

2. The flow meters are also connected to the Supervisory Control and Data Acquisition (SCADA) system so that data can be monitored remotely and stored electronically. This data was used to generate the instantaneous peak flow rate figures.

4.2.3 Water Withdrawal

The total volume of water taken from the production wells of the Aurora Water Supply system for the reporting period of January 1 – December 31, 2006 was 5,052,705,000 litres. This volume is less than the maximum permitted withdrawal as prescribed in the PTTW.

The maximum allowable daily water taking and the actual maximum recorded daily water taking are presented in Table 2.

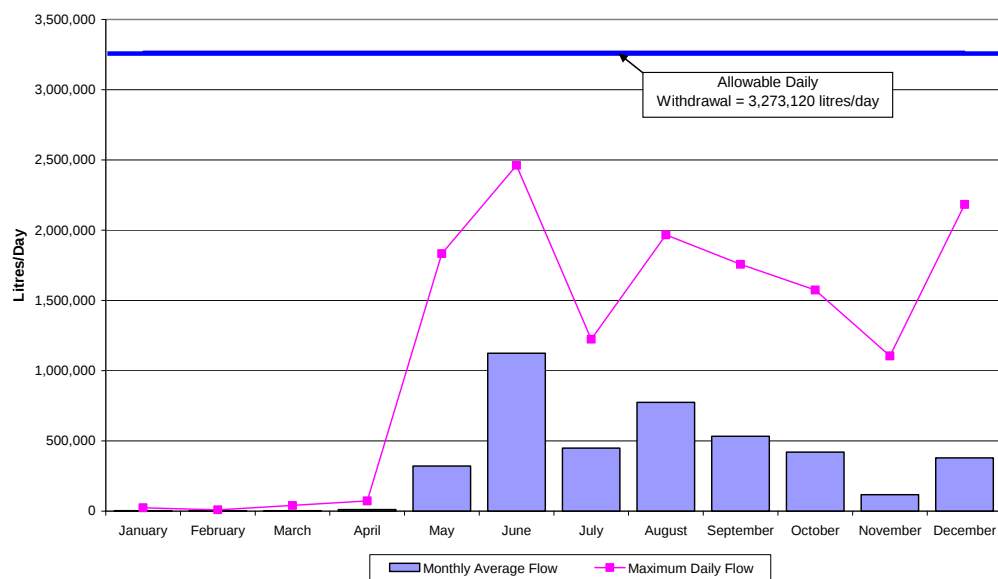
TABLE 2: Allowable and Actual Maximum Daily Withdrawal from the Aurora Production Wells for January 1 – December 31, 2006

Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)
Well 1	3,273,120	2,461,000
Well 2	5,891,760	5,405,000
Well 3	5,237,136	4,960,000
Well 4	7,855,632	6,084,500
Well 5	5,891,760	5,046,500
Well 6	3,469,536	2,455,500

The average monthly flow rates, the maximum daily flows, and the allowable daily flows are presented in Figures 1a, 1b, 1c, 1d, 1e, and 1f. The actual dates of the peak monthly demands are summarized in the Appendices.

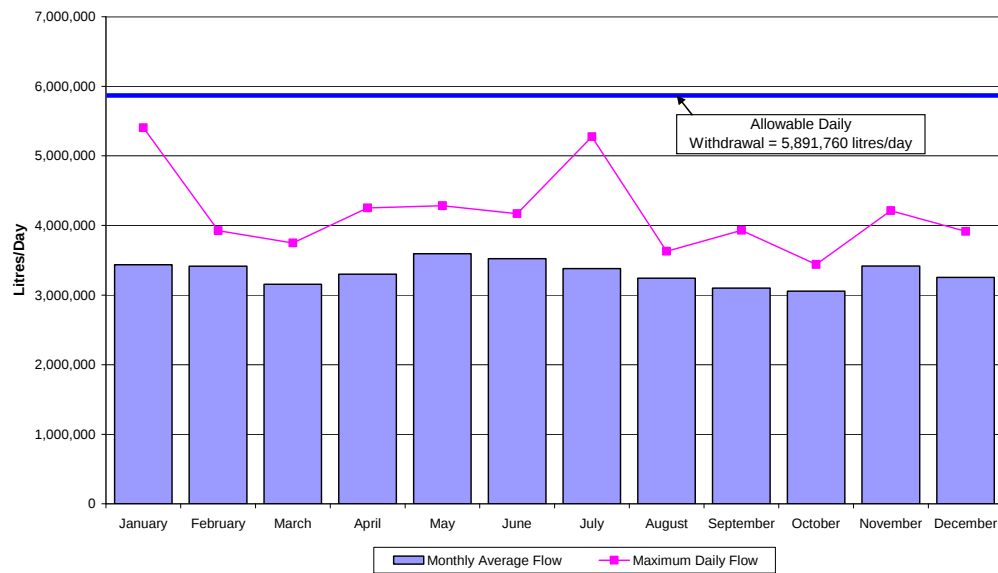
York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1a: Aurora Well No. 1
Monthly Average Flow and Maximum Daily Flow
2006



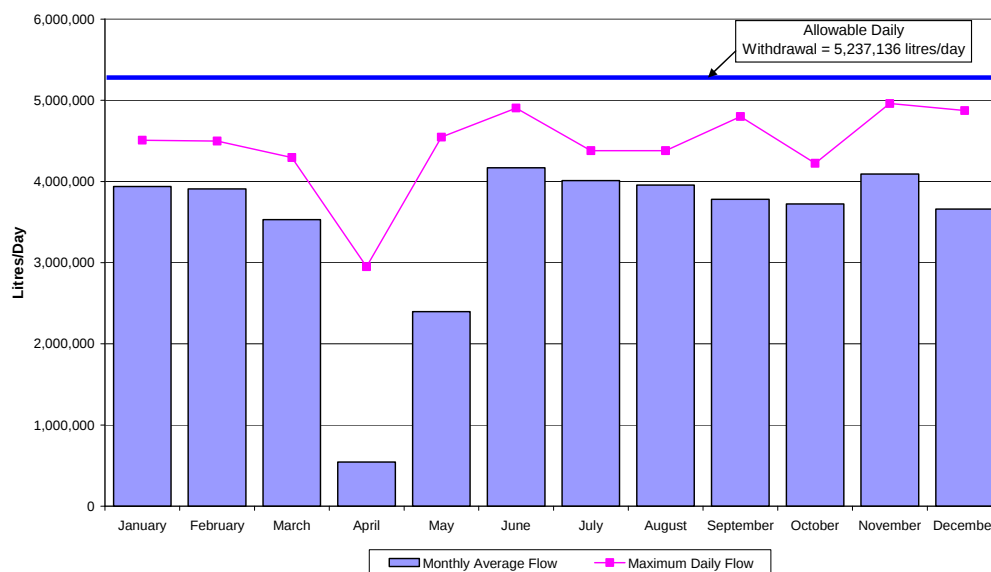
Aurora Well No. 1 was offline from January to March 2006 for maintenance.

Figure 1b: Aurora Well No. 2
Monthly Average Flow and Maximum Daily Flow
2006



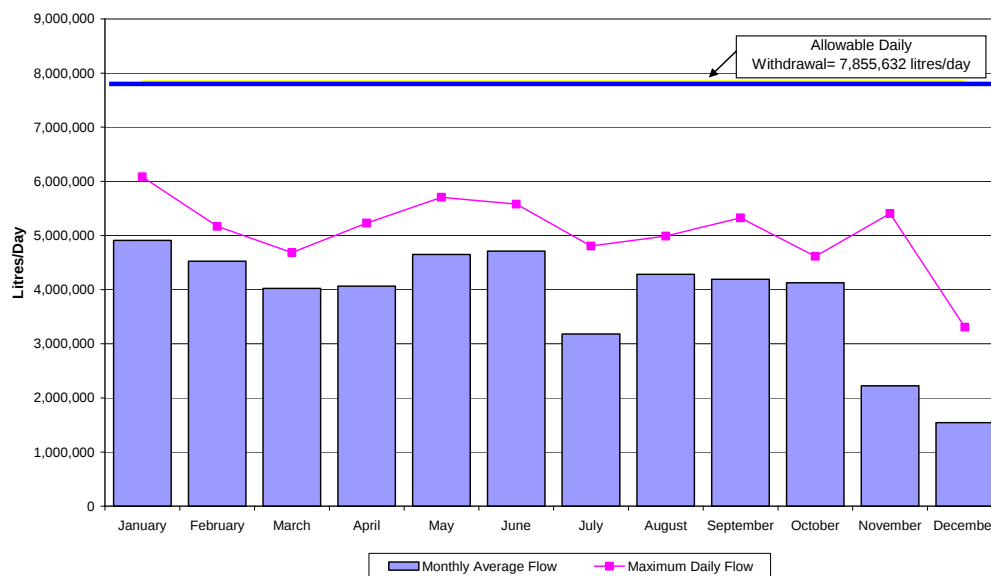
York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1c: Aurora Well No. 3
Monthly Average Flow and Maximum Daily Flow
2006



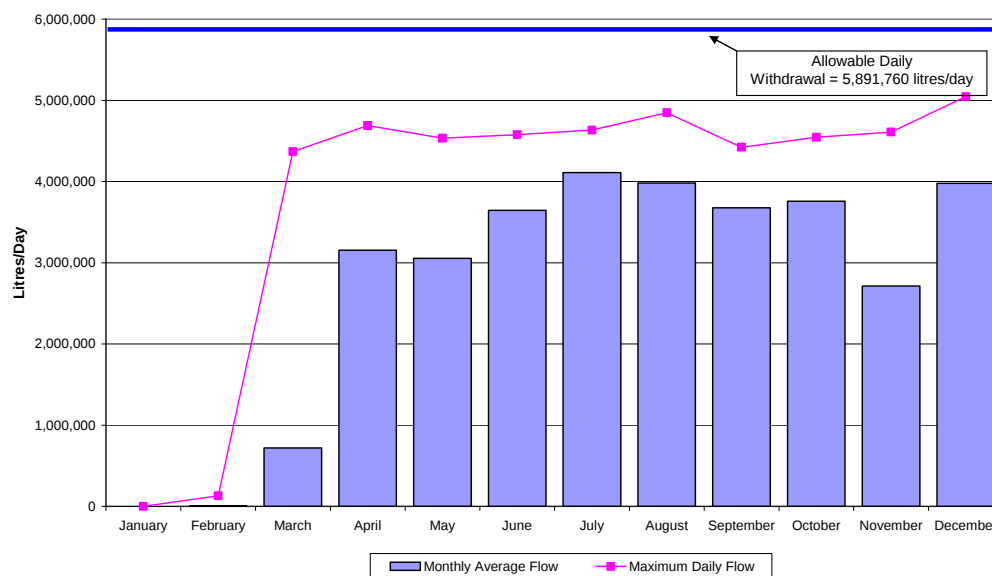
Flow from Aurora Well No. 3 was reduced in April 2006 for maintenance.

Figure 1d: Aurora Well No. 4
Monthly Average Flow and Maximum Daily Flow
2006



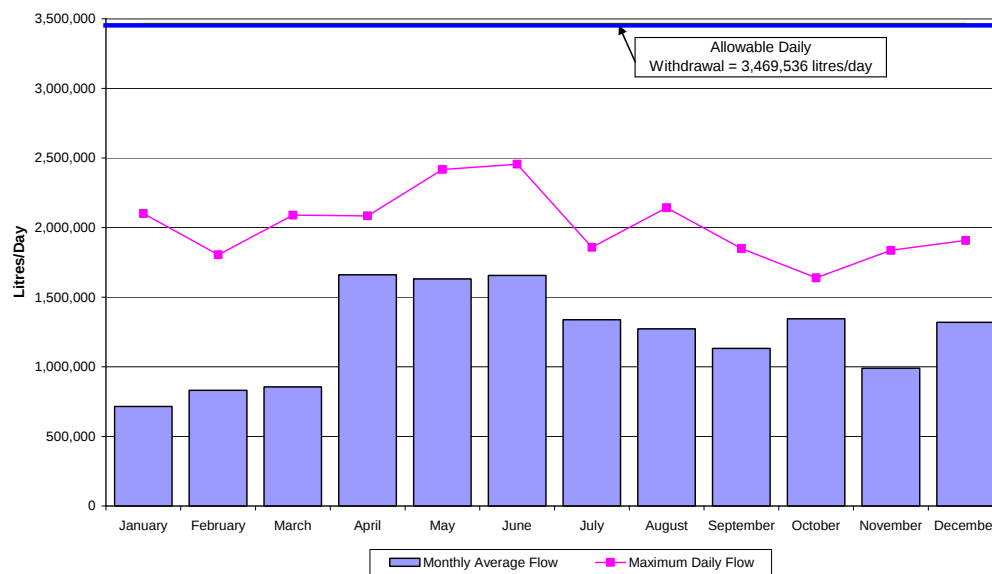
York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1e: Aurora Well No. 5
Monthly Average Flow and Maximum Daily Flow
2006



Aurora Well No. 5 was offline from January to February 2006 for maintenance.

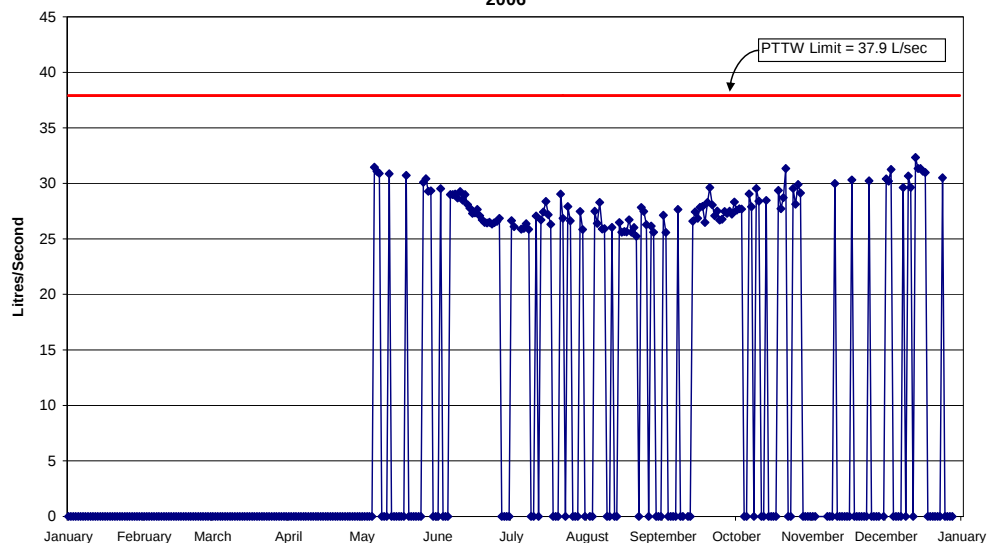
Figure 1f: Aurora Well No. 6
Monthly Average Flow and Maximum Daily Flow
2006



The actual volumes of water taken from the Aurora production wells during January 1 – December 31, 2006 did not exceed the allowable daily withdrawal.

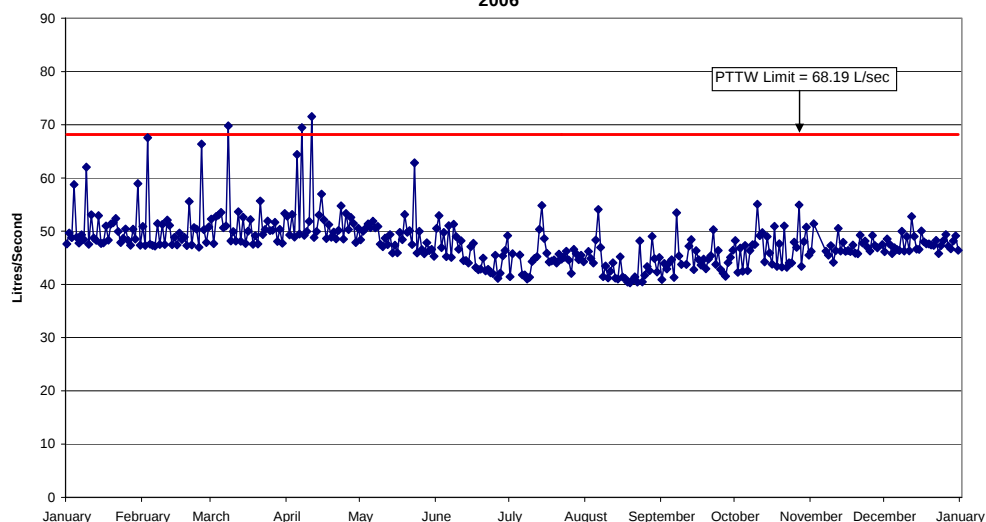
The ‘*Daily Instantaneous Peak Flow (litres)*’ for January 1- December 31, 2006 is presented in Figure 1a, b, c, d, e, and f.

Figure 2a: Aurora Well No. 1
Daily Instantaneous Peak Flow
2006



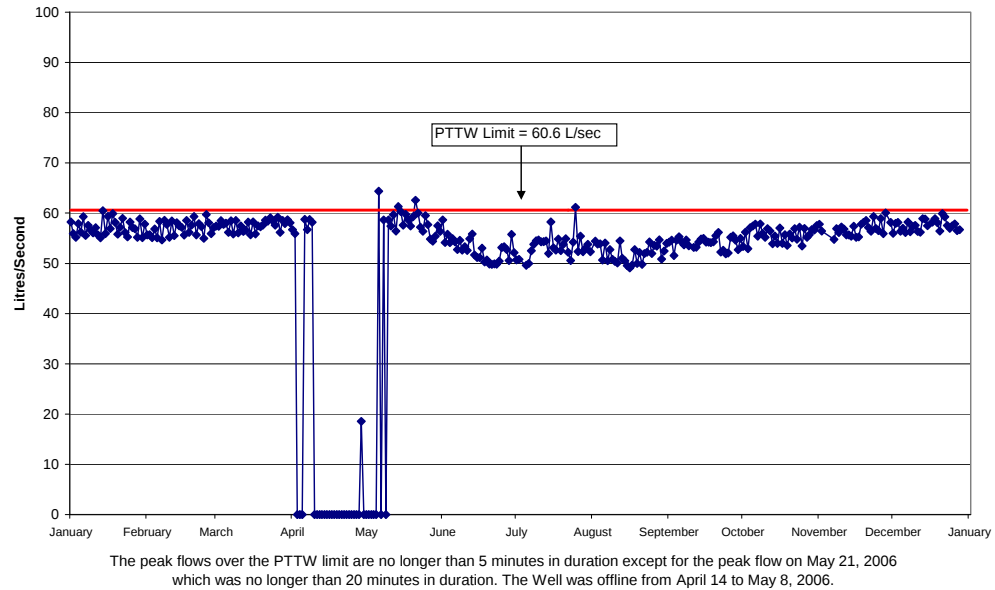
Aurora Well No. 1 was offline from January 1 to May 8, 2006

Figure 2b: Aurora Well No. 2
Daily Instantaneous Peak Flow
2006



The peak flows over the PTTW limit are no longer than 5 minutes in duration.

**Figure 2c: Aurora Well No. 3
Daily Instantaneous Peak Flow
2006**



**Figure 2d: Aurora Well No. 4
Daily Instantaneous Peak Flow
2006**

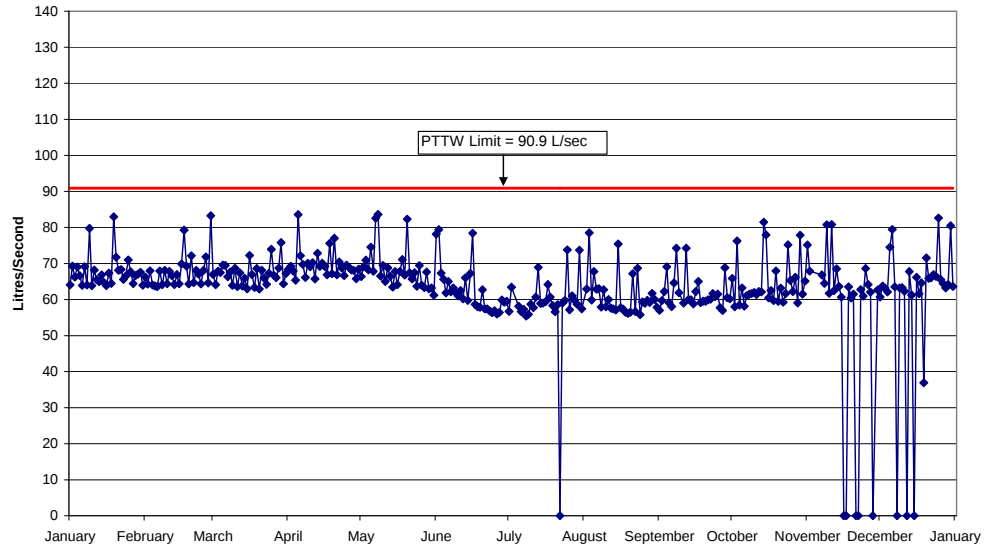
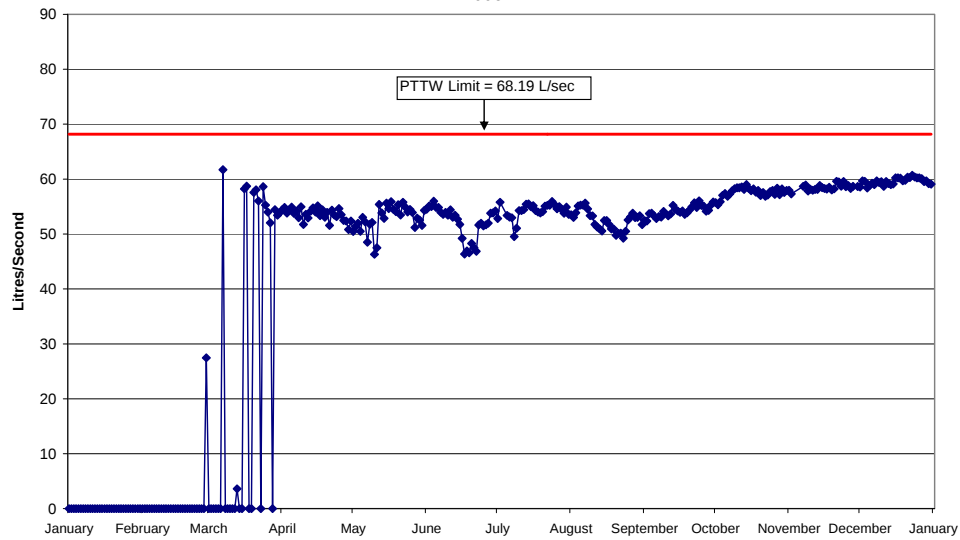


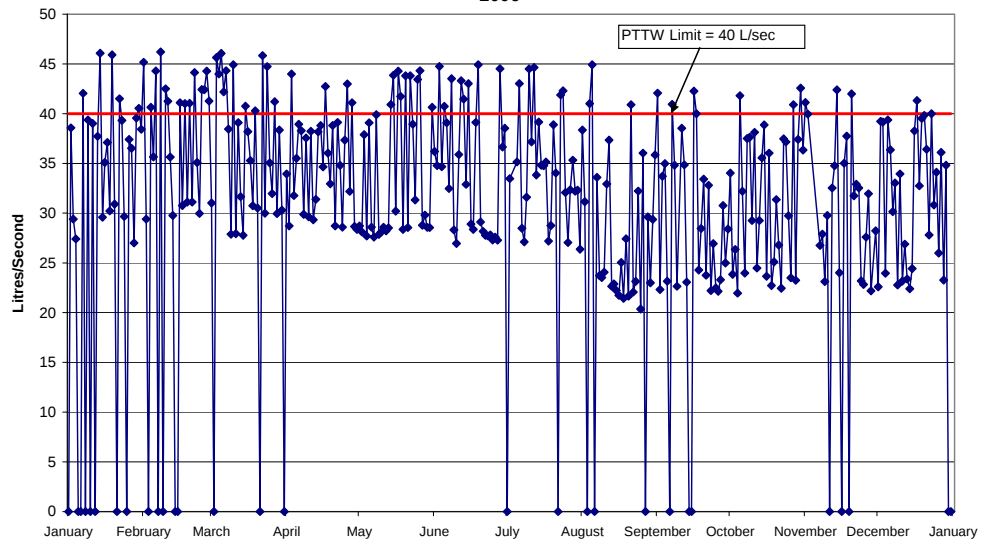
Figure 2c and 2d: shows some instantaneous peak flow rates above the Permit to Take Water limit. The instantaneous peak flow rates are short duration (on average less than 5 minutes) and represent less than 1% of the total volume of water taken for that day. The peaks are associated with the initial start up of a pump by removing of back pressure, a change in elevation in the water table or maintenance on the distribution system.

Figure 2e: Aurora Well No. 5
Daily Instantaneous Peak Flow
2006



The well was offline from February 11 to March 18, 2006.

Figure 2f: Aurora Well No. 6
Daily Instantaneous Peak Flow
2006



The peak flows over the PTTW limit are due to pump start up and are no longer than 5 minutes in duration.

Figure 2f: shows some instantaneous peak flow rates above the Permit to Take Water limit. The instantaneous peak flow rates are short duration (on average less than 5 minutes) and represent less than 1% of the total volume of water taken for that day. These peaks are associated with the initial start up of a pump by removing of back pressure, a change in elevation in the water table or maintenance on the distribution system.

4.3 Ballantrae

York Region operates a water supply system to service Ballantrae/Musselman's Lake, Town of Whitchurch-Stouffville, under authority of a Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE). The C of A includes reference to the valid Permit To Take Water (PTTW) also issued by the MOE. The C of A requirements for the Ballantrae/Musselman's Lake water supply have been finished. Details of the C of A and PTTW and other relevant classification information are presented in Table 1. All system upgrades required by C of A have been completed.

TABLE 1: Ballantrae/Musselman's Lake Water Supply – Summary of Approvals and Permit

Current Certificate of Approval Number:	8759-5W9LN2
Issue Date:	March 3, 2004
Current Permit to Take Water Number:	1088-6MMNAA
Issue Date:	March 10, 2006
Expiry Date:	March 31, 2008
MOE Waterworks Number:	220008658
System Classification:	Water Distribution & Supply II

4.3.1 Water Taking

The PTTW for the Ballantrae/Musselman's Lake Water Supply System allow York Region to withdraw up to 1,818,000 litres per day from production wells 1 and 2 with a maximum combined total allowable withdrawal of 3,180,000 litres per day. During higher demand periods of November 1 – April 30 combined daily water taking is limited to 2,618,000 litres per day and from May 1 – October 31 is limited to 4,580,000 litres per day.

York Region monitors the water taking through flow meters placed downstream of each production well. Flow is monitored on a continuous basis to ensure that the regulated flows are not exceeded.

4.3.2 Measuring Points

Flow meters are in place downstream of each production well. The flow meters record the instantaneous flow rate and the total volume of water that has passed through the meter. The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A.

