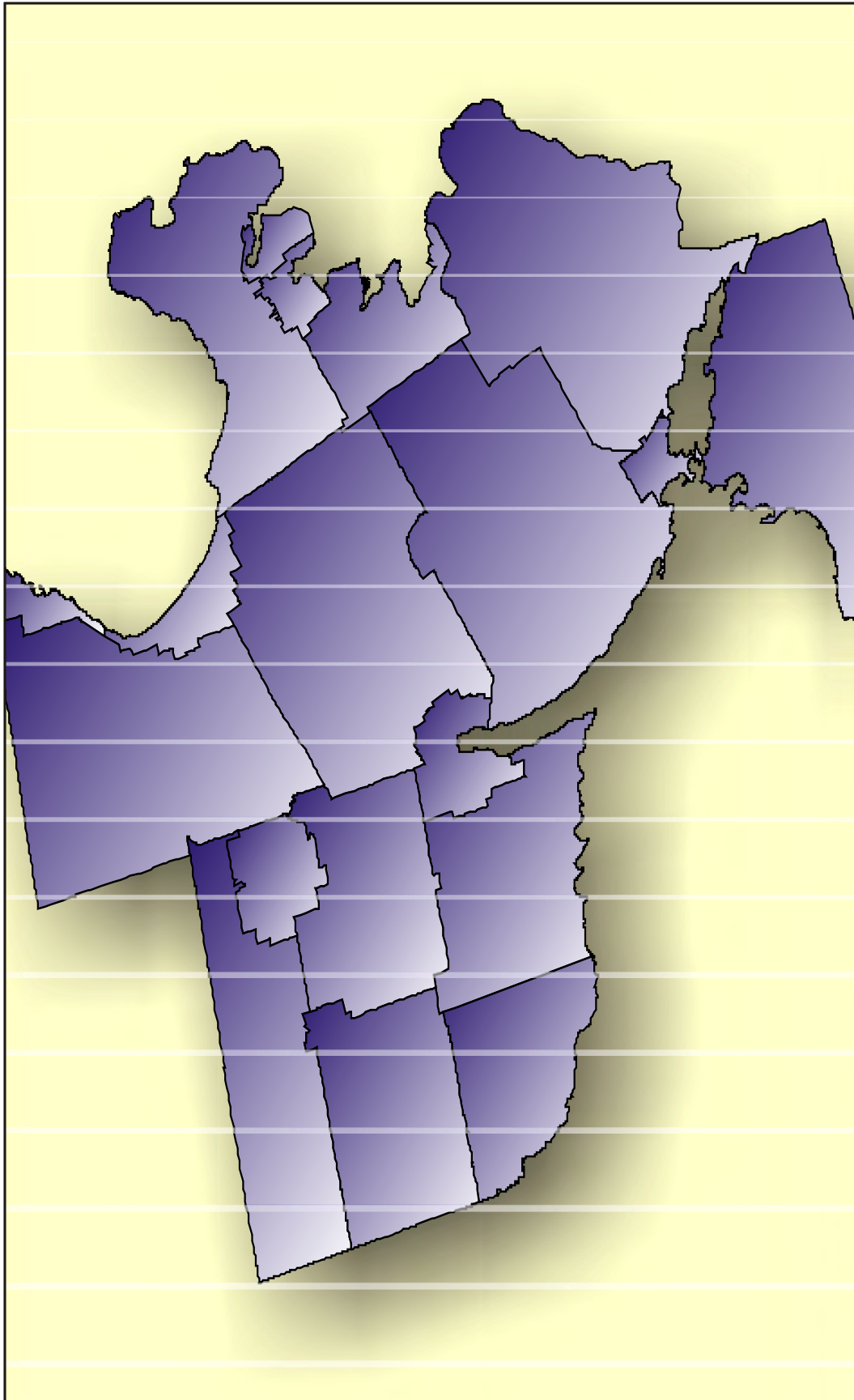


August
2006



**Intergovernmental Action Plan
for Simcoe, Barrie & Orillia**

*Existing Capacities Assessment
Infrastructure Assessment Addendum Report*



Dillon Consulting
Bourrie & Associates
Clara Consulting
EDP Consulting

**INTERGOVERNMENTAL ACTION PLAN
FOR SIMCOE COUNTY, BARRIE, ORILLIA
INFRASTRUCTURE ASSESSMENT REPORT
(ADDENDUM August 2006)**