Flow data is retrieved and stored by two methods in York Region. This approach provides York Region with the opportunity to compare and contrast data should one method suddenly fail due to power failures or other means.

1. York Region staff manually record the flow rates and total flow data on regular operational visits to the well sites. Average flow rates are also calculated using records of total flow and number of operating pump hours. This 'manual' data was used to generate the maximum daily withdrawal and monthly average flow tables and figures.
2. The flow meters are also connected to the Supervisory Control and Data Acquisition (SCADA) system so that data can be monitored remotely and stored electronically. This data was used to generate the instantaneous peak flow rate figures.

4.3.3. Water Withdrawal

The total volume of water taken from the production wells of the Ballantrae/Musselman's Lake Water Supply system for the reporting period of January 1 – December 31, 2006 was 388,901,000 litres. This volume is less than the maximum permitted withdrawal as prescribed in the PTTW.

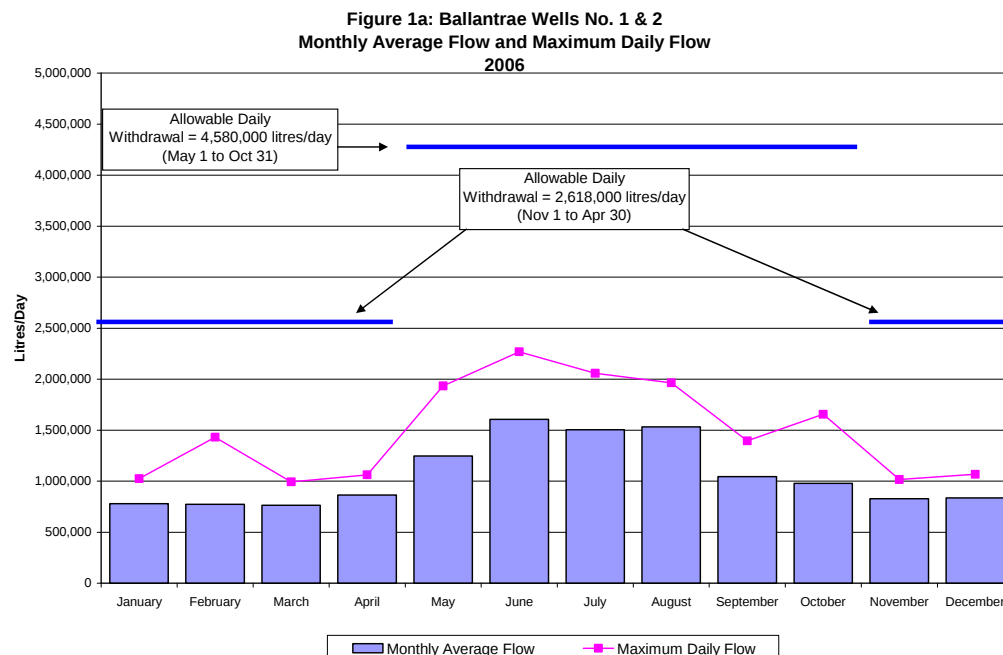
The maximum allowable daily water taking and the actual maximum recorded daily water taking are presented in Table 2.

TABLE 2: Allowable and Actual Maximum Daily Withdrawal from the Ballantrae/Musselman's Lake Production Wells for January 1 – December 31, 2006

Allowable Daily Withdrawal from Production Wells 1 and 2 (Litres)	Actual Maximum Daily Withdrawal (Litres)
2,618,000 from Nov 1 – April 30	1,430,500
4,580,000 from May 1 – October 31	2,269,000

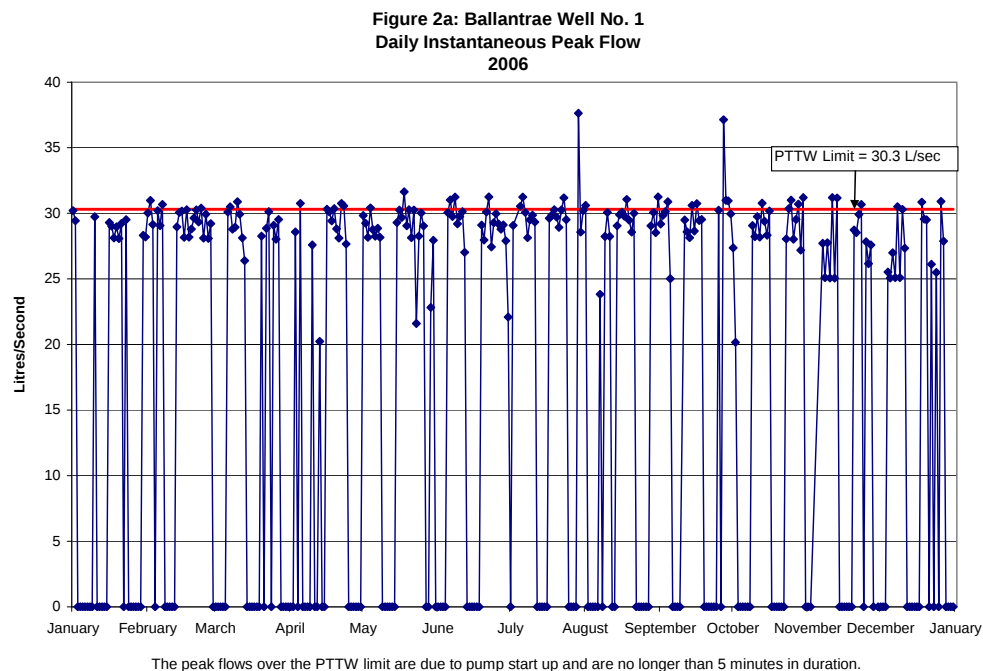
The average monthly flow rates, maximum daily flow, and the allowable daily withdrawal are presented in Figure 1a. The actual dates of the peak monthly demands are summarized in the Appendices.

York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year



The actual volume of water taken from the Ballantrae/Musselman's production wells during January 1 – December 31, 2006 did not exceed the allowable daily withdrawal volume.

The 'Daily Instantaneous Peak Flow (litres)' for January 1- December 31, 2006 for wells 1 and 2 are presented in the following graphs.



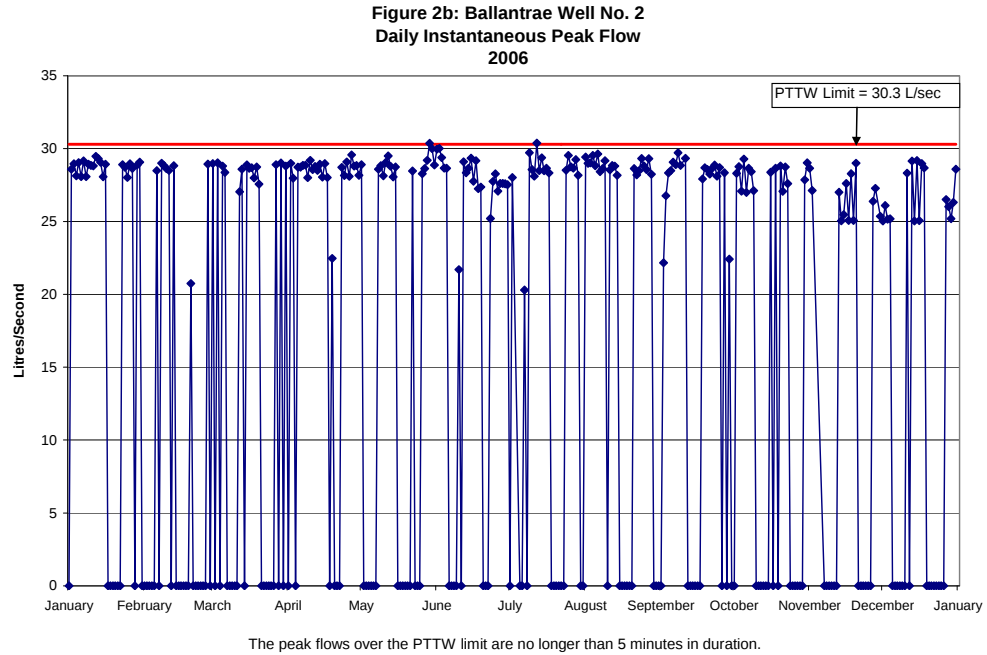


Figure 2a and 2b: shows some instantaneous peak flow rates above the Permit to Take Water limit. The instantaneous peak flow rates are short duration (on average less than 5 minutes) and represent less than 1% of the total volume of water taken for that day. These peaks are associated with the initial start up of a pump by removing of back pressure, a change in elevation in the water table or maintenance on the distribution system.

4.4 Georgina

The Regional Municipality of York (York Region) operates a water supply system to service Sutton, Town of Georgina, under authority of a Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE). The C of A includes reference to the valid Permit To Take Water (PTTW) also issued by the MOE. Details of the C of A and PTTW and other relevant classification information are presented in Table 1. All system upgrades required by C of A have been completed.

TABLE 1: Georgina Water Supply – Summary of Approvals and Permit

Current Certificates of Approval Numbers:	5640-667R8N
Issue Date:	December 8, 2004
Current Permit to Take Water Number:	03-P-3008
Issue Date:	February 12, 2003
Expiry Date:	February 28, 2013
MOE Waterworks Number:	260026156
System Classification:	Water Treatment II

4.4.1 Water Taking

The PTTW for the Georgina Water Supply System allows York Region to withdraw up to 49,999,680 litres per day from the water treatment plant.

York Region monitors the water taking through flow meters. Flows are monitored on a continuous basis to ensure that the regulated flows are not exceeded.

4.4.2 Measuring Points

Flow meters are in place downstream of the intake at the low lift pump, filters and high lift pump locations. The flow meters record the instantaneous flow rate and the total volume of water that has passed through the meter. The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A.

Flow data is retrieved and stored by two methods in York Region. This approach provides York Region with the opportunity to compare and contrast data should one method suddenly fail due to power failures or other means.

1. York Region staff manually record the flow rates and total flow data on regular operational visits to the well sites. Average flow rates are also calculated using records of total flow and number of operating pump

hours. This 'manual' data was used to generate the maximum daily withdrawal and monthly average flow tables and figures.

2. The flow meters have recently been connected to the Supervisory Control and Data Acquisition (SCADA) system so that data can be monitored remotely and stored electronically. This data was used to generate the instantaneous peak flow rate figures.

4.4.3 Water Withdrawal

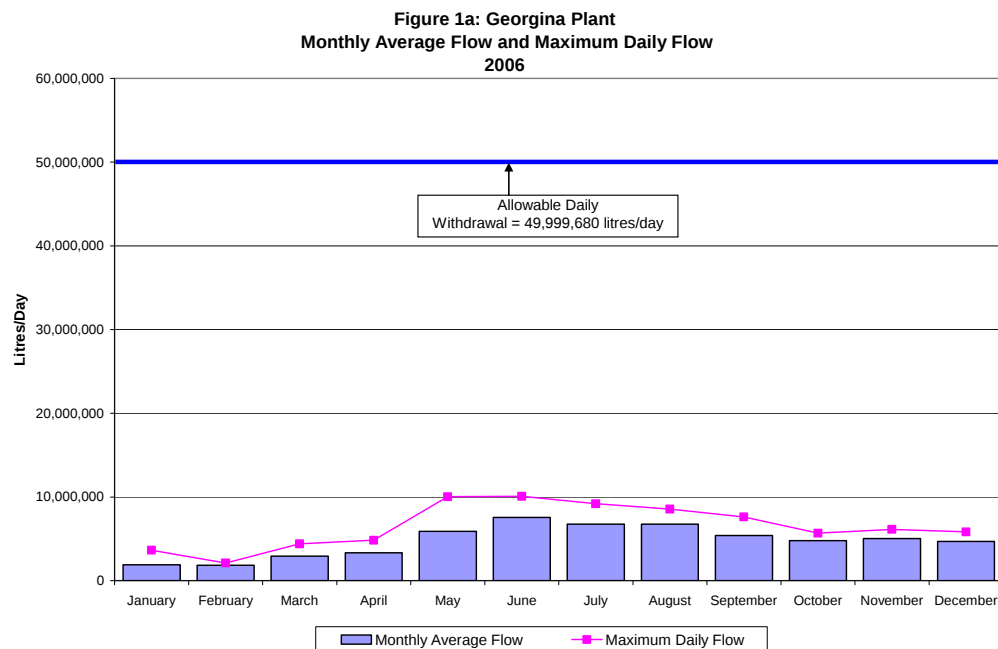
The total volume of water from the Georgina water treatment plant during January 1 – December 31, 2006 was 691,126,000 litres. This volume is less than the maximum permitted withdrawal as prescribed in the PTTW.

The maximum allowable daily water taking and the actual maximum recorded daily water taking are presented in Table 2.

TABLE 2: Allowable and Actual Maximum Daily Withdrawal from the Georgina Water Treatment Plant for January 1 – December 31, 2006

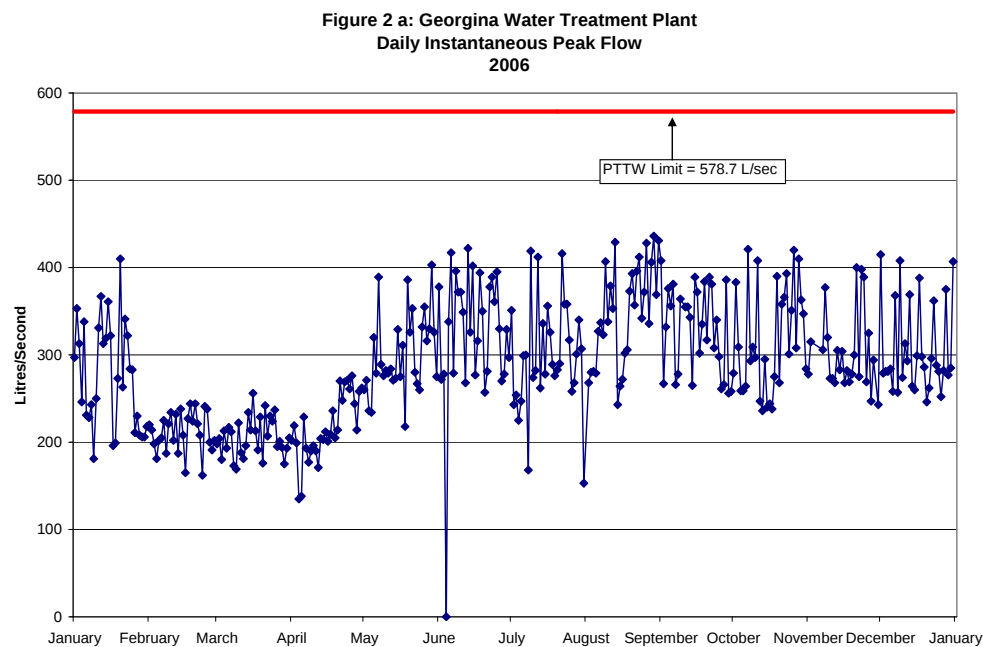
Location	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)
Water Treatment Plant	49,999,680	10,088,667

The monthly average flow rates, maximum daily flow, and allowable daily withdrawal are presented in Figure 1a.



The withdrawal rates from the Georgina Water Treatment Plant did not exceed the allowable limits for January 1 – December 31, 2006.

The ‘*Daily Instantaneous Peak Flow (litres)*’ for January 1- December 31, 2006 is presented in Figure 2a.



4.5 Keswick

The Regional Municipality of York (York Region) operates a water supply system to service Keswick, Town of Georgina, under authority of a Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE). The C of A includes reference to the valid Permit To Take Water (PTTW) also issued by the MOE. Details of the C of A and PTTW and other relevant classification information are presented in Table 1. All system upgrades required by C of A have been completed.

TABLE 1: Keswick Water Supply – Summary of Approvals and Permit

Current Certificates of Approval Numbers: Issue Date:	3684-6GNPMV October 19, 2005
Current Permit to Take Water Number: Issue Date: Expiry Date:	1268-636QNK July 30, 2004 June 30, 2014
MOE Waterworks Number:	210003280
System Classification:	Water Treatment III

4.5.1 Water Taking

The PTTW for the Keswick Water Supply System allows York Region to withdraw up to 16,200,000 litres per day from the water treatment plant.

York Region monitors the water taking through flow meters. Flows are monitored on a continuous basis to ensure that the regulated flows are not exceeded.

4.5.2 Measuring Points

Flow meters are in place downstream of the intake at the low lift pump, filters and high lift pump locations. The flow meters record the instantaneous flow rate and the total volume of water that has passed through the meter. The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A.

Flow data is retrieved and stored by two methods in York Region. This approach provides York Region with the opportunity to compare and contrast data should one method suddenly fail due to power failures or by other means.

1. York Region staff manually record the flow rates and total flow data on regular operational visits to the well sites. Average flow rates are also calculated using records of total flow and number of operating pump

hours. This 'manual' data was used to generate the maximum daily withdrawal and monthly average flow tables and figures.

2. The flow meters are also connected to the Supervisory Control and Data Acquisition (SCADA) system so that data can be monitored remotely and stored electronically. This data was used to generate the instantaneous peak flow rate figures.

4.5.3 Water Withdrawal

The total volume of water from the Keswick water treatment plant during January 1 – December 31, 2006 was 2,667,957,000 litres. This volume is less than the maximum permitted withdrawal as prescribed in the PTTW.

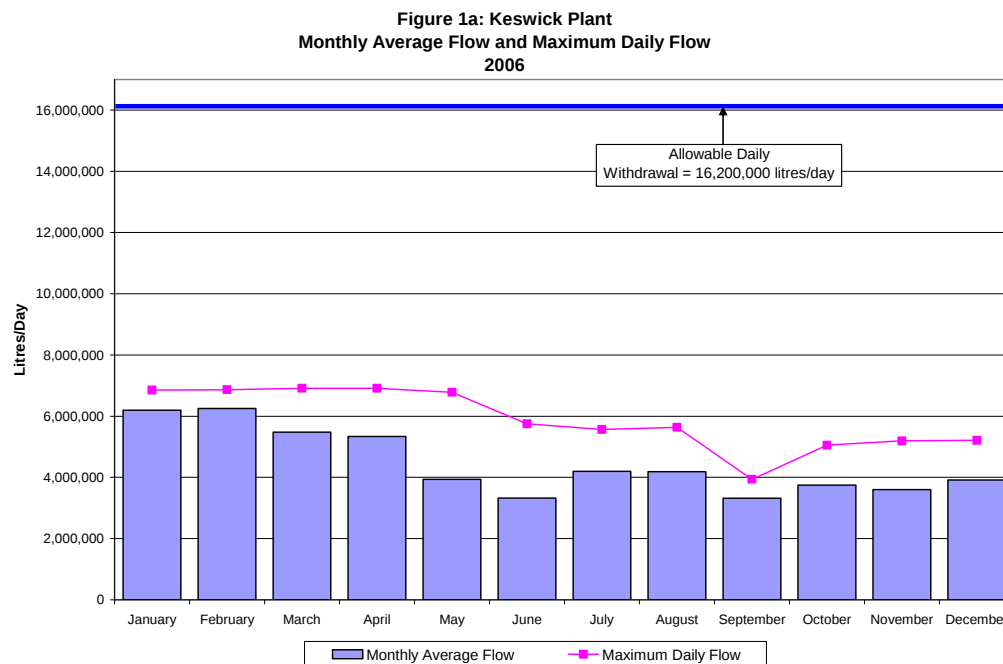
The maximum allowable daily water taking and the actual maximum recorded daily water taking are presented in Table 2.

TABLE 2: Allowable and Actual Maximum Daily Withdrawal from the Keswick Water Treatment Plant for January 1 – December 31, 2006

Location	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)
Water Treatment Plant	16,200,000	6,914,667

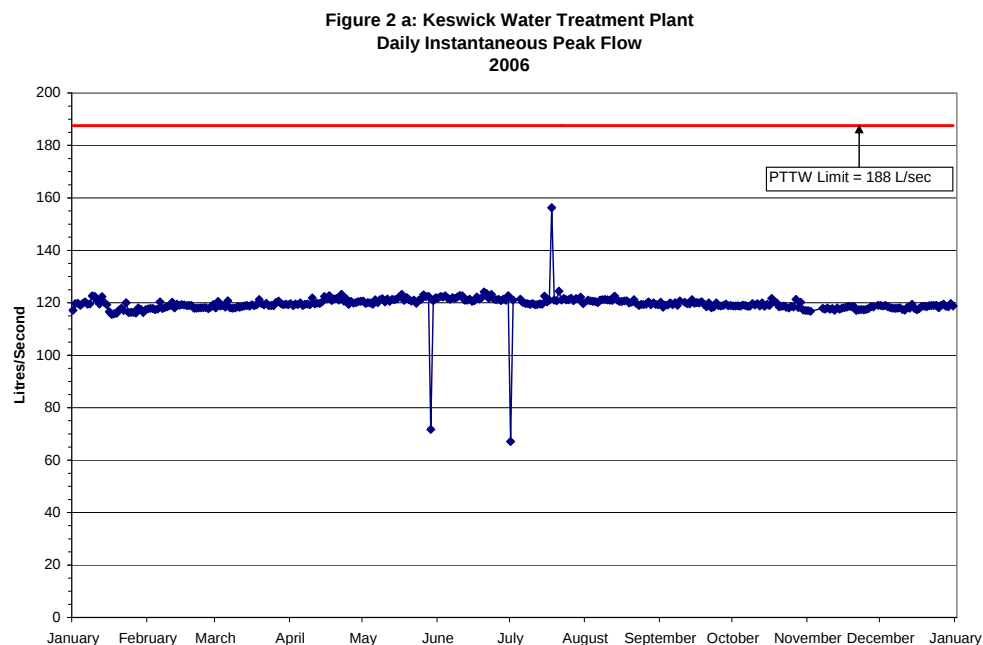
The average monthly flow rates, maximum daily flow, and allowable daily withdrawal are presented in Figure 1a. The actual dates of the peak monthly demands are summarized in the Appendices.

York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year



The withdrawal rates from the Keswick Water Treatment Plant did not exceed the allowable limits during January 1 – December 31, 2006.

The ‘*Daily Instantaneous Peak Flow (litres)*’ for January 1- December 31, 2006 is presented in Figure 2a.



4.6 King City

York Region operates a water supply system to service King City, Township of King, under authority of a Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE). The C of A includes reference to the valid Permit To Take Water (PTTW) also issued by the MOE. Details of the C of A and PTTW and other relevant classification information are presented in Table 1. All system upgrades required by C of A have been completed.

TABLE 1: King City Water Supply – Summary of Approvals and Permit

Current Certificate of Approval Number:	21100-69HKRC
Issue Date:	April 1, 2005
Current Permit to Take Water Number:	8634-67HR9L
Issue Date:	December 20, 2004
Expiry Date:	January 31, 2015
MOE Waterworks Number:	220002299
System Classification:	Water Distribution & Supply II

4.6.1 Water Taking

The PTTW for the King City Water Supply System allows York Region to withdraw up to 1,963,915 litres per day from production well 3 and 2,618,554 litres per day from production well 4.

York Region monitors the water taking through flow meters placed downstream of each production well. Flow is monitored on a continuous basis to ensure that the regulated flows are not exceeded.

4.6.2 Measuring Points

Flow meters are in place downstream of production well 3 and 4. The flow meters record the instantaneous flow rate and the total volume of water that has passed through the meter. The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A.

Flow data is retrieved and stored by two methods in York Region. This approach provides York Region with the opportunity to compare and contrast data should one method suddenly fail due to power failures or by other means.

1. York Region staff manually record the flow rates and total flow data on regular operational visits to the well sites. Average flow rates are also calculated using records of total flow and number of operating pump

hours. This ‘manual’ data was used to generate the maximum daily withdrawal and monthly average flow tables and figures.

2. The flow meters are also connected to the Supervisory Control and Data Acquisition (SCADA) system so that data can be monitored remotely and stored electronically. This data was used to generate the instantaneous peak flow rate figures.

4.6.3 Water Withdrawal

The total volume of water taken from the production wells of the King City Water Supply system for January 1 – December 31, 2006 was 557,387,000 litres. This volume is less than the maximum permitted withdrawal as prescribed in the PTTW.

As a result of increased water use and mechanical well issues during the peak summer period, a Stage I voluntary water ban was issued by the Region to the community of King City in June 2006. At that time, King City well 3, the backup well for the system, was off line due to an investigation of silty (cloudy) water entering the well at the top of the well screen (about 50 metres below grade). The presence of silt in the raw water can, if not fixed, result in higher than allowable fine particulates in the water. This situation did not pose a risk to public health. The well screen was fixed; the Stage I ban was lifted and well has returned to its normal operating conditions.

The maximum allowable daily water taking and the actual maximum recorded daily water taking are presented in Table 2.

TABLE 2: Allowable and Actual Maximum Daily Withdrawal from the King City Production Wells for January 1 – December 31, 2006

Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)
Well 3	1,963,915	1,643,000
Well 4	2,618,554	2,484,500

The monthly average flow rates, maximum daily flow, and the allowable daily withdrawal are presented in Figure 1a and 1b. The actual dates of the peak monthly demands are summarized in the Appendices.

York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1a: King City Well No. 3
Monthly Average Flow and Maximum Daily Flow
2006

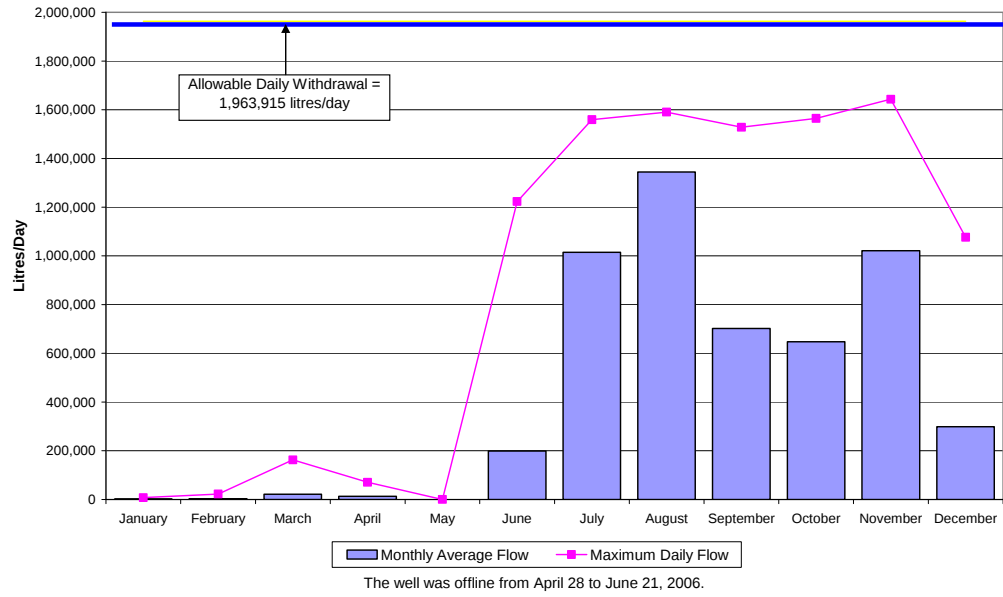
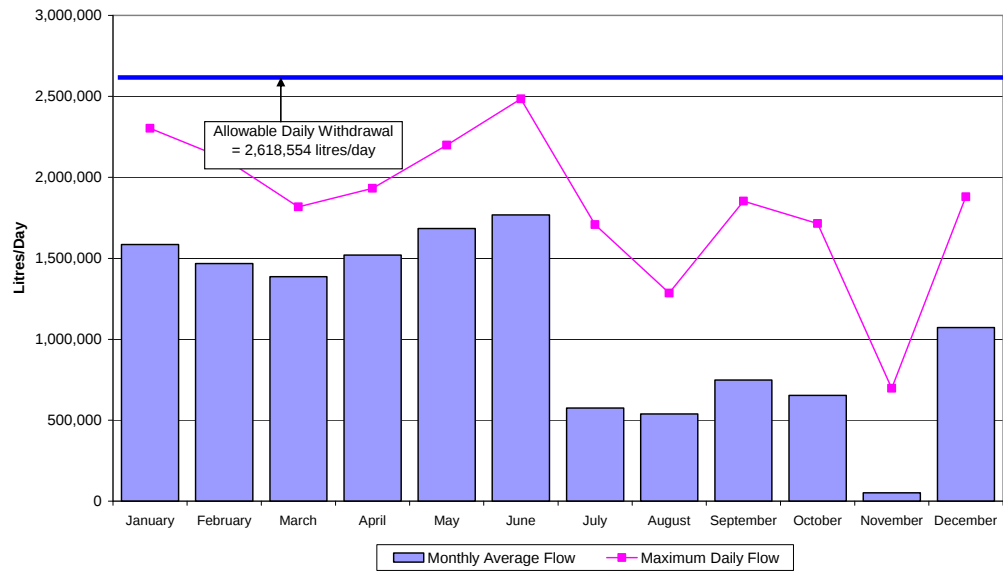
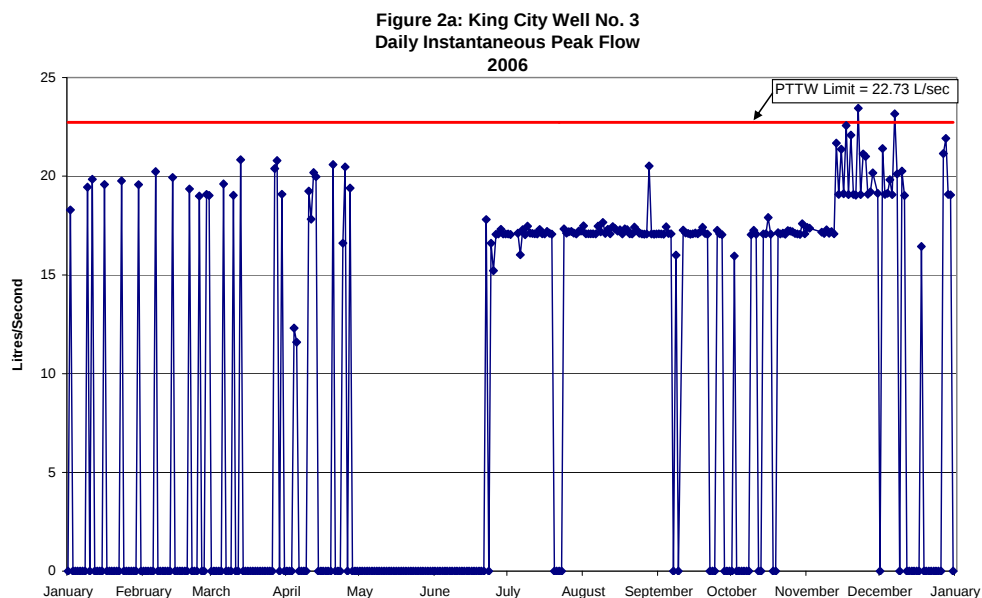


Figure 1b: King City Well No. 4
Monthly Average Flow and Maximum Daily Flow
2006

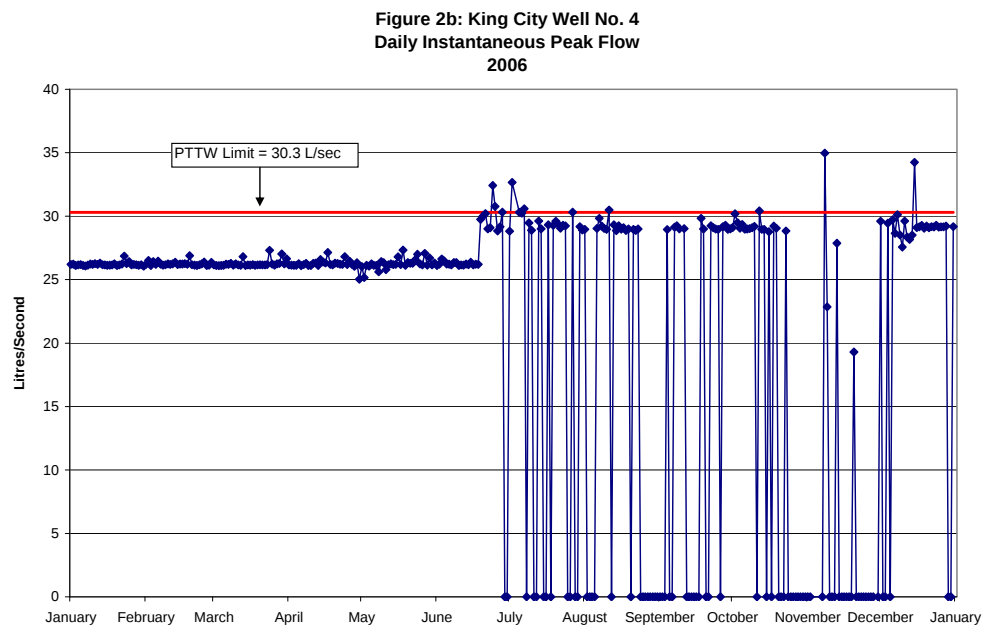


The withdrawal rates from the King City production wells did not exceed the allowable limits during January 1 – December 31, 2006.

The ‘*Daily Instantaneous Peak Flow (litres)*’ for January 1- December 31, 2006 are presented in Figures 2a and 2b.



The well was offline from April 28 to June 1, 2006 for maintenance.



The peak flows over the PTTW limit are no longer than 5 minutes in duration.

4.7 Kleinburg

York Region operates a water supply system to service Kleinburg, City of Vaughan, under authority of a Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE). The C of A includes reference to the valid Permit To Take Water (PTTW) also issued by the MOE. Details of the C of A and PTTW and other relevant classification information are presented in Table 1.

TABLE 1: Kleinburg Water Supply – Summary of Approvals and Permit

Current Certificate of Approval Number: Issue Date:	6072-6R9Q9W July 12, 2006
Previous Permit to Take Water Number: Issue Date: Expiry Date:	3568-6R7MD8 July 12, 2006 March 31, 2009
Previous Permit to Take Water Number: Issue Date: Expiry Date:	7401-6BLHEZ March 30, 2006 July 11, 2006
Previous Permit to Take Water Number: Issue Date: Expiry Date:	7401-6BLHEZ January 29, 2003 March 29, 2006
MOE Waterworks Number:	220002360
System Classification:	Water Distribution II (WDII)

4.7.1 Water Taking

The PTTW for the Kleinburg Water Supply System allows York Region to withdraw up to 950,400 litres per day from production well 2 over a 24 hour period and 3,283,200 litres per day from production wells 3 and 4 inclusive.

Thorough the month of June, a Stage I voluntary and Stage II mandatory water ban was issued by the Region due to increased outdoor water use and mechanical well issue. The main well supply, Kleinburg Well 3, had lost efficiency due to a screen blockage which could not be repaired until the Fall season when water demand was reduced (see Figure 2b). In addition, the back up well, Well 2, is rated at ¼ the capacity of the main well and could not fully support the residential demands or maintain sufficient volumes for fire fighting purposes at that time. As result, the community was at risk and Stage II ban was issued.

On July 14, the main well, Well 3 was temporary replaced by an exploration well 4, located on the same site. Due to its proximity, Well 4 was connected to the existing infrastructure at well 3 and was the main well supply until November 29th, at which time well 3 was rehabilitated and reconnected. Due to time and electrical constraints, Well 4 could not be constructed as permanent well supply; however, it was permitted to the same capacity as well 3. Well 3 is currently operating at its original yield.

York Region monitors the water taking through flow meters placed downstream of each production well. Flow is monitored on a continuous basis to ensure that the regulated flows are not exceeded.

4.7.2 Measuring Points

Flow meters are in place downstream of production well 2 and 3/4. The flow meters record the instantaneous flow rate and the total volume of water that has passed through the meter. The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A.

Flow data is retrieved and stored by two methods in York Region. This approach provides York Region with the opportunity to compare and contrast data should one method suddenly fail due to power failures or by other means.

1. York Region staff manually record the flow rates and total flow data on regular operational visits to the well sites. Average flow rates are also calculated using records of total flow and number of operating pump hours. This 'manual' data was used to generate the maximum daily withdrawal and monthly average flow tables and figures.
2. The flow meters are also connected to the Supervisory Control and Data Acquisition (SCADA) system so that data can be monitored remotely and stored electronically. This data was used to generate the instantaneous peak flow rate figures.

4.7.3 Water Withdrawal

The total volume of water taken from the production wells of the Kleinburg Water Supply system for January 1 – December 31, 2006 was 578,552,000 litres. This volume is less than the maximum permitted withdrawal as prescribed in the PTTW.

The maximum allowable daily water taking and the actual maximum recorded daily water taking are presented in Table 2.

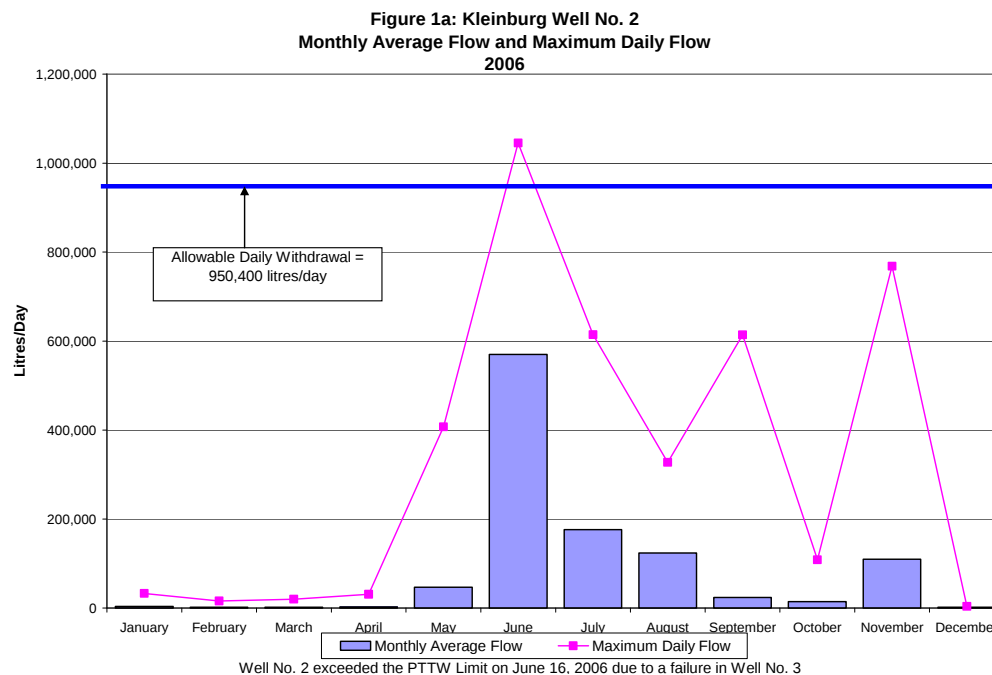
TABLE 2: Allowable and Actual Maximum Daily Withdrawal from the Kleinburg Production Wells for January 1 – December 31, 2006

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)
Well 2	950,400	1,045,333
Well 3/4	3,283,200	3,365,000

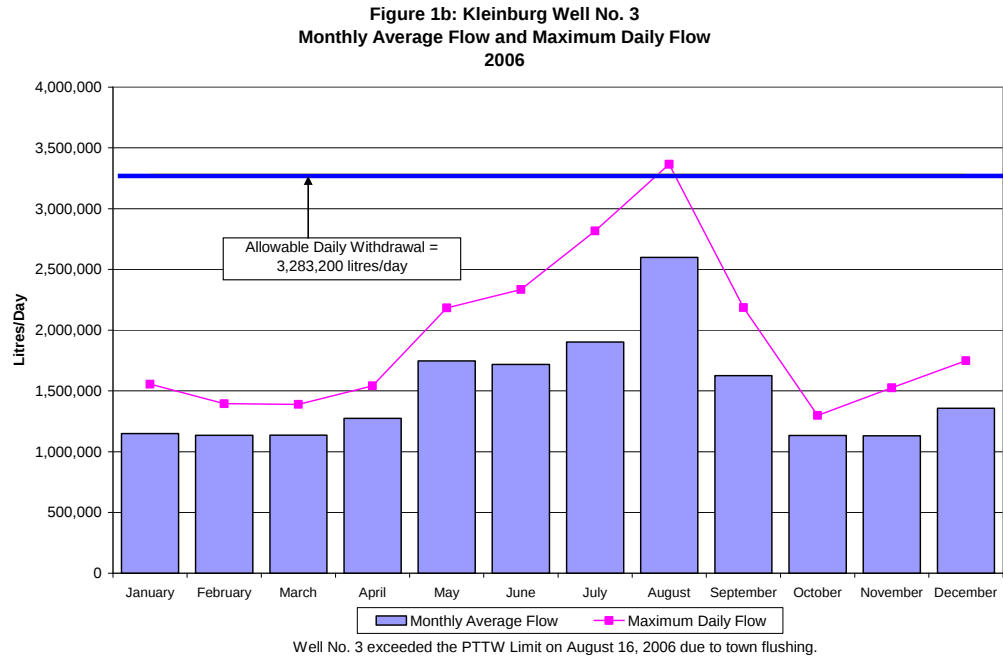
* Kleinburg well 2 is typically used as a standby well and is primarily operated for collection of samples for required water quality testing.

* Kleinburg well 4 is pumped into well 3header, flow is recorded through well 4 metering

The monthly average flow rates, maximum daily flow, and allowable daily withdrawal are presented in Figure 1a and 1b. The actual dates of the peak monthly demands are summarized in the Appendices.



Although the permit limits the continuous operating of well 2 for more than a 24 hours without rest, we are exempted by Condition 3.5 where in the event of a failure of well 3 and well 4 together, well 2 may be pumped until such time well 3 and 4 return into service.



The withdrawal rates from the Kleinberg production wells exceeded the allowable limits during January – December 31, 2006. Kleinberg production well 2 exceeded the allowable limit on June 16, 2006 due to a failure in production well 3. As per condition 3.5 of the PTTW, well 2 was operated without a 24 hour rest period due to ongoing emergency conditions with well 3. The withdrawal rate from the Kleinberg production well 4 exceeded the allowable limit on August 16, 2006 due to town flushing.

The 'Daily Instantaneous Peak Flow (litres)' for January 1- December 31, 2006 is presented in Figures 2a and 2b.

Figure 2a: Kleinburg Well No. 2
Daily Instantaneous Peak Flow
2006

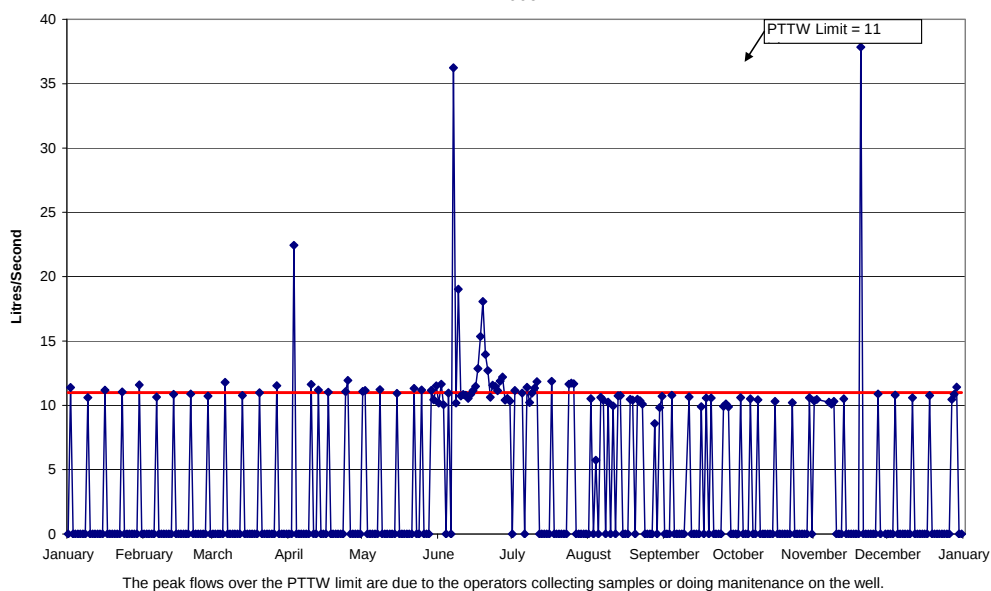
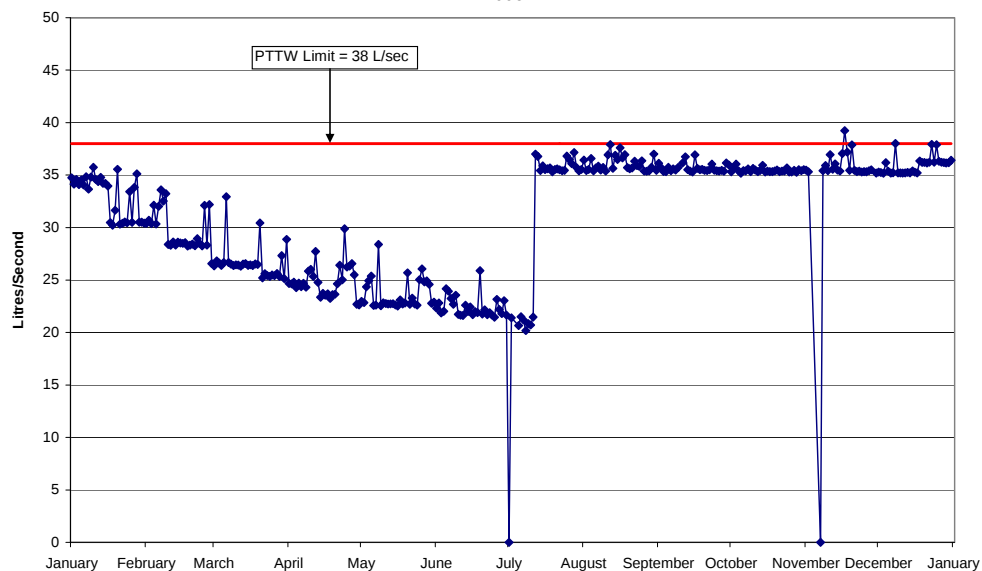


Figure 2b: Kleinburg Well No. 3
Daily Instantaneous Peak Flow
2006



4.8 Mount Albert

York Region operates a water supply system to service Mount Albert, Town of East Gwillimbury, under authority of a Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE). The C of A includes reference to the valid Permit To Take Water (PTTW) also issued by the MOE. Details of the C of A and PTTW and other relevant classification information are presented in Table 1. All system upgrades required by C of A have been completed.

TABLE 1: Mount Albert Water Supply – Summary of Approvals and Permit

Current Certificate of Approval Number:	2899-6H4RRF
Issue Date:	October 24, 2005
Current Permit to Take Water Number:	2274-6PAJGV
Issue Date:	May 17, 2006
Expiry Date:	March 31, 2016
Previous Permit to Take Water Number:	94-P-3070
Issue Date:	January 3, 1996
Expiry Date:	May 16, 2006
MOE Waterworks Number:	220006543
System Classification:	Water Distribution II (WDII)

4.8.1 Water Taking

The PTTW for the Mount Albert Water Supply System allows York Region to withdraw up to 3,273,120 from production well 1 and 3,273,120 for production well 2 with an allowable combined flow 4,352,000 litres per day. The combined water taking from both production wells is limited to a maximum of 16 hours per day for no more than 7 consecutive days, maximum 21 days in the year with a combined annual average of 1,800,000 L/day.

York Region monitors the water taking through flow meters placed downstream of each production well. Flow is monitored on a continuous basis to ensure that the regulated flows are not exceeded.

4.8.2 Measuring Points

Flow meters are in place downstream of production well 1 and 2. The flow meters record the instantaneous flow rate and the total volume of water that has passed through the meter. The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A.

Flow data is retrieved and stored by two methods in York Region. This approach provides York Region with the opportunity to compare and contrast data should one method suddenly fail due to power failures or by other means.

1. York Region staff manually record the flow rates and total flow data on regular operational visits to the well sites. Average flow rates are also calculated using records of total flow and number of operating pump hours. This 'manual' data was used to generate the maximum daily withdrawal and monthly average flow tables and figures.
2. The flow meters are also connected to the Supervisory Control and Data Acquisition (SCADA) system so that data can be monitored remotely and stored electronically. This data was used to generate the instantaneous peak flow rate figures.

4.8.3 Water Withdrawal

The total volume of water taken from the production wells of the Mount Albert Water Supply system for the reporting period of January 1 – December 31, 2006 was 341,595,000 litres. This volume is less than the maximum permitted withdrawal as prescribed in the PTTW.

The maximum allowable daily water taking and the actual maximum recorded daily water taking are presented in Table 2.

TABLE 2: Allowable and Actual Maximum Daily Withdrawal from the Mount Albert Production Wells for January 1 – December 31, 2006

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)
Well 1	3,273,120	1,489,000
Well 2	3,273,120	1,626,500

The monthly average flow rates, maximum daily flow, and allowable daily withdrawal are presented in Figure 1a and 1b. The actual dates of the peak monthly demands are summarized in the Appendices.

York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1a: Mount Albert Well No. 1
Monthly Average Flow and Maximum Daily Flow
2006

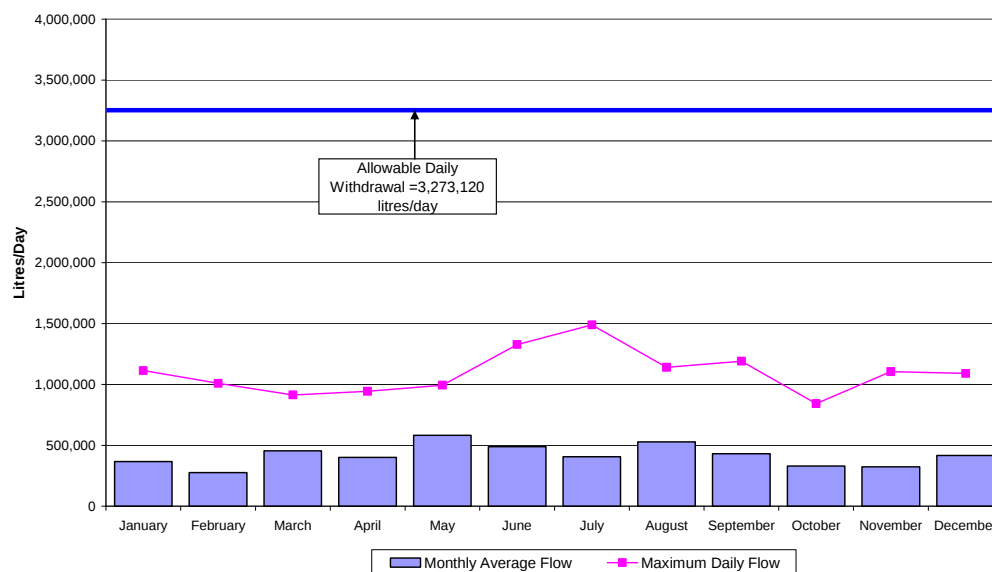
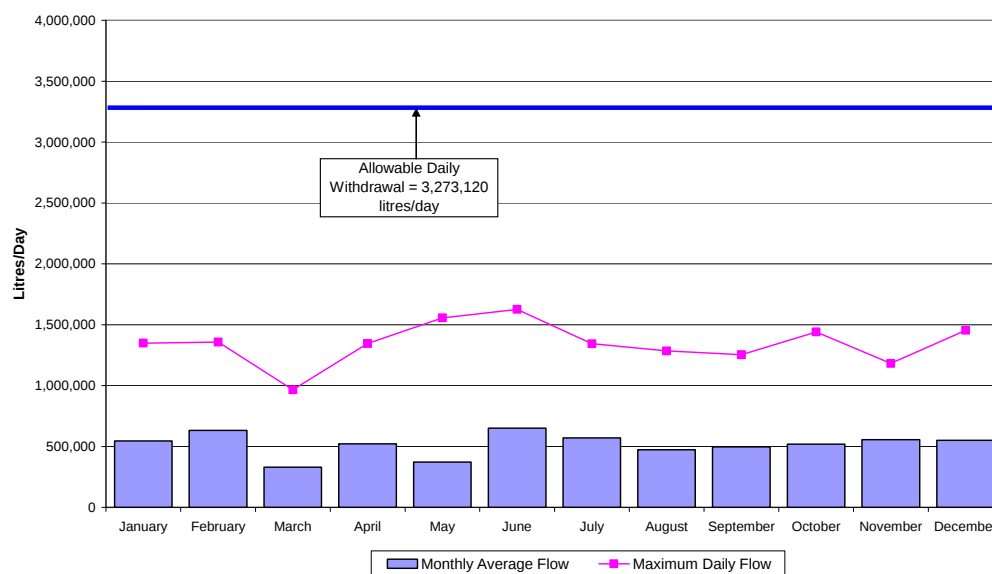


Figure 1b: Mount Albert Well No. 2
Monthly Average Flow and Maximum Daily Flow
2006



The actual volumes of water taken from the Mount Albert production wells during January 1 – December 31, 2006 did not exceed the allowable daily withdrawal volumes.

The 'Daily Instantaneous Peak Flow (litres)' for January 1- December 31, 2006 are presented in Figure 2a and 2b.

Figure 2a: Mount Albert Well No. 1
Daily Instantaneous Peak Flow
2006

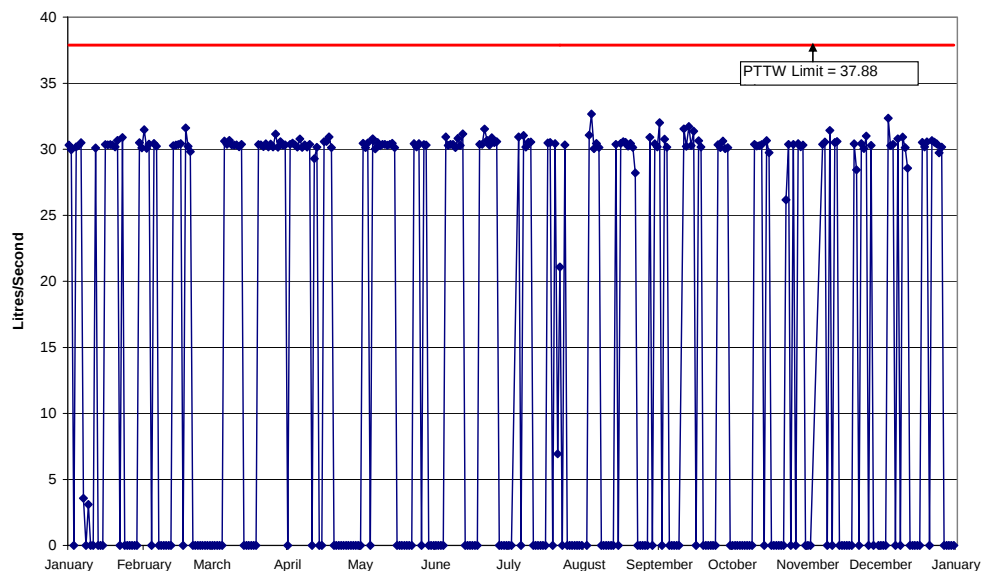
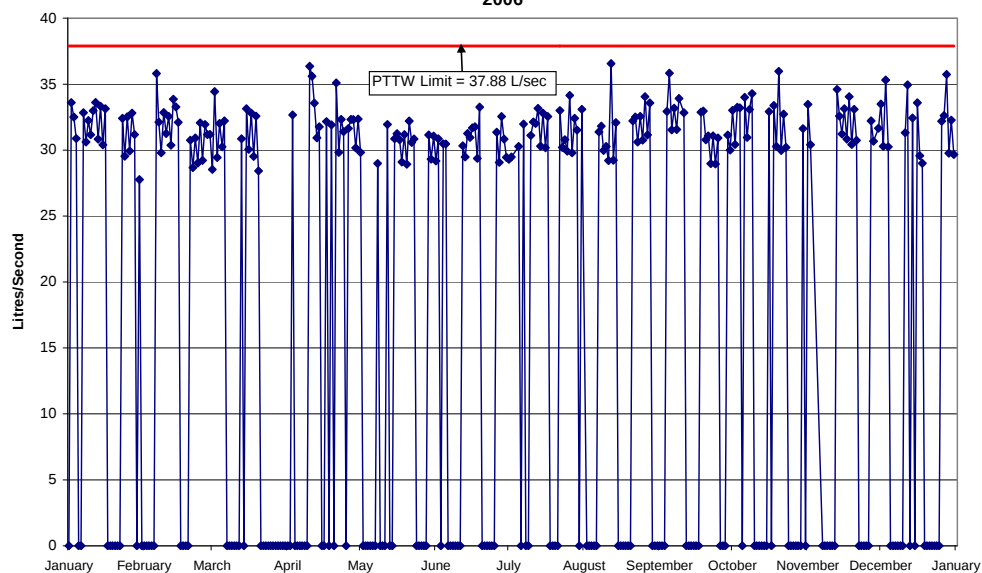


Figure 2b: Mount Albert Well No. 2
Daily Instantaneous Peak Flow
2006



4.9 Newmarket/East Gwillimbury

York Region operates a water supply system to service the communities of Holland Landing, Sharon and Queensville in the Town of East Gwillimbury and the Town of Newmarket under authority of a Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE). The C of A includes reference to the valid Permit To Take Water (PTTW) also issued by the MOE. Details of the C of A and PTTW and other relevant classification information are presented in Table 1. All system upgrades required by C of A have been completed.

TABLE 1: Newmarket/East Gwillimbury Water Supply – Summary of Approvals and Permit

Current Certificate of Approval Number:	3509-6ALJGJ
Issue Date:	July 7, 2005
Current Permit to Take Water Number:	6623-68QQ6L
Issue Date:	March 10, 2005
Expiry Date:	March 31, 2015
MOE Waterworks Number:	
Holland Landing:	220004046
Newmarket:	220002413
Queensville:	260001955
System Classification:	Water Distribution III (WD III)

4.9.1 Water Taking

The PTTW for the Newmarket/East Gwillimbury Water Supply System allows York Region to withdraw up to 56,036,736 litres per day from all production wells

York Region monitors the water taking through flow meters placed downstream of each production well. Flow is monitored on a continuous basis to ensure that the regulated flows are not exceeded.

4.9.2 Measuring Points

Flow meters are in place downstream of each production well. The flow meters record the instantaneous flow rate and the total volume of water that has passed through the meter. The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A.

Flow data is retrieved and stored by two methods in York Region. This approach provides York Region with the opportunity to compare and contrast data should one method suddenly fail due to power failures or by other means.

1. York Region staff manually record the flow rates and total flow data on regular operational visits to the well sites. Average flow rates are also calculated using records of total flow and number of operating pump hours. This 'manual' data was used to generate the maximum daily withdrawal and monthly average flow tables and figures.
2. The flow meters are also connected to the Supervisory Control and Data Acquisition (SCADA) system so that data can be monitored remotely and stored electronically. This data was used to generate the instantaneous peak flow rate figures.

4.9.3 Water Withdrawal

The total volume of water taken from the production wells of the Newmarket/East Gwillimbury Water Supply system for January 1 – December 31, 2006 was 10,378,649,000 litres. This volume is less than the maximum permitted withdrawal as prescribed in the PTTW.

The maximum allowable daily water taking and the actual maximum recorded daily water taking are presented in Table 2.

TABLE 2: Allowable and Actual Maximum Daily Withdrawal from the Newmarket/East Gwillimbury Production Wells for the January 1 – December 31, 2006

Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)
Holland Landing Well 1	2,291,184	1,643,000
Holland Landing Well 2	3,600,432	2,713,6670
Newmarket Well 1	2,291,184	1,840,000
Newmarket Well 2	4,582,512	4,492,000
Newmarket Well 13	5,891,760	5,804,000
Newmarket Well 14	2,291,184	1,583,000
Newmarket Well 15	3,273,120	1,587,500
Newmarket Well 16	5,629,824	4,373,000
Queensville Well 1	6,546,384	5,827,000
Queensville Well 2	6,546,384	6,484,500
Queensville Well 3	6,546,384	6,155,500
Queensville Well 4	6,546,384	6,216,667

The monthly average flow rates, maximum daily flow, and allowable daily withdrawal are presented in Figure 1a through 1l. The actual dates of the peak monthly demands are summarized in the Appendices.

**Figure 1a: Holland Landing Well No. 1
Monthly Average Flow and Maximum Daily Flow
2006**

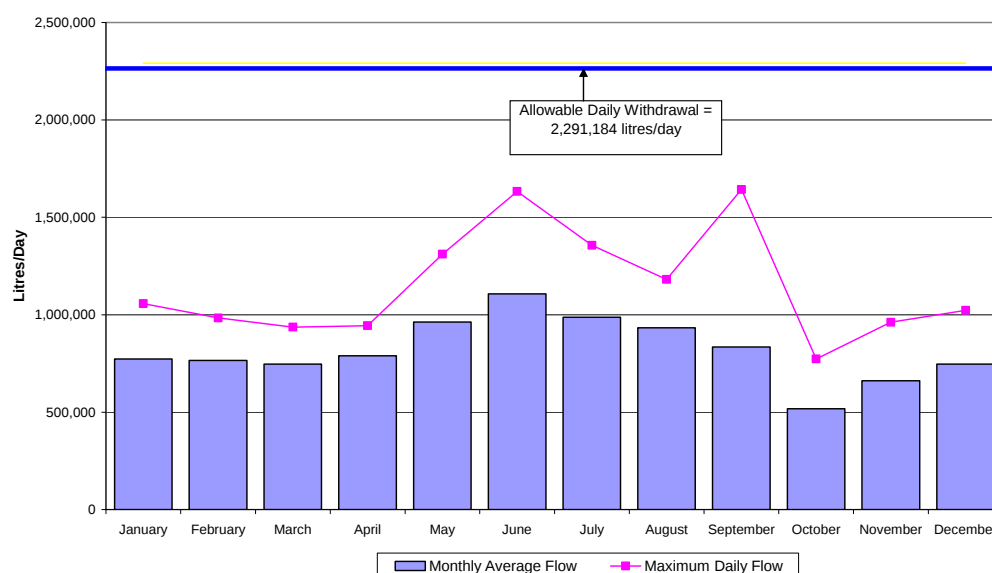


Figure 1b: Holland Landing Well No. 2
Monthly Average Flow and Maximum Daily Flow
2006

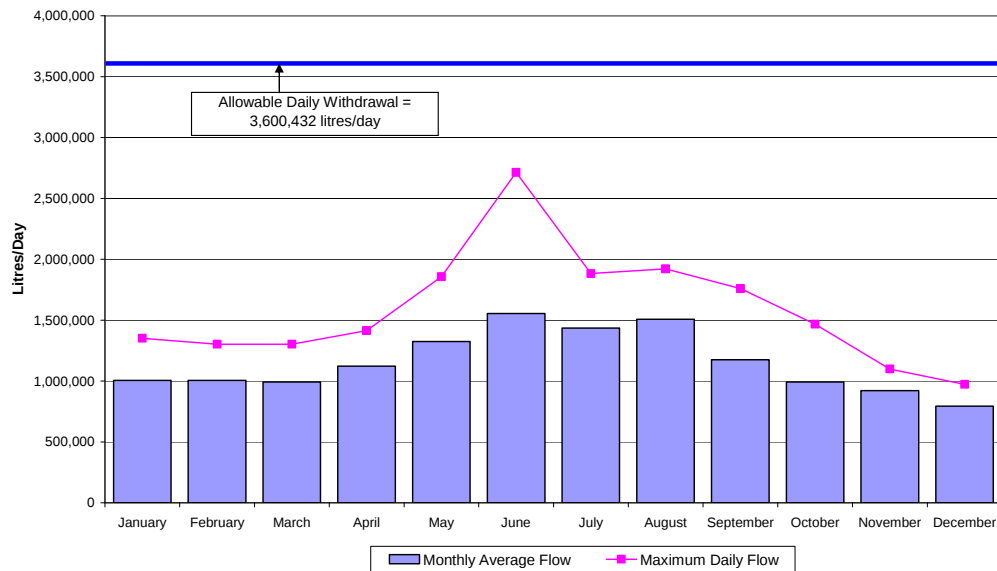
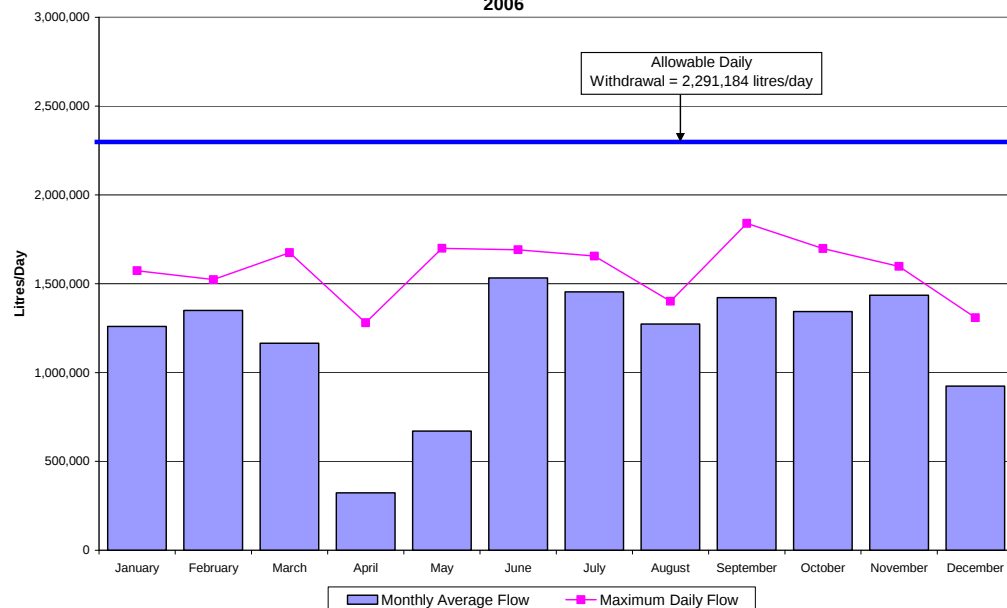


Figure 1c: Newmarket Well No. 1
Monthly Average Flow and Maximum Daily Average
2006



York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1d: Newmarket Well No. 2
Monthly Average Flow and Maximum Daily Flow
2006

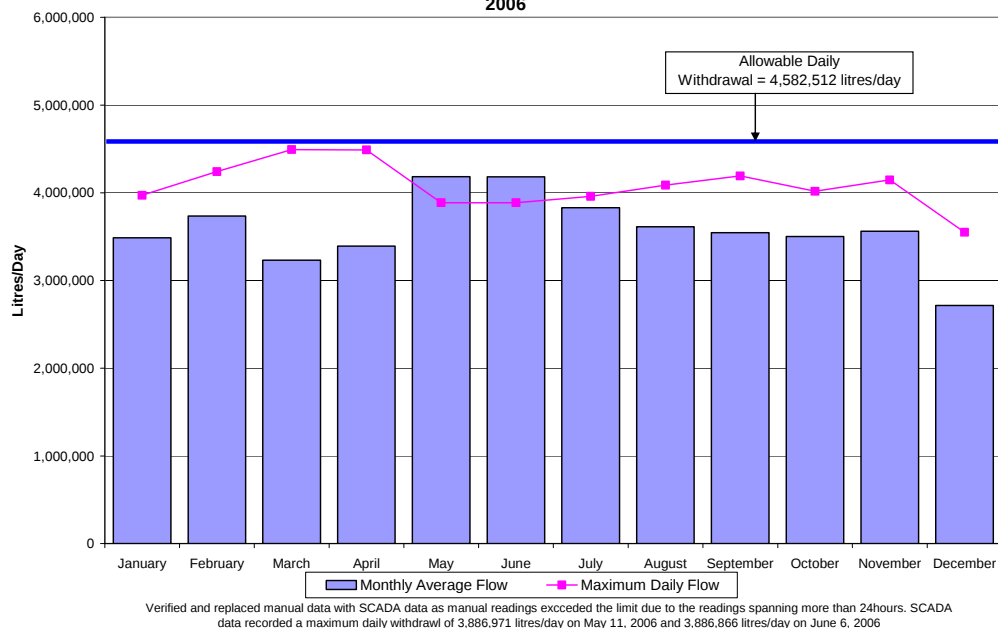
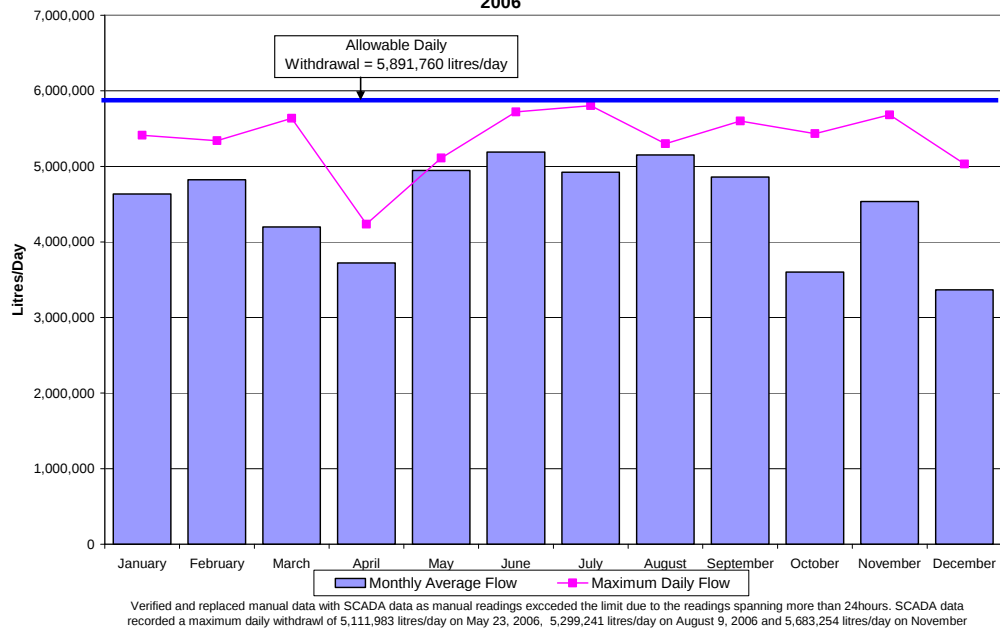


Figure 1e: Newmarket Well No. 13
Monthly Average Flow and Maximum Daily Flow
2006



York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1f: Newmarket Well No. 14
Monthly Average Flow and Maximum Daily Flow
2006

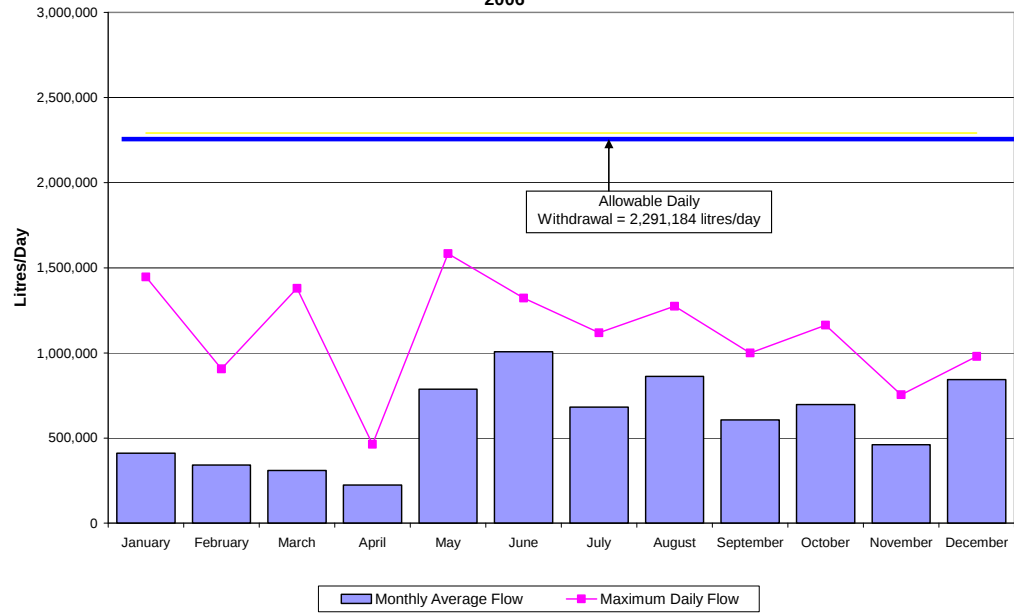
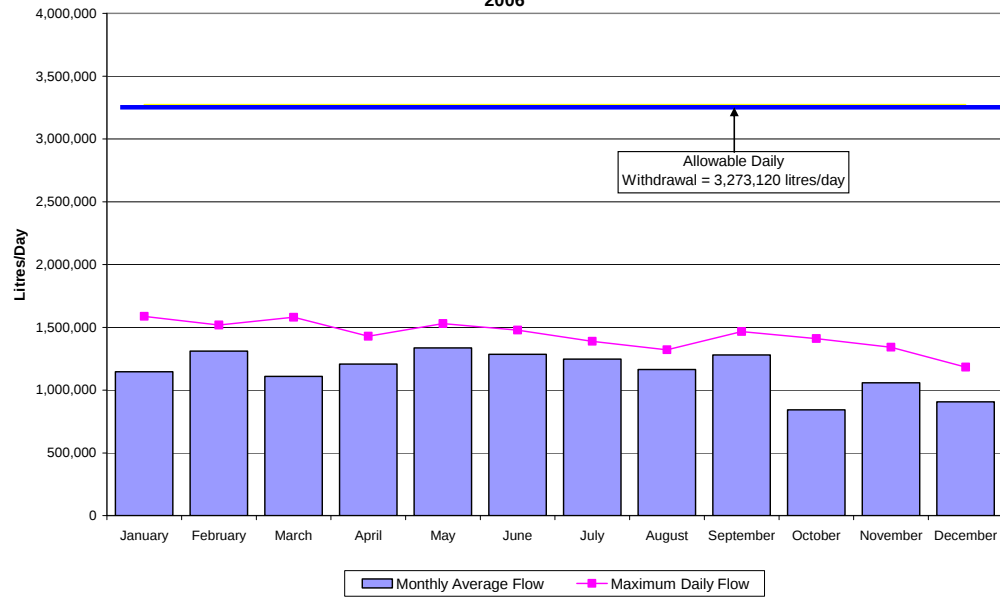


Figure 1g: Newmarket Well No. 15
Monthly Average Flow and Maximum Daily Flow
2006



York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1h: Newmarket Well No. 16
Monthly Average Flow and Maximum Daily Flow
2006

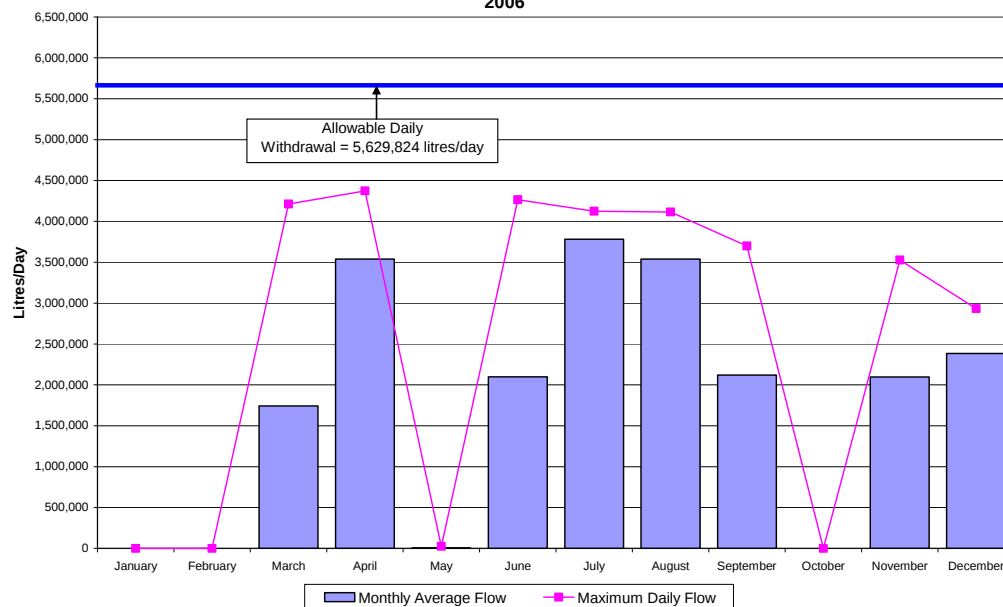
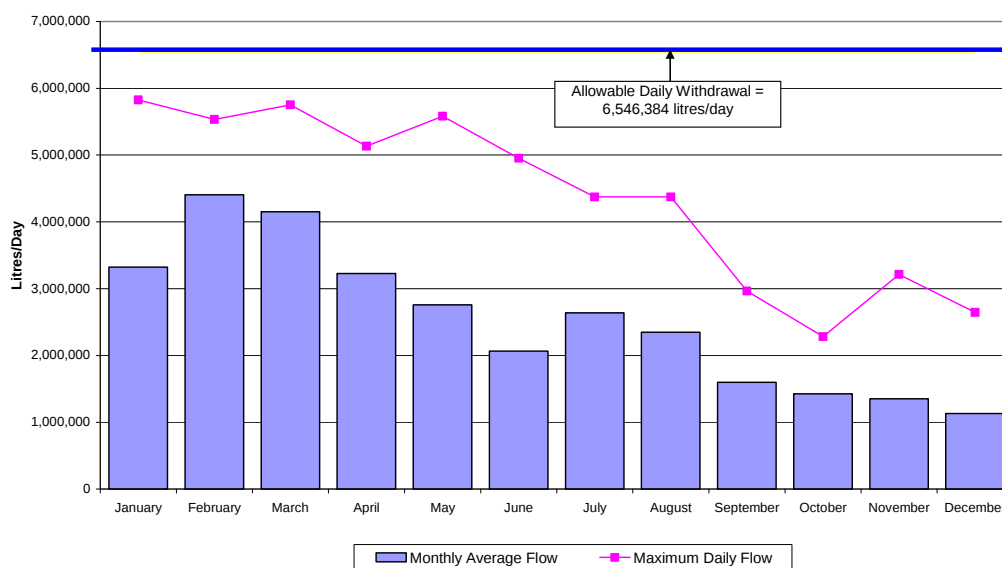


Figure 1i: Queensville Well No. 1
Monthly Average Flow and Maximum Daily Flow
2006



York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1j: Queensville Well No. 2
Monthly Average Flow and Maximum Daily Flow
2006

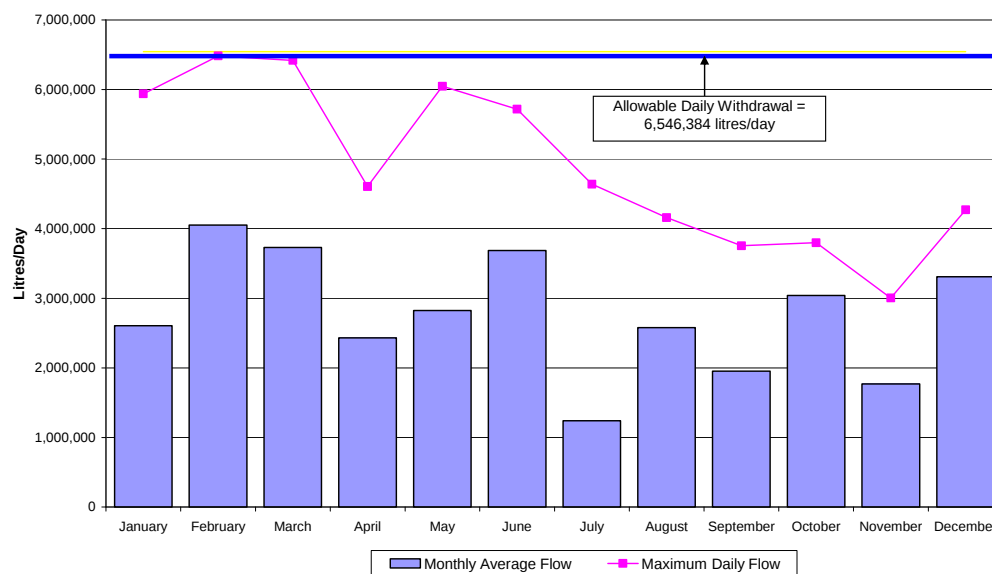
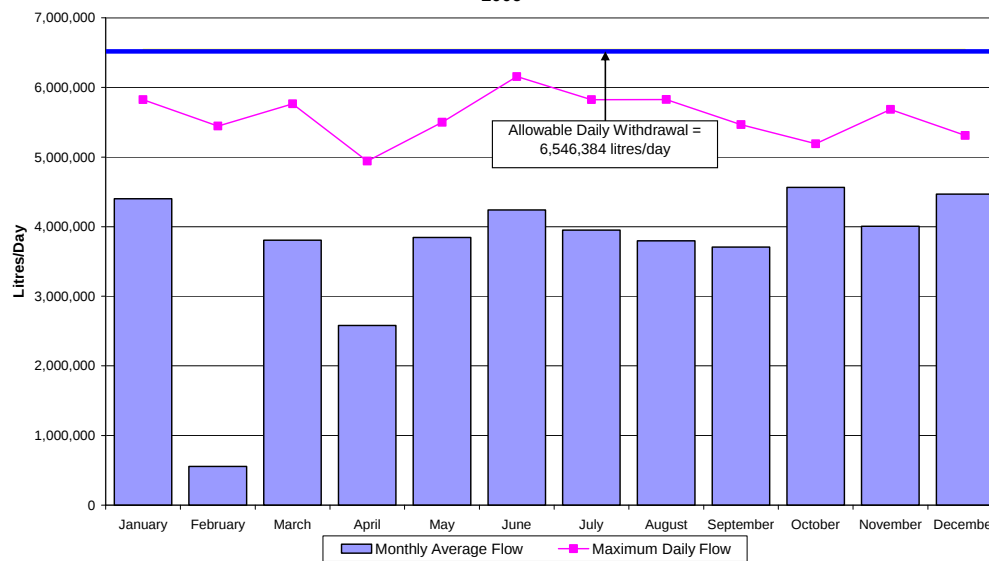
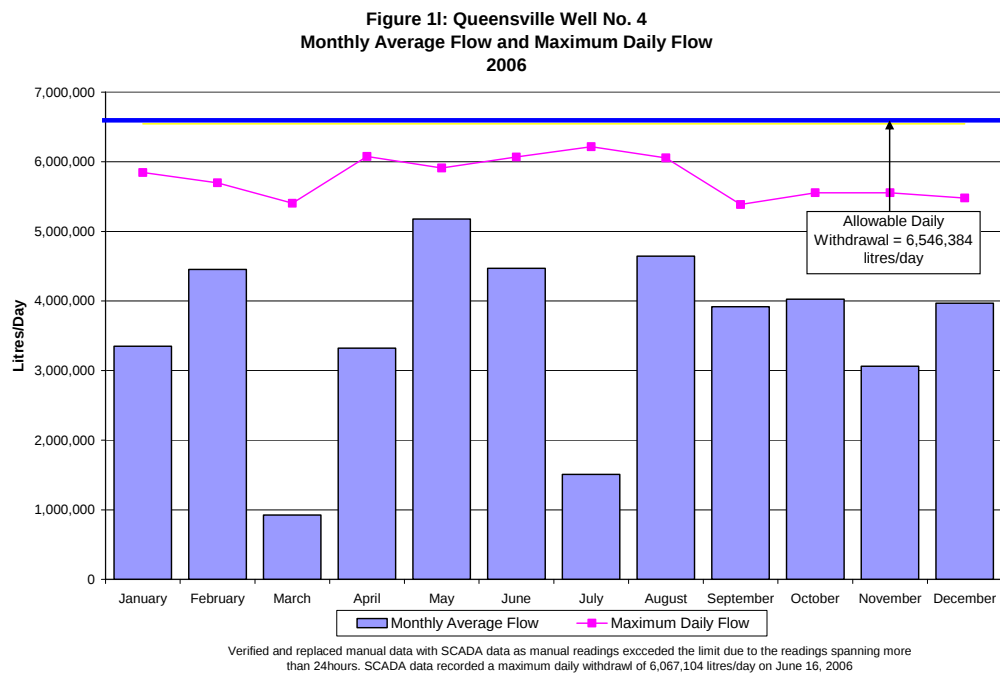


Figure 1k: Queensville Well No. 3
Monthly Average Flow and Maximum Daily Flow
2006



Verified manual data with SCADA data as manual data covered a period greater than 24



Throughout the period of January 1 – December 31, 2006 the withdrawal rates from the Newmarket/East Gwillimbury production wells did not exceed the allowable limits.

The 'Daily Instantaneous Peak Flow (litres)' for January 1- December 31, 2006 is presented in Figures 2a through 2l.

Figure 2a: Holland Landing Well No. 1
Daily Instantaneous Peak Flow
2006

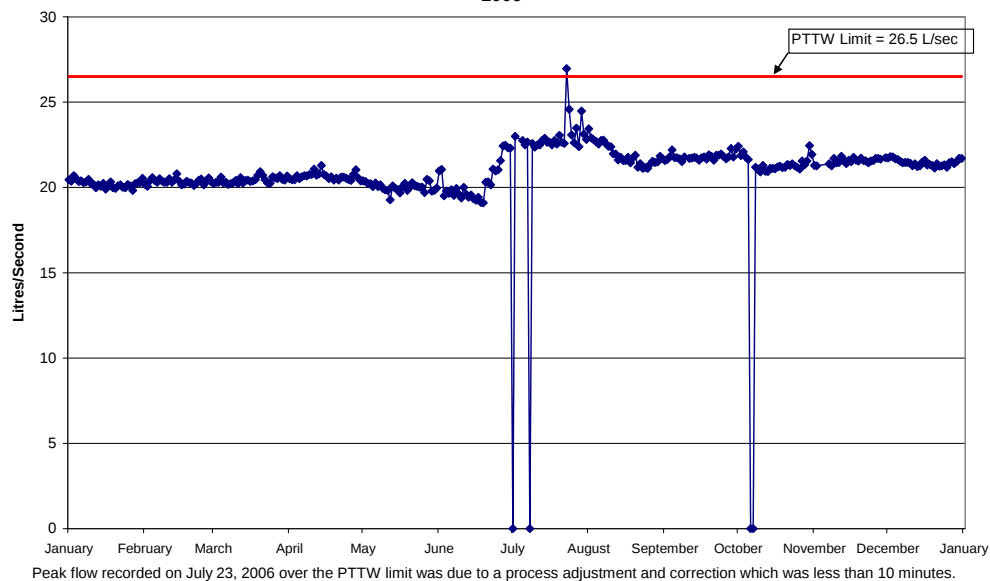


Figure 2b: Holland Landing Well No. 2
Daily Instantaneous Peak Flow
2006

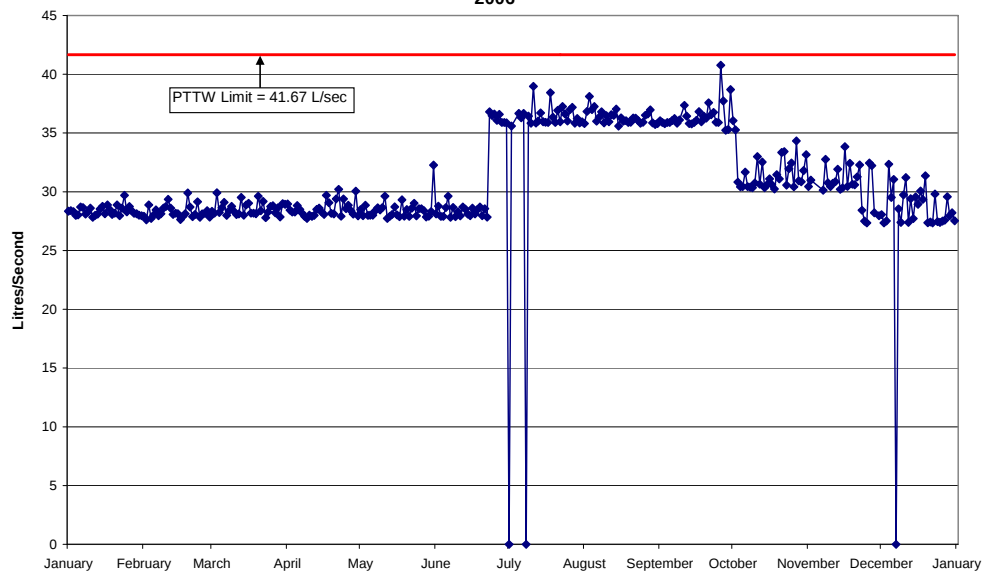


Figure 2c: Newmarket Well No. 1
Daily Instantaneous Peak Flow
2006

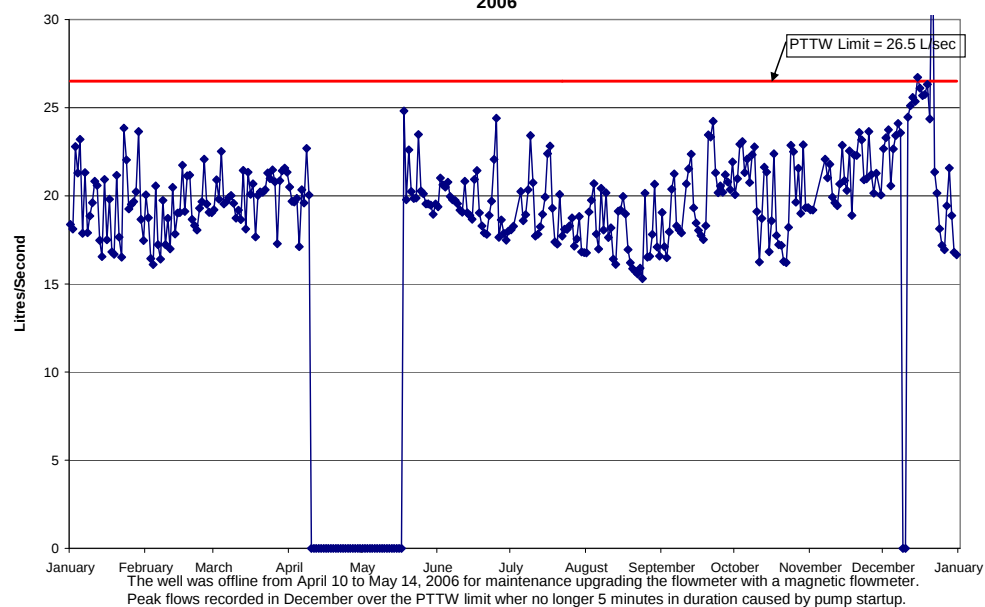
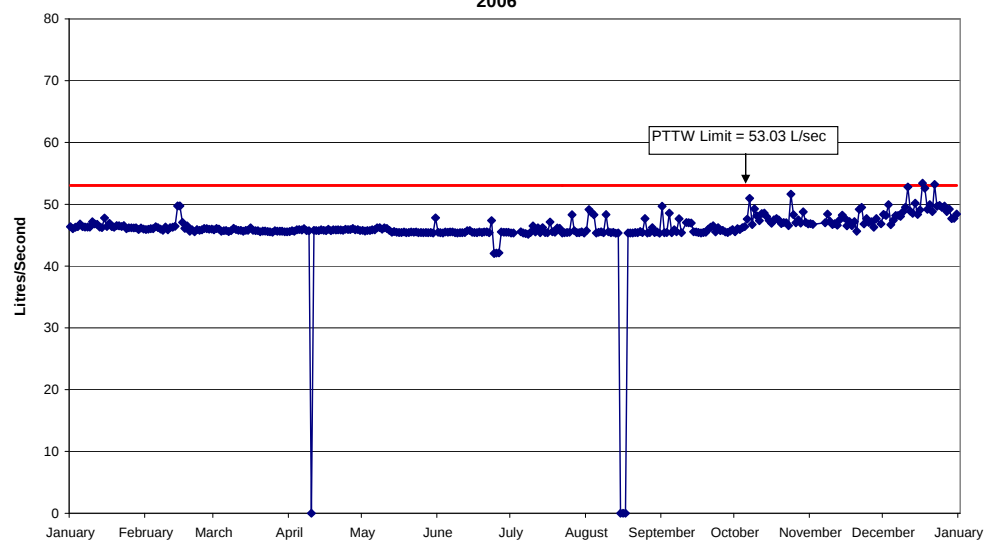


Figure 2d: Newmarket Well No. 2
Daily Instantaneous Peak Flow
2006



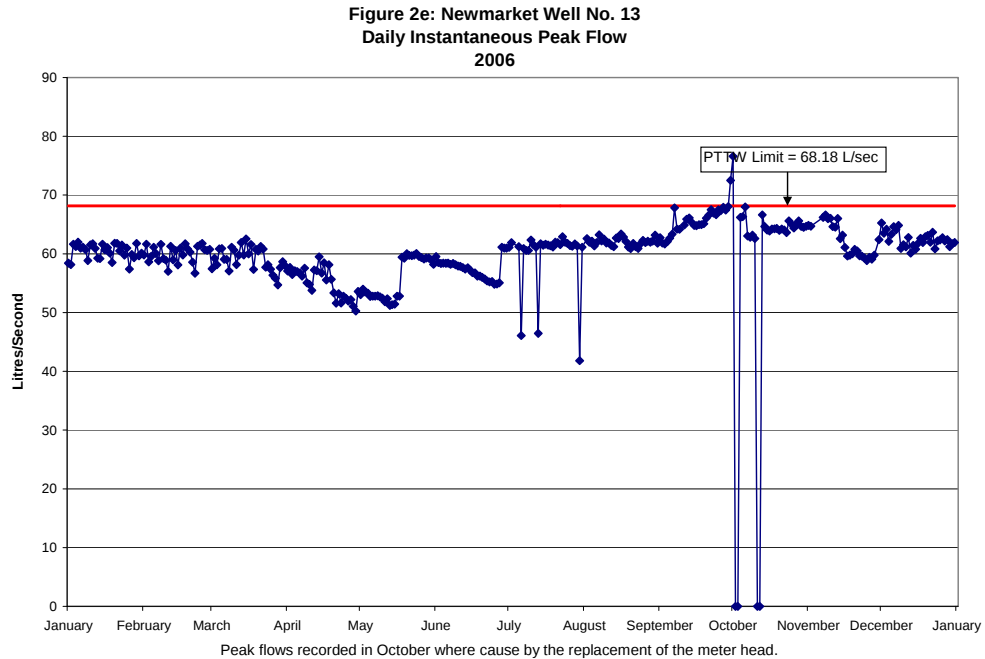
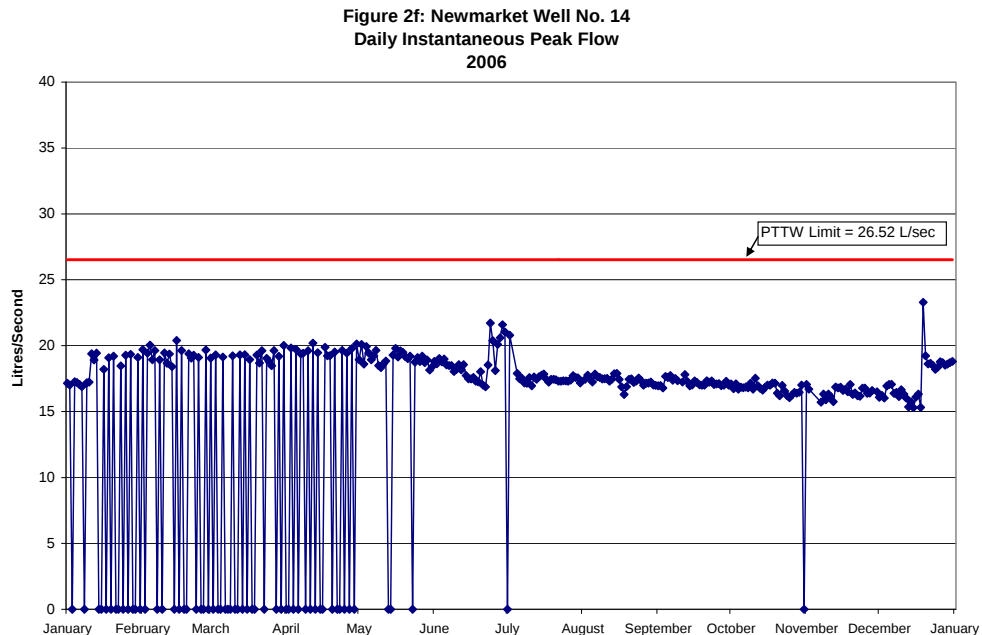


Figure 2a, 2c, 2d, 2e and 2h: shows some instantaneous peak flow rates above the Permit to Take Water limit. The instantaneous peak flow rates are short duration (on average less than 5 minutes) and represent less than 1% of the total volume of water taken for that day. These peaks are associated with the initial start up of a pump by removing of back pressure, a change in elevation in the water table or maintenance on the distribution system.



York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 2g: Newmarket Well No. 15
Daily Instantaneous Peak Flow
2006

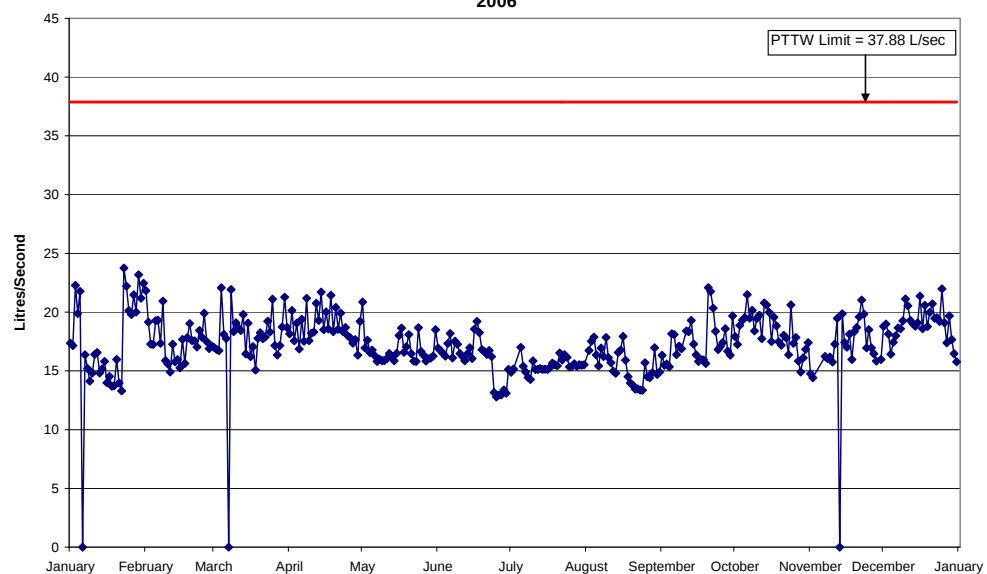
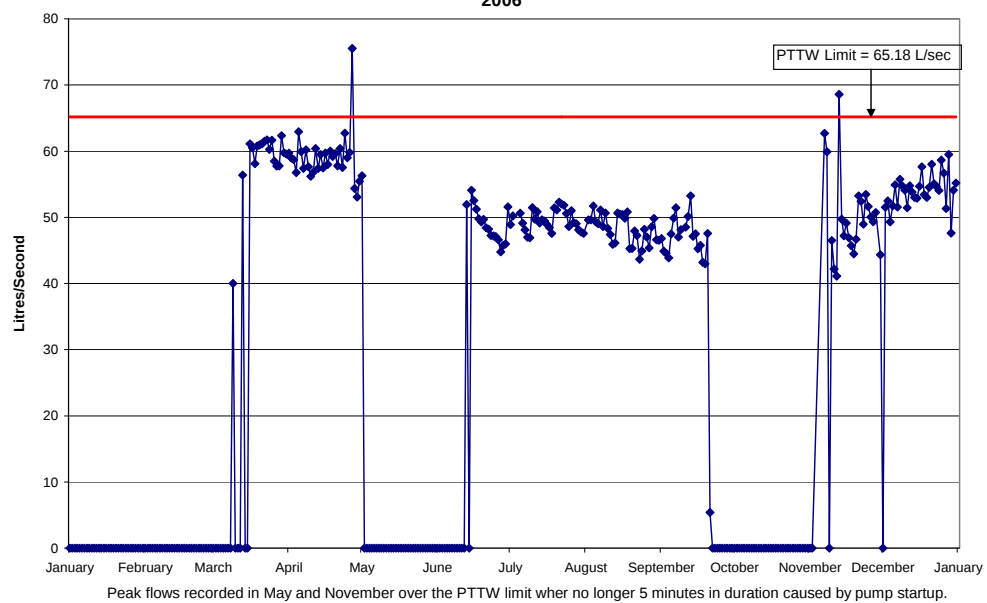


Figure 2h: Newmarket Well No. 16
Daily Instantaneous Peak Flow
2006



York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 2i: Queensville Well No. 1
Daily Instantaneous Peak Flow
2006

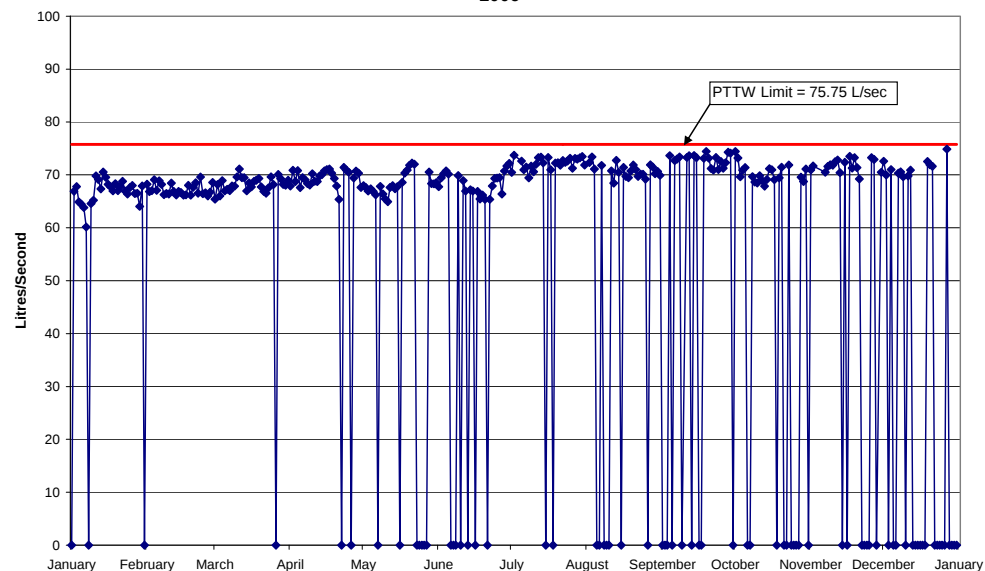
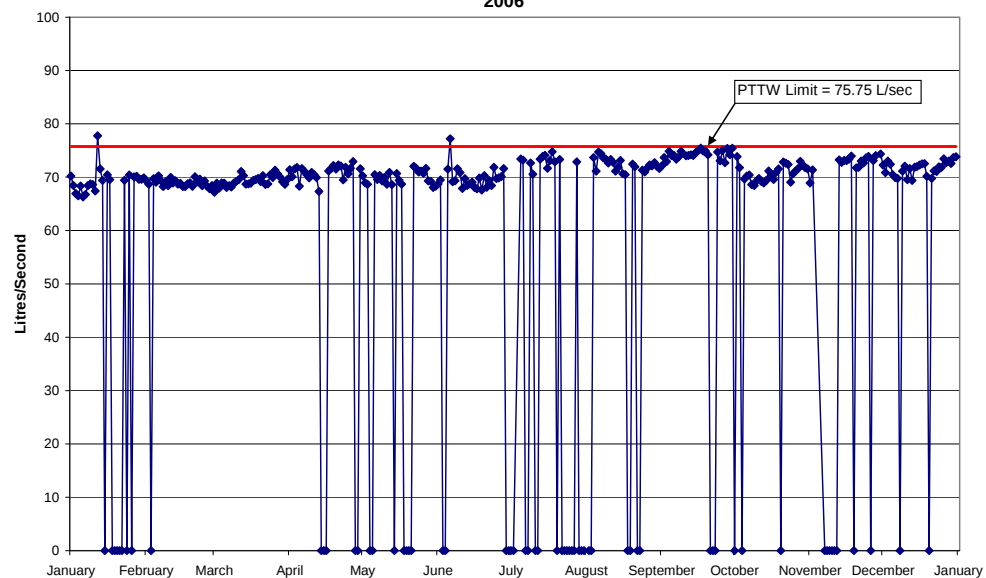


Figure 2j: Queensville Well No. 2
Daily Instantaneous Peak Flow
2006



The peak flow over the PTTW limit on Jan. 12, 2006 is no longer than 5 minutes in duration. The peak flow over the PTTW on June 6, 2006 is 77.22

York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 2k: Queensville Well No. 3
Daily Instantaneous Peak Flow
2006

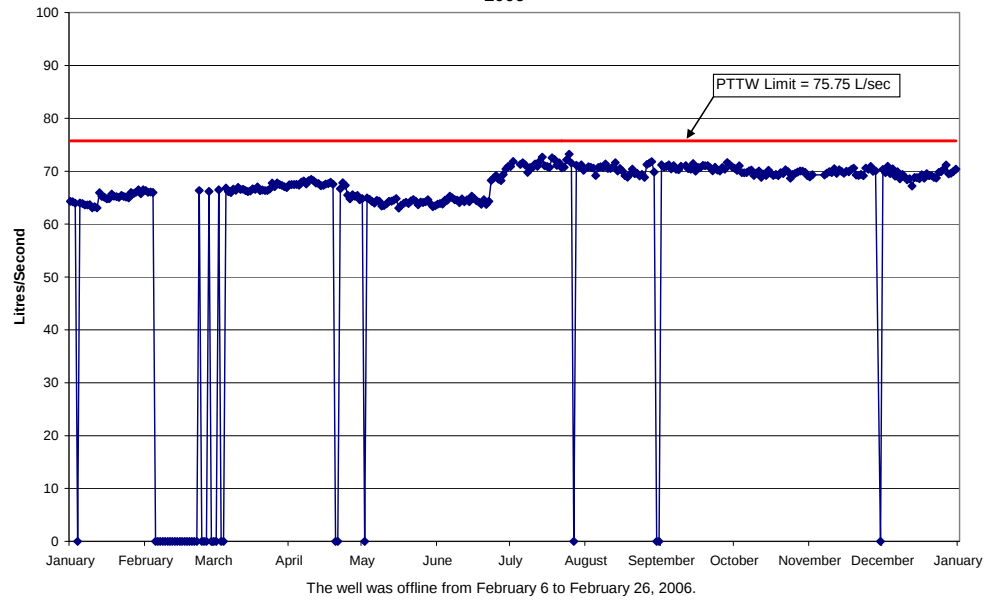
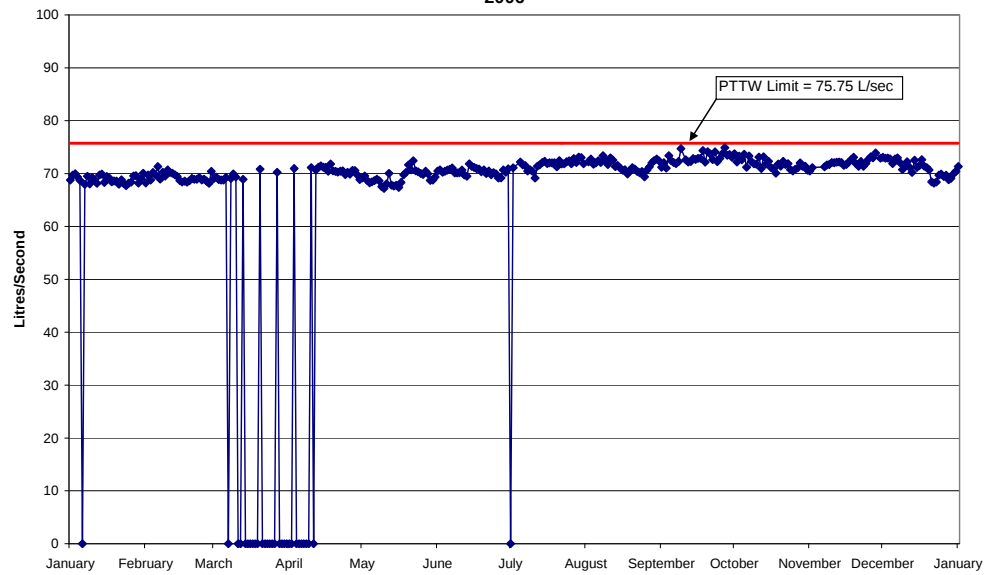


Figure 2l: Queensville Well No. 4
Daily Instantaneous Peak Flow
2006



4.10 Nobleton

York Region operates a water supply system to service Nobleton, Township of King, under authority of a Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE). The C of A includes reference to the valid Permit To Take Water (PTTW) also issued by the MOE. Details of the C of A and PTTW and other relevant classification information are presented in Table 1. All system upgrades required by C of A have been completed.

TABLE 1: Nobleton Water Supply – Summary of Approvals and Permit

Current Certificate of Approval Number:	6988-5RRN8F
Issue Date:	November 24, 2003
Current Permit to Take Water Number:	7433-6HWTED
Issue Date:	November 15, 2005
Expiry Date:	December 31, 2010
MOE Waterworks Number:	220002306
System Classification:	Water Distribution II (WDII)

4.10.1 Water Taking

The PTTW for the Nobleton Water Supply System allows York Region to withdraw up to 3,927,740 litres per day from production wells 2 and 3.

York Region monitors the water taking through flow meters placed downstream of each production well. Flow is monitored on a continuous basis to ensure that the regulated flows are not exceeded.

4.10.2 Measuring Points

Flow meters are in place downstream of production well 2 and 3. The flow meters record the instantaneous flow rate and the total volume of water that has passed through the meter. The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A.

Flow data is retrieved and stored by two methods in York Region. This approach provides York Region with the opportunity to compare and contrast data should one method suddenly fail due to power failures or by other means.

1. York Region staff manually record the flow rates and total flow data on regular operational visits to the well sites. Average flow rates are also calculated using records of total flow and number of operating pump hours. This ‘manual’ data was used to generate the maximum daily withdrawal and monthly average flow tables and figures.

2. The flow meters are also connected to the Supervisory Control and Data Acquisition (SCADA) system so that data can be monitored remotely and stored electronically. This data was used to generate the instantaneous peak flow rate figures.

4.10.3 Water Withdrawal

The total volume of water taken from the production wells of the Nobleton Water Supply system in January 1 – December 31, 2006 was 383,634,000 litres. This volume is less than the maximum permitted withdrawal as prescribed in the PTTW.

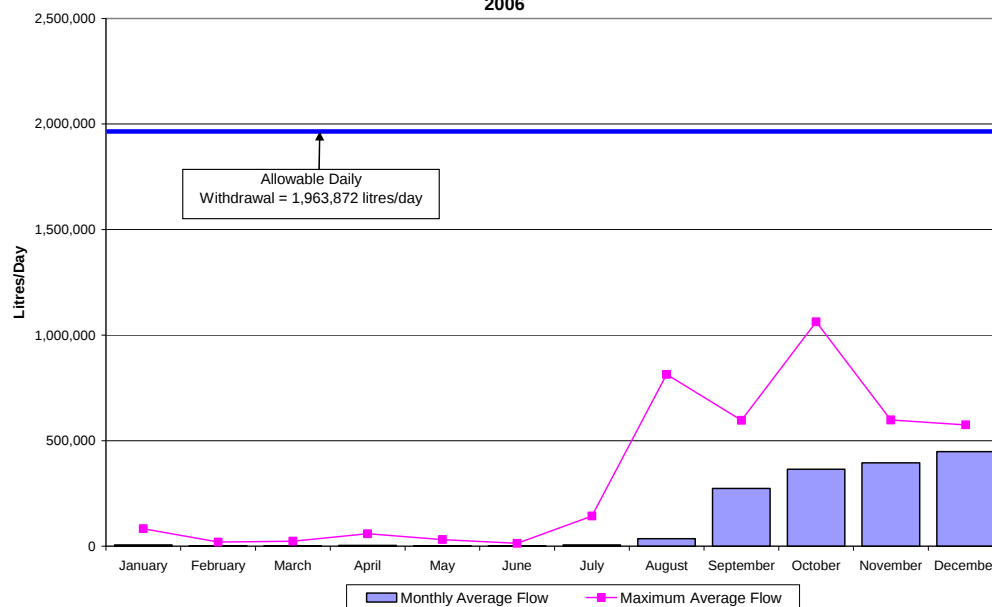
The maximum allowable daily water taking and the actual maximum recorded daily water taking are presented in Table 2.

TABLE 2: Allowable and Actual Maximum Daily Withdrawal from the Nobleton Production Wells for 2006

ProductionWell Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)
Well 2	1,963,872	1,063,300
Well 3	1,963,872	1,912,000

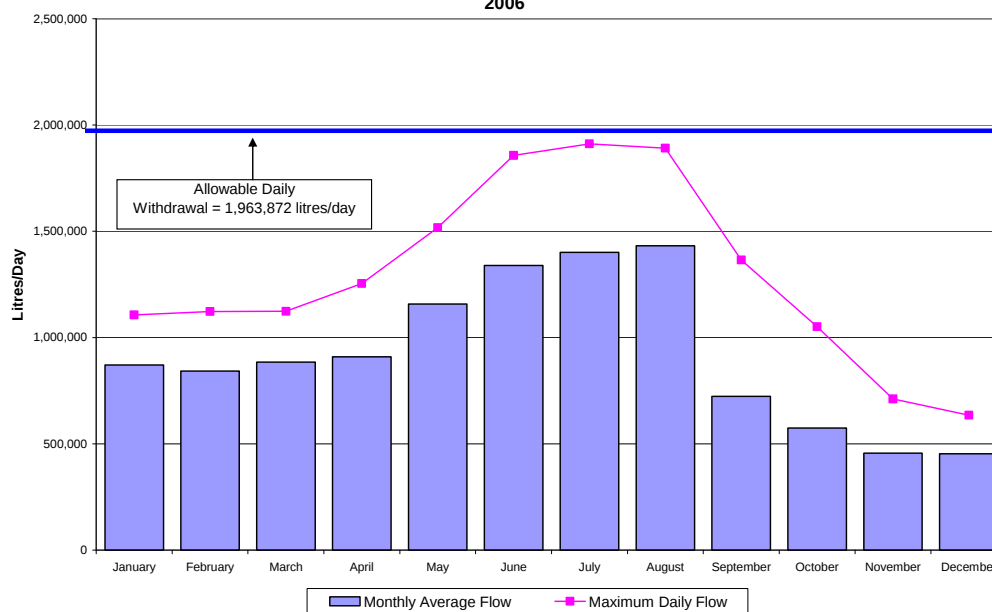
The monthly average flow rates, maximum daily flow, and allowable daily withdrawal are presented in Figure 1a and 1b. The actual dates of the peak monthly demands are summarized in the Appendices.

Figure 1a: Nobleton Well No. 2
Monthly Average Flow and Maximum Daily Flow
2006



Nobleton Well No. 2 was offline from January to June 2006 due to local drilling.

Figure 1b: Nobleton Well No. 3
Monthly Average Flow and Maximum Daily Flow
2006



The withdrawal rates from the Nobleton production wells did not exceed the allowable limits during January 1 – December 31, 2006.

The 'Daily Instantaneous Peak Flow (litres)' for January 1- December 31, 2006 is presented found in Figures 2a and 2b.

Figure 2a: Nobleton Well No. 2
Daily Instantaneous Peak Flow
2006

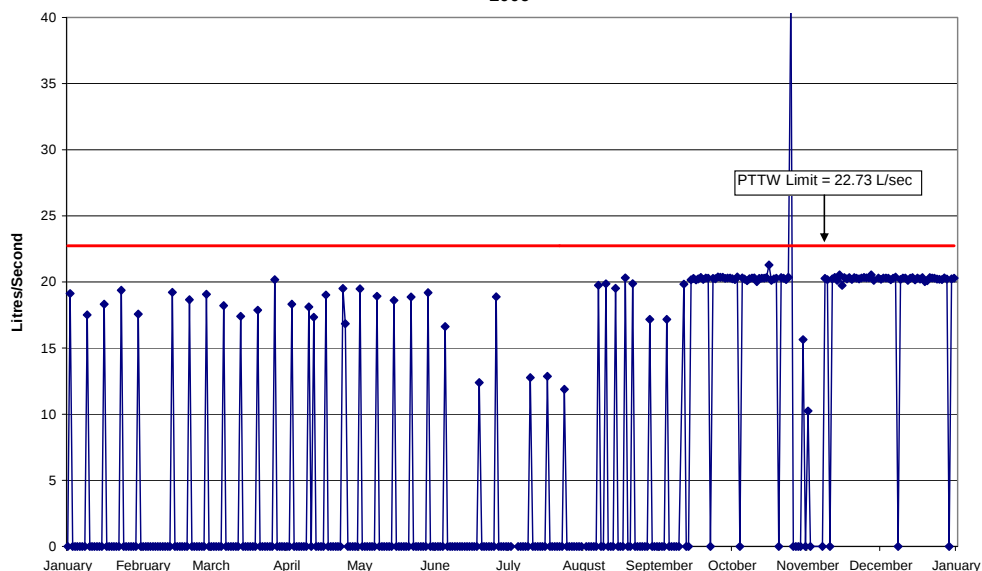
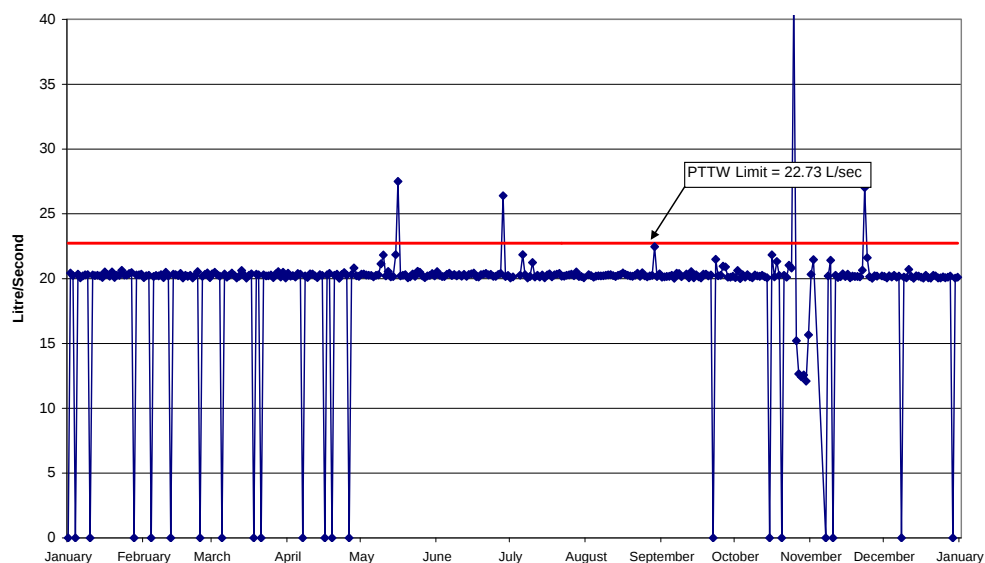


Figure 2b: Nobleton Well No. 3
Daily Instantaneous Peak Flow
2006



The peak flows over the PTTW limit are due to pump start up and are no longer than 5 minutes in duration.

4.11 Schomberg

York Region operates a water supply system to service Schomberg, Township of King, under authority of a Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE). The C of A includes reference to the valid Permit To Take Water (PTTW) also issued by the MOE. Details of the C of A and PTTW and other relevant classification information are presented in Table 1. All system upgrades required by C of A have been completed.

TABLE 1: Schomberg Water Supply – Summary of Approvals and Permit

Current Certificate of Approval Number: Issue Date:	7539-6KSQXR February 9, 2006
Current Permit to Take Water Number: Issue Date: Expiry Date:	3451-66BNPB November 9, 2004 November 30, 2014
MOE Waterworks Number:	220004901
System Classification:	Water Distribution II (WDII)

4.11.1 Water Taking

The PTTW for the Schomberg Water Supply System allows York Region to withdraw up to 3,926,560 litres per day from production wells 2 and 3.

York Region monitors the water taking through flow meters placed downstream of each production well. Flow is monitored on a continuous basis to ensure that the regulated flows are not exceeded.

4.11.2 Measuring Points

Flow meters are in place downstream of production well 2 and 3. The flow meters record the instantaneous flow rate and the total volume of water that has passed through the meter. The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A.

Flow data is retrieved and stored by two methods in York Region. This approach provides York Region with the opportunity to compare and contrast data should one method suddenly fail due to power failures or by other means.

1. York Region staff manually record the flow rates and total flow data on regular operational visits to the well sites. Average flow rates are also calculated using records of total flow and number of operating pump hours. This ‘manual’ data was used to generate the maximum daily withdrawal and monthly average flow tables and figures.

2. The flow meters are also connected to the Supervisory Control and Data Acquisition (SCADA) system so that data can be monitored remotely and stored electronically. This data was used to generate the instantaneous peak flow rate figures.

4.11.3 Water Withdrawal

The total volume of water taken from the production wells of the Schomberg Water Supply system for January 1 – December 31, 2006 was 248,767,000 litres. This volume is less than the maximum permitted withdrawal as prescribed in the PTTW.

The maximum allowable daily water taking and the actual maximum recorded daily water taking are presented in Table 2.

TABLE 2: Allowable and Actual Maximum Daily Withdrawal from the Schomberg Production Wells for January 1 – December 31, 2006

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)
Well 2	1,636,560	1,149,300
Well 3	2,290,000	808,000

The monthly average flow rates, maximum daily flow, and the allowable daily withdrawal are presented in Figure 1a and 1b. The actual dates of the peak monthly demands are summarized in the Appendices.

York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1a: Schomberg Well No. 2
Monthly Average Flow and Maximum Daily Flow
2006

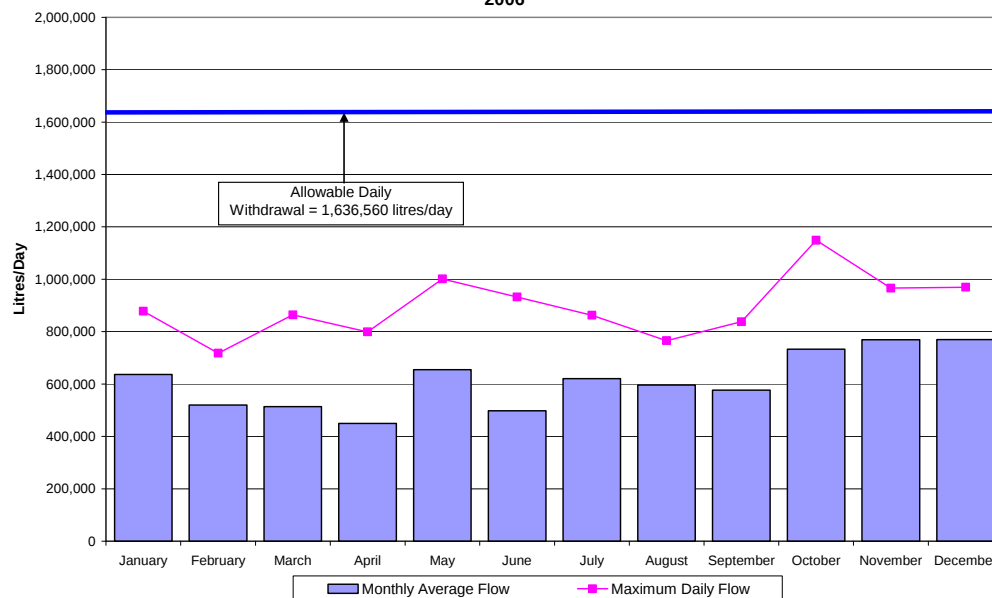
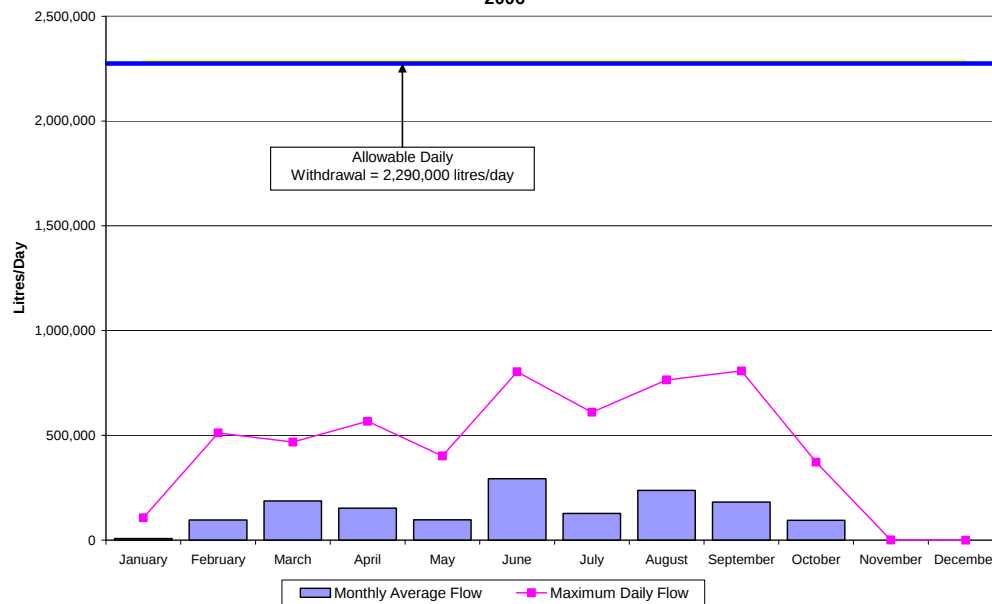


Figure 1b: Schomberg Well No. 3
Monthly Average Flow and Average Daily Flow
2006



The actual volumes of water taken from the Schomberg production wells in the period of January 1 – December 31, 2006 did not exceed the allowable daily withdrawal volumes.

The 'Daily Instantaneous Peak Flow (litres)' for January 1- December 31, 2006 is found in the following graphs.

Figure 2a: Schomberg Well No. 2
Daily Instantaneous Peak Flow
2006

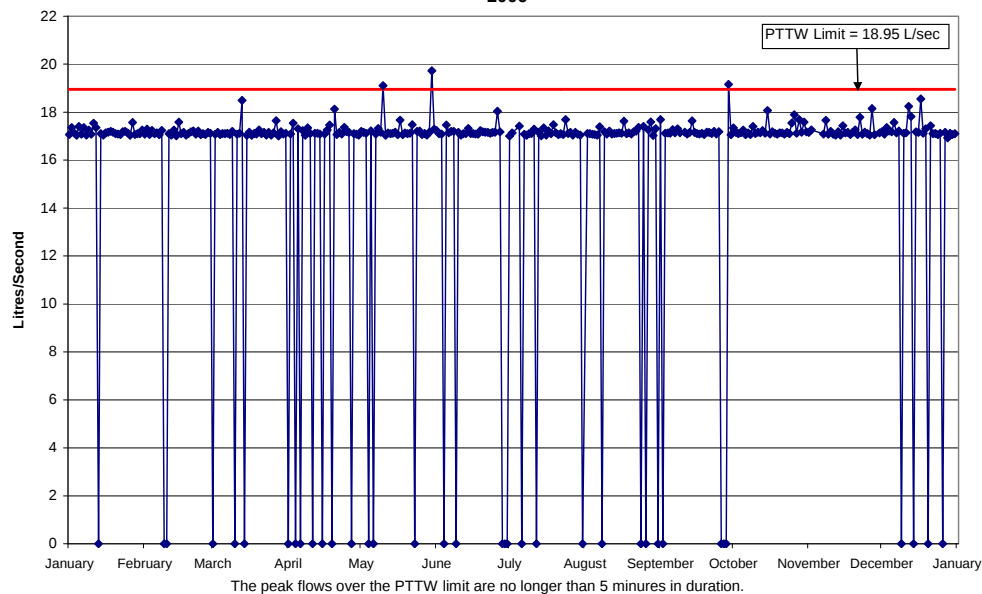
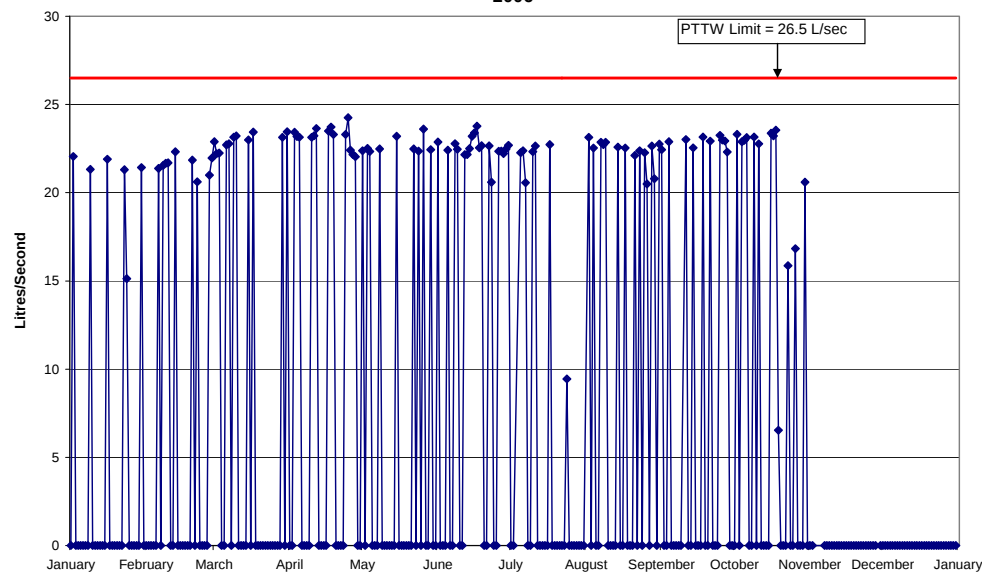


Figure 2b: Schomberg Well No. 3
Daily Instantaneous Peak Flow
2006



4.12 Stouffville

York Region operates a water supply system to service Stouffville, Town of Whitchurch-Stouffville, under authority of a Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE). The C of A includes reference to the valid Permit To Take Water (PTTW) also issued by the MOE. Details of the C of A and PTTW and other relevant classification information are presented in Table 1. All system upgrades required by C of A have been completed.

TABLE 1: Stouffville Water Supply – Summary of Approvals and Permit

Current Certificate of Approval Number:	8721-6KRKE7
Issue Date:	January 23, 2006
Current Permit to Take Water Number:	6008-6DBPNT
Issue Date:	June 14, 2005
Expiry Date:	June 30, 2007
MOE Waterworks Number:	220002333
System Classification:	Water Distribution III (WD III)

4.12.1 Water Taking

The PTTW for the Stouffville Water Supply System allows York Region to withdraw up to 14,238,720 litres per day from all production wells.

York Region monitors the water taking through flow meters placed downstream of each production well. Flow is monitored on a continuous basis to ensure that the regulated flows are not exceeded.

4.12.2 Measuring Points

Flow meters are in place downstream of each production well. The flow meters record the instantaneous flow rate and the total volume of water that has passed through the meter. The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A.

Flow data is retrieved and stored by two methods in York Region. This approach provides York Region with the opportunity to compare and contrast data should one method suddenly fail due to power failures or by other means.

1. York Region staff manually record the flow rates and total flow data on regular operational visits to the well sites. Average flow rates are also calculated using records of total flow and number of operating pump hours. This ‘manual’ data was used to generate the maximum daily withdrawal and monthly average flow tables and figures.

2. The flow meters are also connected to the Supervisory Control and Data Acquisition (SCADA) system so that data can be monitored remotely and stored electronically. This data was used to generate the instantaneous peak flow rate figures.

4.12.3 Water Withdrawal

The total volume of water taken from the production wells of the Stouffville Water Supply system from January 1 – December 31, 2006 was 1,800,775,000 litres. This volume is less than the maximum permitted withdrawal as prescribed in the PTTW.

During the fall of 2006, Stouffville Well 3 was run continuously to assist with a dewatering construction project that was underway by a private developer. The dewatering location was ~150 m from our existing well 3. Due to their activities and close monitoring, the well was not at risk at any time.

The maximum allowable daily water taking and the actual maximum recorded daily water taking are presented in Table 2.

TABLE 2: Allowable and Actual Maximum Daily Withdrawal from the Stouffville Production Wells for January 1 – December 31, 2006

Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)
Well 1	2,946,240	2,509,667
Well 2	2,946,240	2,504,667
Well 3	2,946,240	2,613,000
Well 5	2,289,600	1,886,000
Well 6	3,110,400	1,496,000

The monthly average flow rates, maximum daily flow, and allowable daily withdrawal are presented in Figure 1a, 1b, 1c, 1d, and 1e. The actual dates of the peak monthly demands are summarized in the Appendices.

York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1a: Stouffville Well No. 1
Monthly Average Flow and Maximum Daily Flow
2006

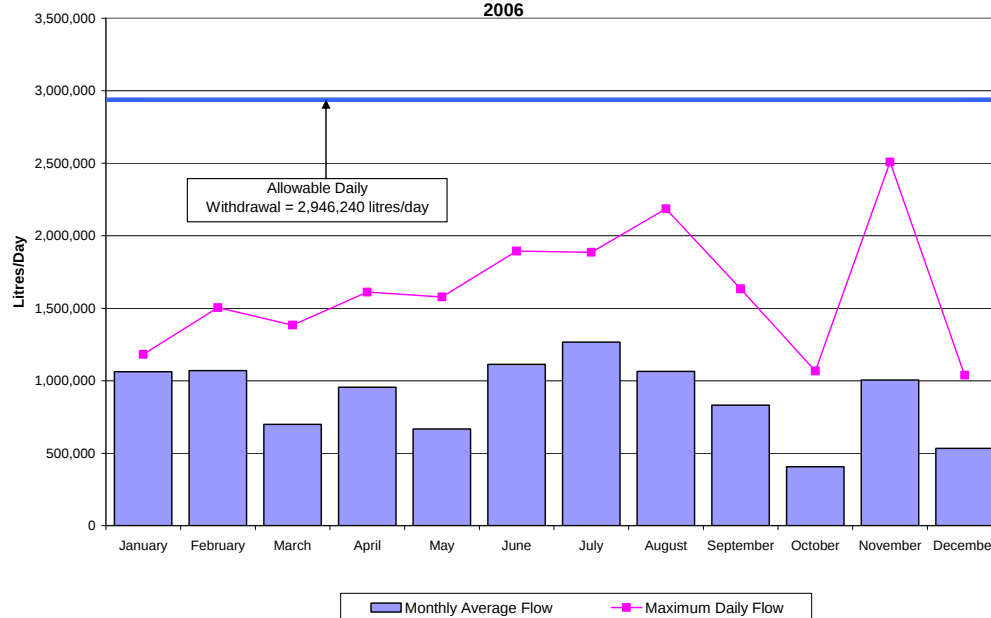
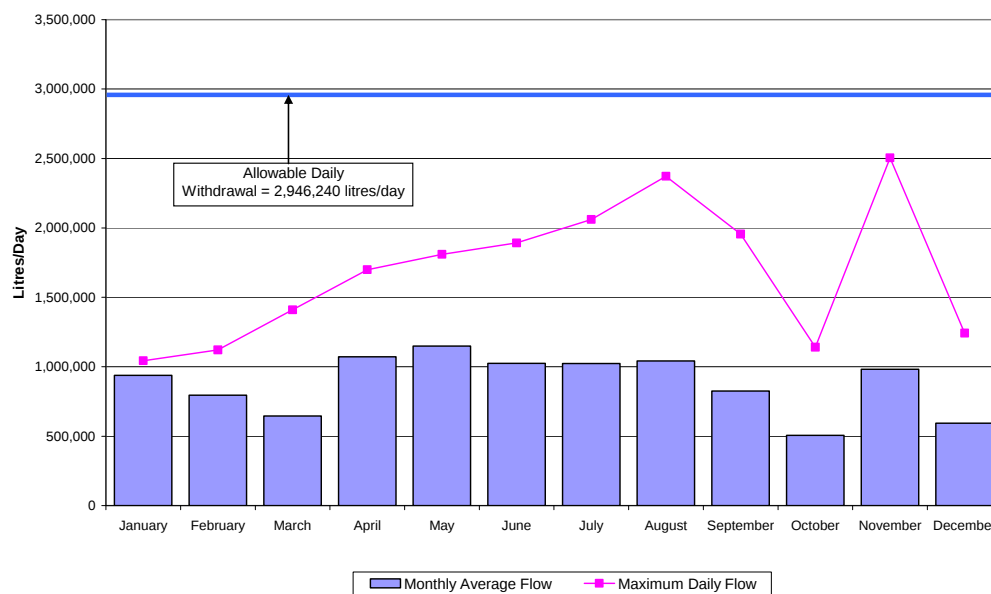


Figure 1b: Stouffville Well No. 2
Monthly Average Flow and Maximum Daily Flow
2006



York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 1c: Stouffville Well No. 3
Monthly Average Flow and Maximum Daily Flow
2006

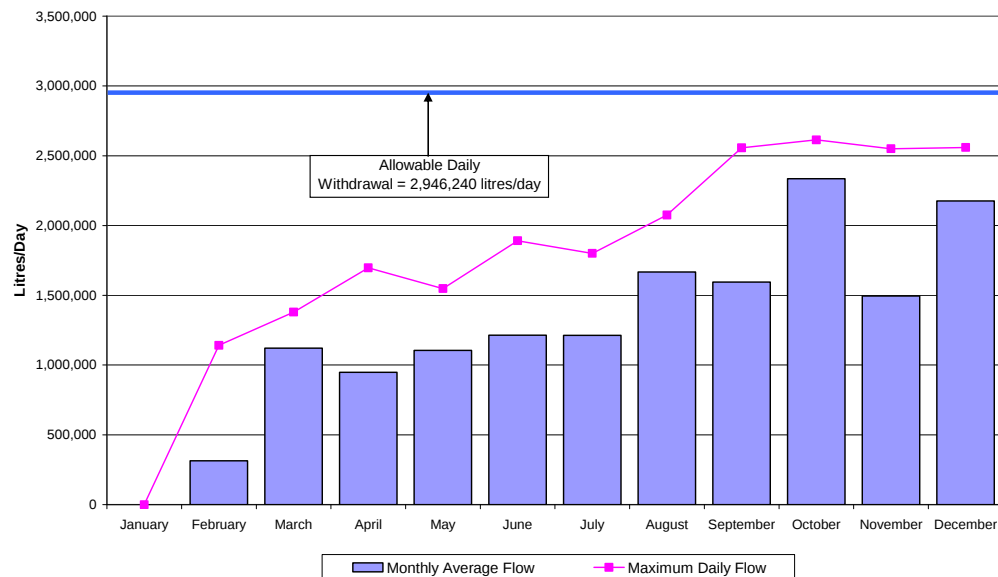
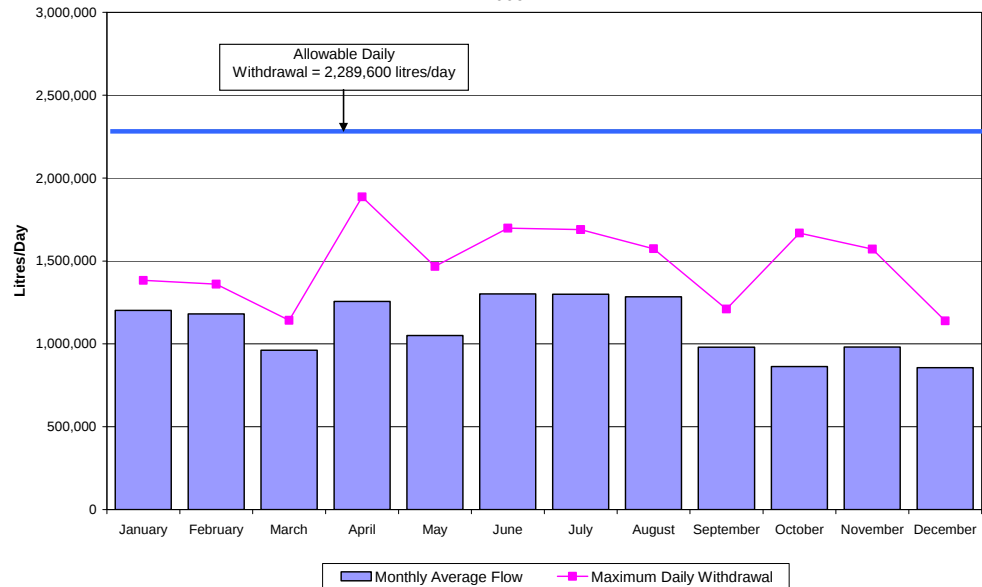
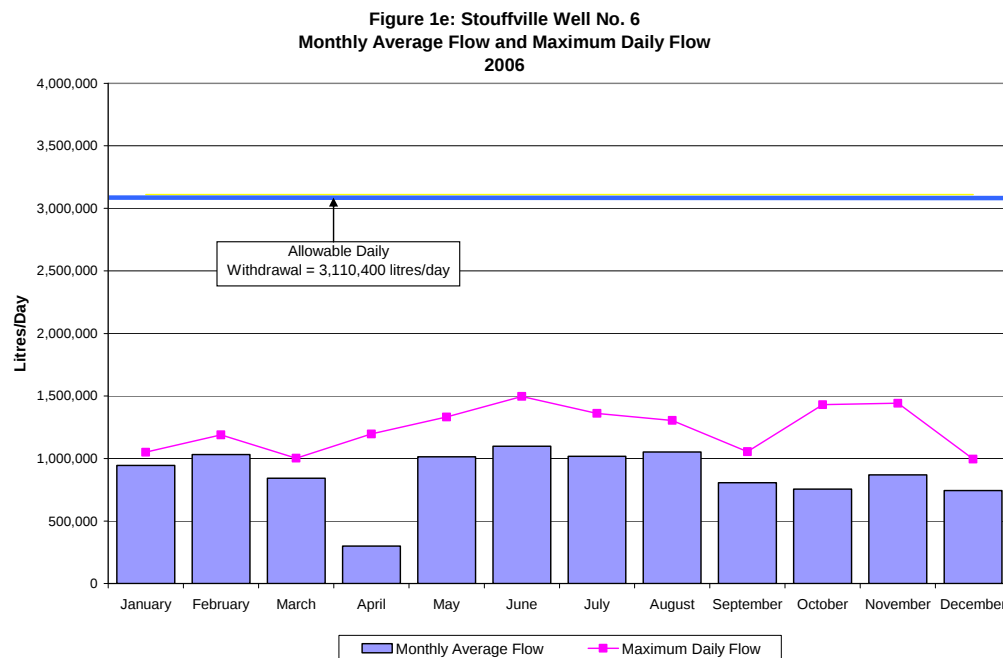


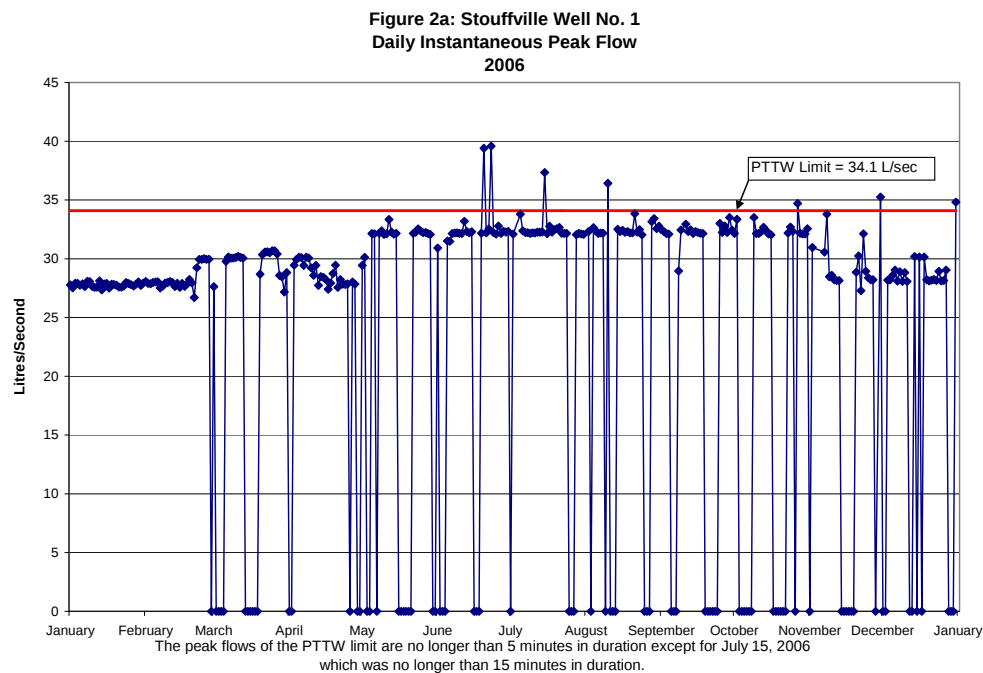
Figure 1d: Stouffville Well No. 5
Monthly Average Flow and Maximum Daily Flow
2006





The actual volumes of water taken from the Stouffville production wells for January 1 – December 31, 2006 did not exceed the allowable daily withdrawal volumes.

The ‘*Daily Instantaneous Peak Flow (litres)*’ for January 1- December 31, 2006 is presented in Figures 2a through 2e.



York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Figure 2b: Stouffville Well No. 2
Daily Instantaneous Peak Flow
2006

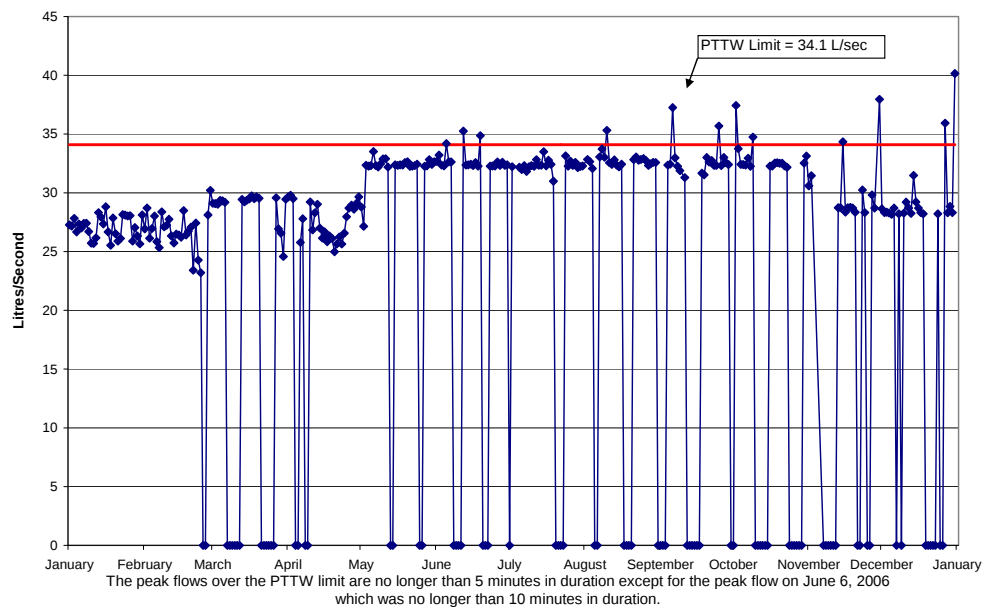


Figure 2c: Stouffville Well No. 3
Daily Instantaneous Peak Flow
2006

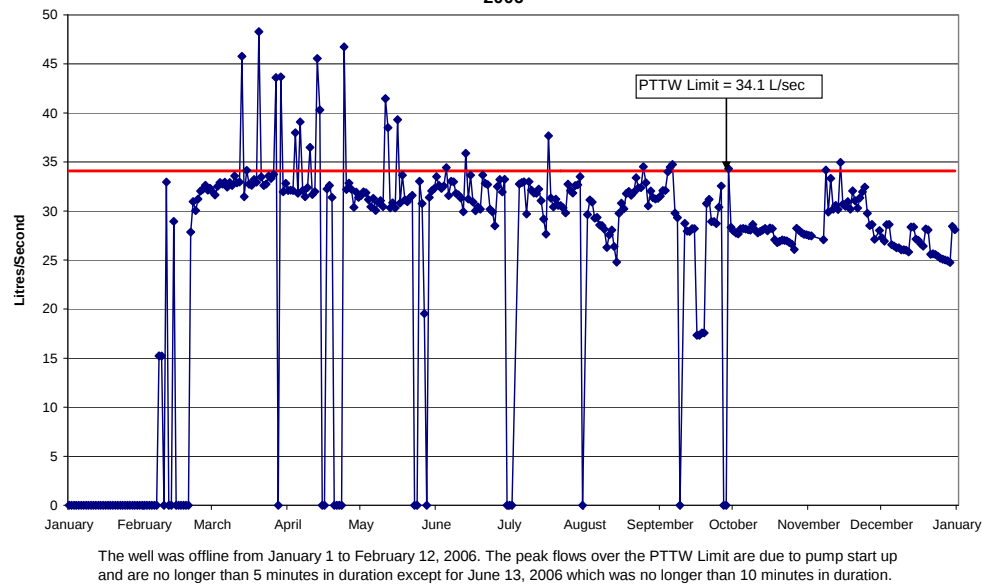


Figure 2d: Stouffville Well No. 5
Daily Instantaneous Peak Flow
2006

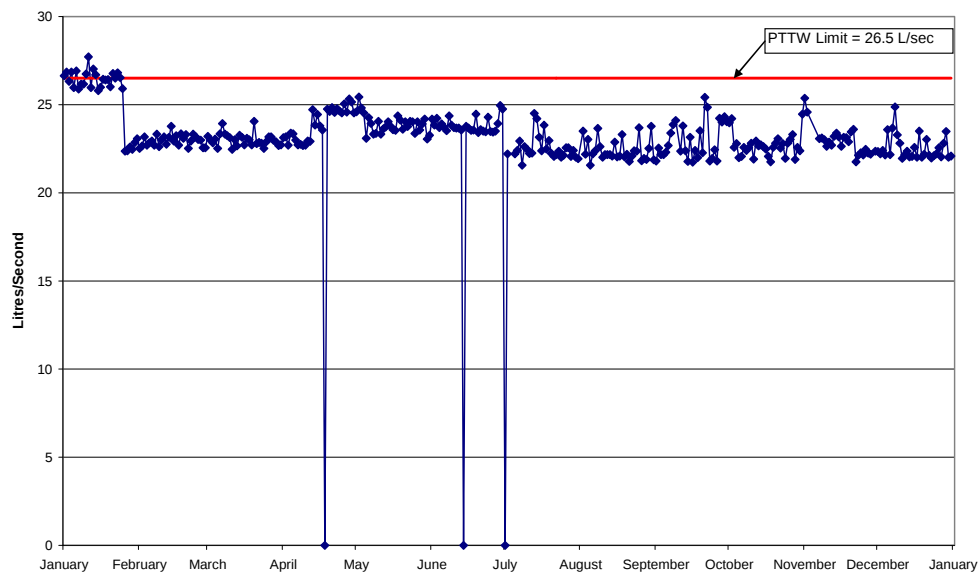
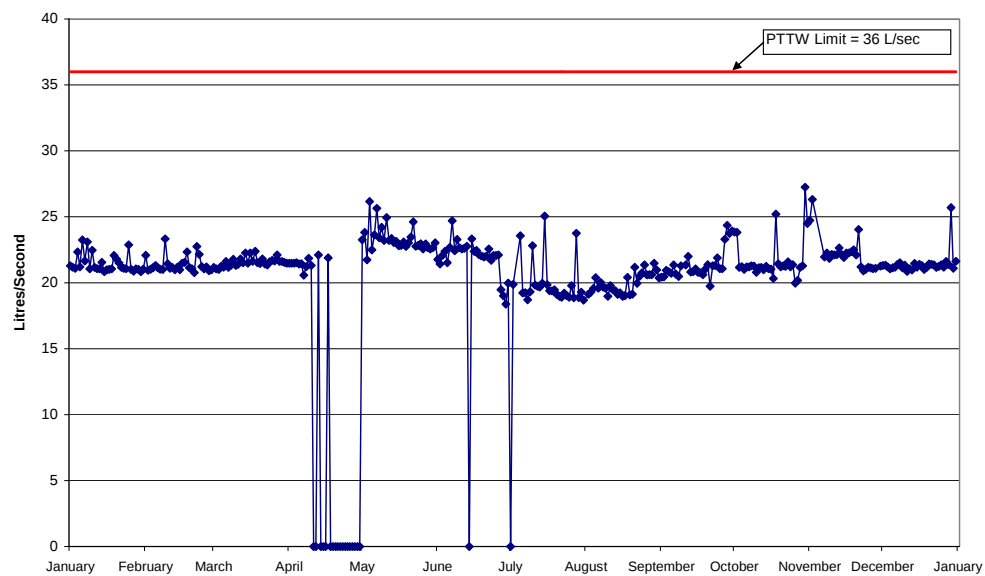


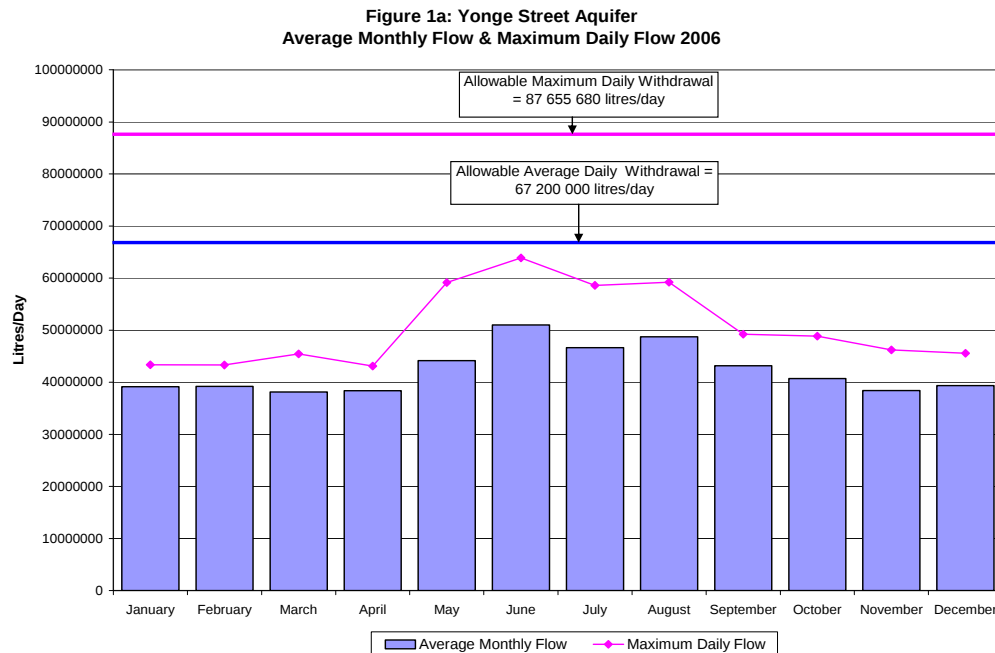
Figure 2e: Stouffville Well No. 6
Daily Instantaneous Peak Flow
2006



4.13 Yonge Street Aquifer

The Yonge Street Aquifer is the name given to the source aquifer that supplies groundwater to the communities of Aurora, Newmarket, Holland Landing, Queensville and Sharon. There are 20 wells in total that obtain water from the Yonge Street Aquifer, which are captured under one Permit to Take Water 6623-68QQ6L.

Detailed information about the individual wells has been provided in separate sections and appears in this report under the 'Aurora' or 'Newmarket' headings. However, for the purposes of understanding the accumulative impact of our water taking on the Yonge Street Aquifer, Figure 1a has been provided below.



As reported in 2005, the Permit To Take Water for Yonge Street Aquifer states that on an annual basis, the average daily taking for all the wells in the Yonge Street Aquifer cannot exceed 42,000,000 litres per day. In 2006, the annual average was 42,278,000 litres per day, which is less than 1% higher than the allowable limit. All other limits imposed by the Yonge Street Aquifer Permit to Take Water PTTW were met and the total volume taken for 2006 was comparable to the volume taken in 2005.

As reported in 2005, well demand was previously identified as in issue in the Master Plan for water supply and construction activities are underway to connect these communities to the Region of Peel lake based supply.

Construction for this connection is expected to be completed by the Spring of 2008.

4.14 York Water System

York Region operates a water supply system to service the Town of Markham, the Town of Richmond Hill, the City of Vaughan, and parts of the Town of Aurora and Newmarket. The York Water System is classified as a 'Large Municipal System receiving water from a Large Municipal System'. It distributes water supplied from the City of Toronto and Regional Municipality of Peel to the area municipalities. As such, it does not have a requirement for a Permit to Take Water.

There are several Certificate of Approval (C of A) as issued by the Ontario Ministry of the Environment (MOE) in the York Water System. Details of the C of A and other relevant classification information are presented in Table 1.

TABLE 1: York Water System – Summary of Approvals and Permit

Current Certificate of Approval: York Distribution System Exemption	1298-6S9MJW
Issue Date:	August 3, 2006
Jefferson Pumping Station:	7-0380-97-006
Issue Date:	May 9, 1997
South Richmond Hill Reservoir:	1867-5YNQBB
Issue Date:	May 7, 2004
Richmond Hill Pumping Station:	5-255-77-006
Issue Date:	September 21, 1977
Markham Reservoir:	5-268-77-006
Issue Date:	December 29, 1978
Milliken Elevated Tank:	5-366-80-006
Issue Date:	June 26, 1980
Markham Pumping Station:	0714-5RYNS3
Issue Date:	October 10, 2003
North Richmond Hill Pumping Station:	3889-5K4SKT
Issue Date:	March 4, 2003
North Richmond Hill Reservoir:	3889-5K4SKT
Issue Date:	March 4, 2003
Maple Pumping Station:	2888-6C4PWQ
Issue Date:	May 5, 2005
MOE Waterworks Number:	260001929
System Classification:	Water Distribution IV (WDIV)

4.14.1 Water Taking

York Region monitors the water taking through flow meters. Flows are monitored on a continuous basis to ensure that the regulated flows are not exceeded.

The agreement with the City of Toronto and York Region (Toronto/York Water Supply Agreement) allows for a daily maximum of 460,000,000 litres per day or 460 megalitres per day in 2006.

The agreement with the Region of Peel and York Region (Peel/York Water Supply Agreement) allows for the daily maximum of 33,557,000 litres per day or 33 megalitres per day in 2006.

4.14.2 Measuring Points

York Region staff manually record the flow rates and total flow data on regular operational visits to the plant.

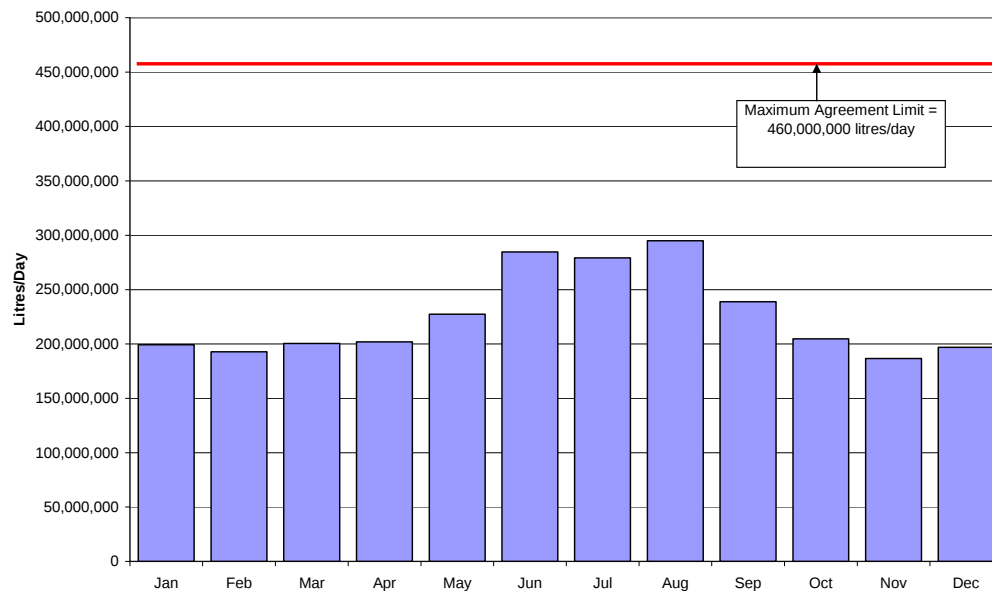
The flow meters are calibrated on an annual basis to meet the monitoring conditions of the C of A.

4.14.3 Water Withdrawal

The total volume of water supplied from Toronto to the York Water System for the reporting period of January 1 – December 31, 2006 was 2,707,339,059 litres. This volume is less than the maximum permitted withdrawal as prescribed in the operating agreement with the City of Toronto.

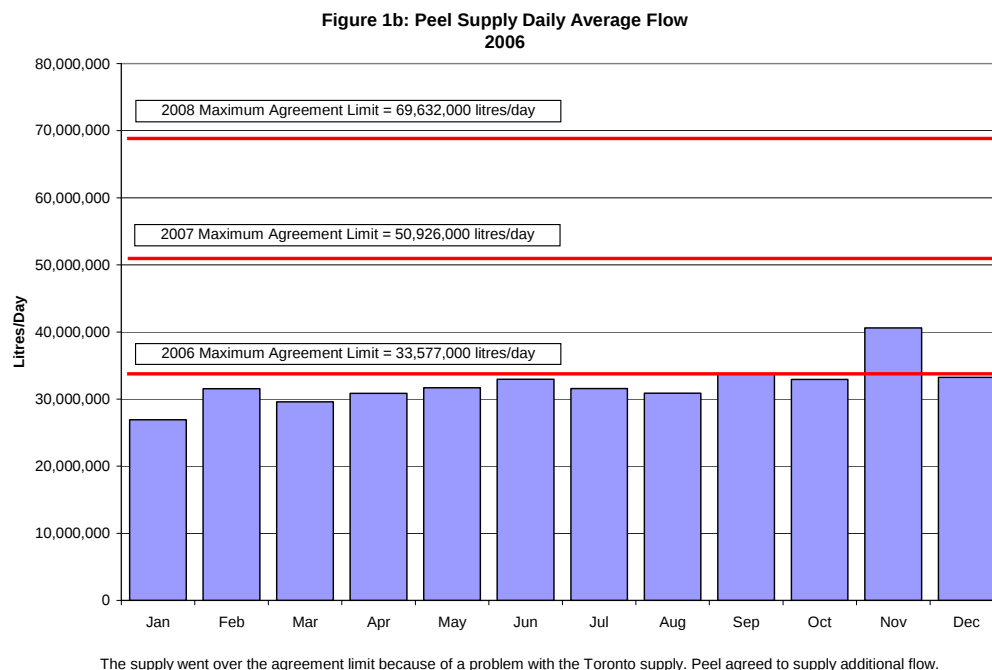
The total water supplied by Toronto to the York Water System monthly flow rates are presented in Figure 1a.

Figure 1a: Toronto Supply Daily Average Flow
2006

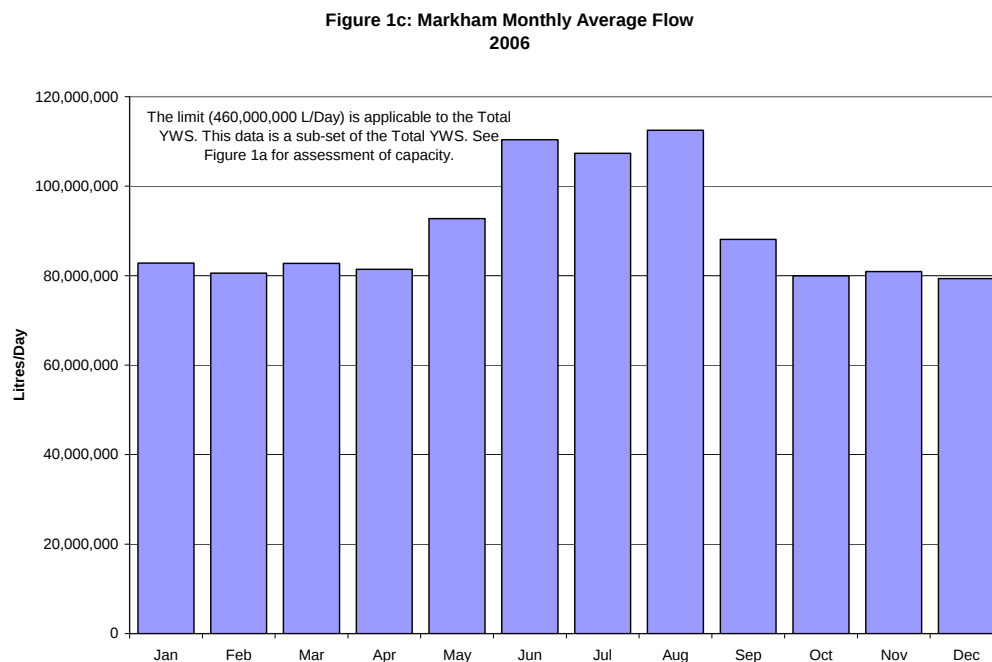


The total volume of water supplied from Peel to the York Water System for the reporting period of January 1 – December 31, 2006 was 387,534,747 litres (see figure 1b) This volume is less than the maximum permitted withdrawal as prescribed in the Operating Agreement with the Region of Peel except for the month of November where the supply went over due to a limited supply from the Toronto supply. Region of Peel agreed to supply additional flow to meet the demand.

The total water supplied by Peel to the York Water System monthly flow rates are presented in Figure 1b along with the supply for 2007 and 2008.

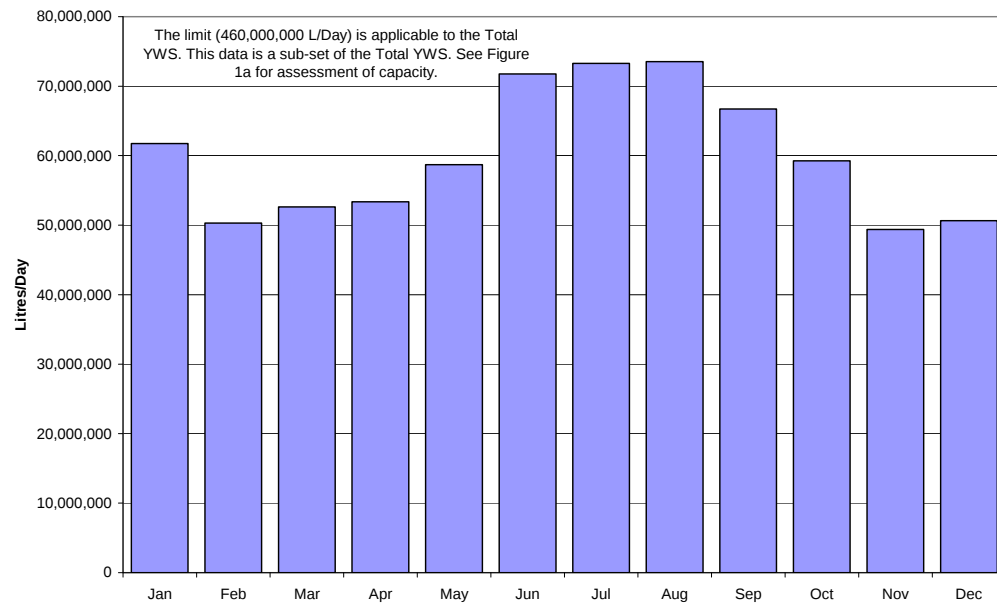


The monthly flow rates for each municipality served by the YWS are presented in Figures 1c through f.

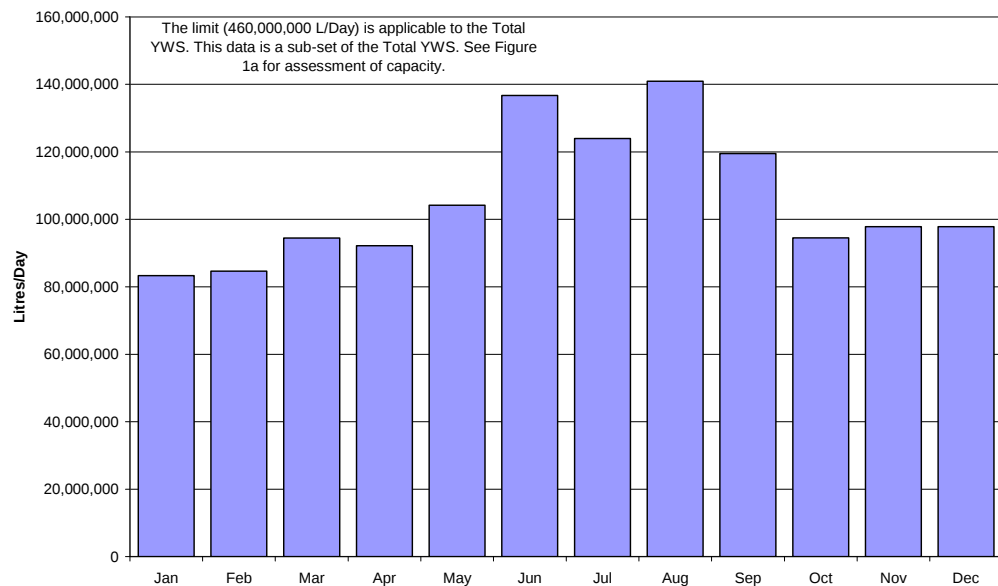


York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

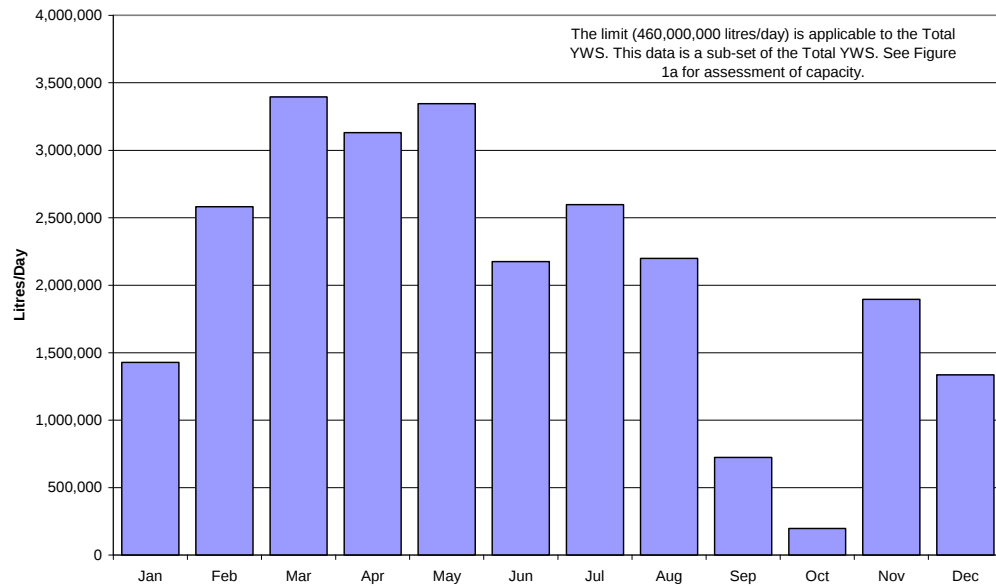
**Figure 1d: Richmond Hill Monthly Average Flow
2006**



**Figure 1e: Vaughan Monthly Average Flow
2006**



**Figure 1f: Aurora Monthly Average Flow
2006**



The withdrawal rates for the YWS from the City of Toronto did not exceed the allowable daily limits in during the reporting period of January 1 – December 31, 2006.

The '*Daily Instantaneous Peak Flow (litres)*' for January 1- December 31, 2006 is unavailable for the York Water System during the reporting period. SCADA data is not available for the YWS system due to communication difficulties Between SCADA and the multi directional flow meters supplying the YWS.

Appendices

Ansnoerveldt Maximum Daily Withdrawal:

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal Date
Well 1	100,800	18,500	January 23
		16,333	February 03
		17,000	March 27
		20,000	April 17
		26,500	May 10
		27,500	June 12
		32,000	July 17
		31,000	August 01
		22,000	September 27
		17,667	October 30
		19,333	November 27
		21,333	December 04
Well 2	184,320	52,500	January 11
		33,333	February 03
		35,500	March 27
		40,000	April 17
		53,500	May 29
		61,000	June 19
		64,500	July 31
		64,500	August 01
		45,000	September 27
		36,000	October 30
		39,667	November 27
		43,667	December 04

Aurora Maximum Daily Withdrawals:

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal Date
Well 1	3,273,120	23,333	January 13
		9,000	February 15
		40,000	March 13
		72,000	April 28
		1,832,000	May 29
		2,461,000	June 19
		1,223,333	July 07
		1,966,000	August 07
		1,756,500	September 25
		1,574,000	October 04
		1,104,000	November 03
		2,183,000	December 18
Well 2	5,891,760	5,405,000	January 16
		3,926,667	February 03
		3,750,000	March 13
		4,253,333	April 28
		4,283,333	May 05
		4,170,000	June 19
		5,275,000	July 28
		3,630,000	August 18
		3,930,000	September 25
		3,440,000	October 04
		4,215,000	November 15
		3,915,000	December 13
Well 3	5,237,136	4,510,000	January 11
		4,496,667	February 03
		4,295,000	March 13
		2,951,000	April 01
		4,546,667	May 26
		4,905,000	June 19
		4,380,000	July 24
		4,380,000	August 18
		4,800,000	September 25
		4,225,000	October 04
		4,960,000	November 15
		4,875,000	December 13

York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Well 4	7,855,632	6,084,500	January 02
		5,170,000	February 03
		4,685,000	March 13
		5,230,000	April 19
		5,705,000	May 08
		5,580,000	June 19
		4,806,667	July 07
		4,990,000	August 18
		5,325,000	September 25
		4,615,000	October 04
		5,406,667	November 03
		3,306,000	December 22
Well 5	5,891,760	-	-
		131,000	February 06
		4,370,200	March 26
		4,689,500	April 19
		4,535,000	May 08
		4,579,000	June 14
		4,633,000	July 24
		4,848,000	August 07
		4,423,500	September 04
		4,545,500	October 16
		4,609,500	November 15
		5,046,500	December 13
Well 6	3,469,536	2,101,000	January 30
		1,805,500	February 22
		2,089,000	March 22
		2,083,667	April 07
		2,418,000	May 01
		2,455,500	June 19
		1,858,667	July 07
		2,142,000	August 07
		1,849,000	September 25
		1,639,333	October 20
		1,836,500	November 27
		1,907,500	December 13

Ballantrae Maximum Daily Withdrawals:

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal Date
Well 1 and 2	2,618,000 from Nov. 1 to Apr. 30	1,025,000	January 11
		1,430,500	February 12
		994,000	March 06
		1,062,000	April 14
	4,580,000 from May 1 to Oct. 31	1,934,000	May 29
		2,269,000	June 21
		2,058,000	July 07
		1,964,000	August 21
		1,395,000	September 06
		1,656,000	October 02
		1,017,000	November 27
		1,068,000	December 08

Georgina Maximum Daily Withdrawals:

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal Date
Water Treatment Plant	49,999,680	3,651,000	January 03
		2,105,333	February 10
		4,395,000	March 22
		4,842,000	April 24
		10,030,500	May 29
		10,088,667	June 23
		9,201,333	July 14
		8,555,667	August 18
		7,614,500	September 04
		5,681,667	October 06
		6,138,000	November 24
		5,834,333	December 08

Keswick Maximum Daily Withdrawals:

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal Date
Water Treatment Plant	16,200,000	6,852,667	January 13
		6,862,000	February 17
		6,914,667	March 31
		6,914,667	April 01
		6,784,500	May 03
		5,747,500	June 19
		5,569,000	July 03
		5,638,000	August 22
		3,937,000	September 20
		5,052,333	October 20
		5,193,500	November 29
		5,213,000	December 20

King City Maximum Daily Withdrawals:

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal Date
Well 3	1,963,915	7,500	January 09
		22,000	February 20
		162,500	March 29
		70,500	April 26
		-	-
		1,223,500	June 28
		1,559,500	July 17
		1,590,500	August 23
		1,528,500	September 04
		1,564,500	October 25
		1,643,000	November 22
		1,076,333	December 01
Well 4	2,618,554	2,302,500	January 04
		2,116,500	February 06
		1,817,000	March 31
		1,932,000	April 14
		2,199,500	May 29
		2,484,500	June 19
		1,708,333	July 21
		1,285,500	August 07
		1,853,500	September 27
		1,715,000	October 04
		697,000	November 08
		1,879,500	December 11

Kleinburg Maximum Daily Withdrawals:

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal Date
Well 2	950,400	33,000	January 23
		16,000	February 27
		20,000	March 06
		31,000	April 10
		407,500	May 29
		1,045,333	June 16
		614,333	July 07
		327,500	August 09
		614,000	September 16
		108,500	October 02
		768,500	November 06
		3,800	December 27
Well 3	3,283,200	1,556,000	January 30
		1,395,000	February 20
		1,389,000	March 29
		1,541,333	April 28
		2,183,000	May 29
		2,334,000	June 05
		2,817,000	July 31
		3,365,000	August 16
		2,186,333	September 01
		1,298,333	October 01
		1,525,667	November 24
		1,749,000	December 18

Mount Albert Maximum Daily Withdrawals:

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal Date
Well 1	3,273,120	1,114,500	January 18
		1,009,500	February 01
		914,000	March 31
		944,000	April 05
		994,333	May 12
		1,327,500	June 21
		1,489,000	July 07
		1,141,500	August 14
		1,192,000	September 11
		843,000	October 25
		1,105,333	November 10
		1,090,500	December 22
Well 2	3,273,120	1,348,000	January 02
		1,357,500	February 22
		966,000	March 01
		1,346,000	April 21
		1,556,000	May 29
		1,626,500	June 28
		1,343,500	July 12
		1,284,500	August 21
		1,253,667	September 29
		1,440,000	October 20
		1,182,000	November 13
		1,453,500	December 30

Newmarket/East Gwillimbury Maximum Daily Withdrawals:

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal Date
Holland Landing Well 1	2,291,184	1,057,500	January 18
		984,000	February 15
		936,500	March 29
		943,667	April 28
		1,311,500	May 29
		1,632,667	June 23
		1,356,667	July 07
		1,181,000	August 07
		1,643,000	September 25
		773,000	October 02
		962,000	November 03
		1,022,500	December 04
Holland Landing Well 2	3,600,432	1,351,500	January 18
		1,302,000	February 15
		1,302,000	March 24
		1,414,333	April 21
		1,857,000	May 29
		2,713,667	June 23
		1,883,000	July 24
		1,921,333	August 18
		1,760,000	September 13
		1,467,500	October 04
		1,099,333	November 17
		973,600	December 22
Newmarket Well 1	2,291,184	1,573,000	January 25
		1,523,500	February 22
		1,674,500	March 06
		1,280,000	April 03
		1,699,500	May 24
		1,691,333	June 02
		1,655,333	July 14
		1,401,333	August 11
		1,840,000	September 27
		1,698,000	October 04
		1,598,000	November 10
		1,308,333	December 01

Newmarket Well 2	4,582,512	3,971,000	January 25
		4,240,000	February 22
		4,492,000	March 06
		4,487,667	April 21
		3,886,971 ^{1,2}	May 11
		3,886,866 ^{1,3}	June 06
		3,959,500	July 03
		4,087,333	August 11
		4,192,000	September 27
		4,016,667	October 20
		4,145,667	November 10
		3,549,600	December 27
Newmarket Well 13	5,891,760	5,413,000	January 25
		5,341,000	February 08
		5,638,000	March 06
		4,236,000	April 10
		5,111,983 ^{1,4}	May 23
		5,721,000	June 28
		5,804,000	July 24
		5,299,241 ^{1,5}	August 09
		5,601,000	September 15
		5,434,667	October 20
		5,683,254 ^{1,6}	November 06
		5,031,667	December 01
Newmarket Well 14	2,291,184	1,446,000	January 11
		906,000	February 20
		1,379,333	March 24
		463,333	April 07
		1,583,000	May 29
		1,322,500	June 14
		1,118,667	July 07
		1,274,500	August 16
		999,500	September 20
		1,163,000	October 09
		755,000	November 03
		979,200	December 22

1 – Verified manual data with SCADA data as manual records covered a period greater than 24 hours.

2 – SCADA data recorded an actual maximum daily withdrawal of 3,886,971 litres on *May 11*.

3 – SCADA data recorded an actual maximum daily withdrawal of 3,886,866 litres on *June 6*.

4 – SCADA data recorded an actual maximum daily withdrawal of 5,111,983 litres on *May 23*.

5 – SCADA data recorded an actual maximum daily withdrawal of 5,299,241 litres on *August 9*.

6 – SCADA data recorded an actual maximum daily withdrawal of 5,683,254 litres on *Nov. 6*.

Newmarket Well 15	3,273,120	1,587,500	January 30
		1,517,500	February 20
		1,580,500	March 08
		1,429,000	April 26
		1,529,000	May 24
		1,477,000	June 19
		1,388,500	July 24
		1,321,000	August 01
		1,466,333	September 22
		1,409,500	October 02
		1,341,500	November 06
		1,183,000	December 27
Newmarket Well 16	5,629,824	-	-
		-	-
		4,211,500	March 27
		4,373,000	April 24
		25,000	May 01
		4,265,500	June 19
		4,123,500	July 05
		4,114,333	August 11
		3,700,333	September 15
		-	-
		3,526,333	November 17
Queensville Well 1	6,546,384	2,932,750	December 04
		5,827,000	January 23
		5,534,000	February 08
		5,754,000	March 29
		5,134,500	April 10
		5,581,500	May 08
		4,952,333	June 02
		4,374,000	July 31
		4,374,000	August 01
		2,964,429	September 18
		2,282,571	October 02
		3,214,000	November 06
		2,644,500	December 18

Queensville Well 2	6,546,384	5,937,333	January 27
		6,484,500	February 22
		6,418,000	March 22
		4,606,333	April 07
		6,048,000	May 01
		5,718,500	June 12
		4,640,500	July 17
		4,158,571	August 07
		3,754,857	September 01
		3,799,571	October 23
		3,004,000	November 03
		4,270,000	December 01
Queensville Well 3	6,546,384	5,825,000	January 09
		5,444,500	February 01
		5,765,333	March 10
		4,942,333	April 01
		5,500,000	May 08
		6,155,500	June 28
		5,824,333	July 07
		5,827,286	August 14
		5,465,857	September 18
		5,189,714	October 02
		5,683,000	November 20
		5,310,250	December 18
Queensville Well 4	6,546,384	5,845,000	January 23
		5,696,667	February 24
		5,403,333	March 03
		6,075,000	April 19
		5,910,000	May 24
		6,067,104 ¹	June 16
		6,216,667	July 28
		6,056,000	August 04
		5,384,714	September 11
		5,553,750	October 30
		5,553,750	November 01
		5,479,750	December 04

1 – Verified manual data with SCADA data as manual records covered a period greater than 24 hrs. SCADA data recorded an actual maximum daily withdrawal of 6,067,104 litres on June 16.

Nobleton Maximum Daily Withdrawals:

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal Date
Well 2	1,963,872	83,000	January 16
		20,000	February 20
		24,000	March 13
		59,000	April 10
		32,000	May 08
		14,000	June 19
		143,000	July 31
		814,000	August 14
		596,333	September 15
		1,063,300	October 13
		598,500	November 06
		575,000	December 04
Well 3	1,963,872	1,106,500	January 02
		1,123,000	February 15
		1,123,500	March 27
		1,254,500	April 17
		1,517,000	May 29
		1,857,667	June 23
		1,912,000	July 05
		1,891,000 ¹	August 11
		1,365,000	September 06
		1,051,800	October 25
		711,500	November 01
		635,000	December 15

1 – Verified manual data with SCADA data as manual records covered a period greater than 24 hrs. SCADA data recorded an actual maximum daily withdrawal of 1,891,000 litres on Aug. 11.

Schomberg Maximum Daily Withdrawals:

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal Date
Well 2	1,636,560	878,000	January 11
		718,000	February 15
		864,000	March 20
		799,500	April 17
		1,001,500	May 08
		932,667	June 23
		863,000	July 03
		765,333	August 18
		838,000	September 06
		1,149,300	October 23
		966,500	November 27
		969,500	December 18
Well 3	2,290,000	107,000	January 02
		512,000	February 08
		468,500	March 15
		567,000	April 26
		401,500	May 03
		803,500	June 28
		610,000	July 05
		764,500	August 07
		808,000	September 27
		372,000	October 04
		857	November 01
		-	-

Stouffville Maximum Daily Withdrawals:

Production Well Number	Allowable Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal (Litres)	Actual Maximum Daily Withdrawal Date
Well 1	2,946,240	1,181,667	January 27
		1,504,500	February 03
		1,383,667	March 24
		1,612,000	April 19
		1,577,500	May 08
		1,894,500	June 19
		1,886,000	July 19
		2,186,000	August 16
		1,633,500	September 27
		1,067,000	October 01
		2,509,667	November 24
		1,038,667	December 24
Well 2	2,946,240	1,044,000	January 27
		1,121,000	February 17
		1,410,500	March 13
		1,699,667	April 28
		1,809,667	May 05
		1,891,667	June 16
		2,060,500	July 24
		2,372,000	August 11
		1,955,500	September 06
		1,141,000	October 18
		2,504,667	November 17
		1,242,500	December 11
Well 3	2,946,240	-	-
		1,142,000	February 22
		1,379,667	March 24
		1,697,000	April 28
		1,548,333	May 05
		1,891,000	June 19
		1,800,500	July 24
		2,075,333	August 18
		2,557,000	September 20
		2,613,000	October 09
		2,549,500	November 01
		2,558,500	December 13

York Region Drinking Water System Schedule 22 Summary Report
2006 Reporting Year

Well 5	2,289,600	1,382,333	January 13
		1,360,500	February 27
		1,142,000	March 27
		1,886,000	April 26
		1,467,000	May 24
		1,697,500	June 19
		1,689,000	July 24
		1,574,000	August 01
		1,210,000	September 15
		1,668,000	October 25
		1,571,500	November 01
		1,138,500	December 11
Well 6	3,110,400	1,050,333	January 13
		1,189,000	February 27
		1,002,000	March 27
		1,196,000	April 05
		1,331,500	May 24
		1,496,000	June 19
		1,360,500	July 24
		1,305,000	August 21
		1,054,333	September 15
		1,430,000	October 25
		1,441,000	November 01
		996,000	December 11