Table of Contents

1.0	INTRODUCTION AND BACKGROUND	1
2.0	ASSESSMENT OF EXISTING INFRASTRUCTURE, APPROACH METHODS - UPDATE	2
2.1	Information Status Update	2
2.3	Wastewater Treatment Assessment, General	2
2.4	Water Supply Assessment, General.....	2
5.2	City of Barrie.....	2
5.4	Township of Clearview.....	2
5.9	Town of New Tecumseth.....	3
5.10	Town of Penetanguishene.....	5
5.14	Township of Springwater.....	5
5.15	Township of Tay.....	5
6.2	Township of Adjala-Tosorontio.....	6
6.5	Township of Clearview.....	7
6.6	Town of Collingwood.....	8
6.13	Town of Penetanguishene.....	8
6.14	Township of Ramara.....	8
6.15	Township of Severn.....	10
6.16	Township of Springwater.....	10
6.17	Township of Tay.....	12
10.2.1	Township of Adjala-Tosorontio	13
10.2.3	Town of Bradford West Gwillimbury	13
10.2.4	Township of Clearview	15
10.2.5	Town of Collingwood	16
10.2.7	Town of Innisfil	17
10.2.9	Town of New Tecumseth	17
10.2.12	Penetanguishene	18
10.2.13	Township of Ramara	20
10.2.14	Township of Severn	20
10.2.15	Township of Springwater	21
10.2.16	Township of Tay	22

1.0 INTRODUCTION AND BACKGROUND

In March of 2006, the Province and Municipalities in Simcoe County, as well as the Cities of Barrie and Orillia, completed Phase 2 of the Intergovernmental Action Plan. One component of Phase 2 included the Infrastructure Assessment Report whose purpose was to assemble a sound and defensible database on infrastructure and services and to determine the existing capacity available to accommodate approved development and growth. The Report was able to complete its purpose through quantifying and analyzing the capacities of the existing municipal infrastructure within the Study Area. Any issues related to the water, sanitary sewer, stormwater and transportation infrastructure were addressed in the Infrastructure Assessment Report.

Need for Infrastructure Assessment Report Addendum Update

Since the Infrastructure Assessment Report dated March 2006, new and updated information has become provided by the Municipalities. This data subsequently has an impact when quantifying and analyzing the existing capacities of the municipal systems in the Study Area. Therefore, this Addendum to the March 2006 Infrastructure Assessment Report was required to ensure that the most accurate information available was presented.

The addendum will present the sections of the Infrastructure Assessment Report, dated March 2006, that have been updated.

The Appendices noted below that were included in the Infrastructure Assessment Report dated March 2006 are re-issued in the Addendum as further information has been provided. All other Appendices are valid and present the information to the best of our knowledge:

- Appendix A – Assessment of Wastewater Treatment Facilities
- Appendix C – Assessment of Water Supply Systems
- Appendix D - Existing Wastewater Serviced Boundaries
- Appendix E – Existing Fully Serviced Boundaries
- Appendix T – Wastewater Treatment Gap Analysis
(Based on Existing Infrastructure)
- Appendix U - Wastewater Treatment Gap Analysis
(Based on existing + EA approved Infrastructure)
- Appendix V - Water Capacity Gap Analysis
(Based on Existing Infrastructure)
- Appendix W - Water Capacity Gap Analysis
(Based on existing + EA Approved Infrastructure)
- Appendix X - Graphical Representation of Wastewater Treatment Capacity
Gap Analysis
- Appendix Y - Graphical Representation of Water Supply Capacity Gap Analysis
- Appendix Z - Suggested Alternatives to Overcome the Wastewater Treatment Gap
- Appendix AA - Suggested Alternatives to Overcome the Water Supply Gap

2.0 ASSESSMENT OF EXISTING INFRASTRUCTURE, APPROACH METHODS - UPDATE

Revisions and updates have been made to the following sub-sections from Section 2.0 of the Infrastructure Assessment Report dated March 2006:

2.1 Information Status Update

The Infrastructure Assessment Report dated March 2006 presented a summary list of the information gaps. The list was valid at the time of the issuance of the Report with the exception of the Town of Penetanguishene. The Town had provided Class EA's for Water and Wastewater for the purpose of the IGAP Study in July 2005.

2.3 Wastewater Treatment Assessment, General

The first paragraph of this section should be replaced with the following:

There are 24 municipal wastewater treatment facilities in Simcoe County, serving approximately 278,000 persons.

2.4 Water Supply Assessment, General

The first paragraph of this section should be replaced with the following:

There are 89 municipal, residential, water supply systems in Simcoe County, servicing approximately 324,000 persons.

5.2 City of Barrie

The first footnote following Table 1 – Summary of Wastewater Treatment Facility: City of Barrie should be replaced with the following:

- The Class EA for the sewage treatment plant expansion is complete and the recommended expansion is 76,000 m³/day. The City of Barrie is proceeding with the detailed engineering design.

5.4 Township of Clearview

Table 3 and the subsequent two paragraphs should be replaced with the following:

TABLE 3 – SUMMARY OF WASTEWATER TREATMENT FACILITIES

CLEARVIEW TOWNSHIP

System Name	Rated Capacity m ³ /d	Historical ADF m ³ /d	Serviced Population (Persons)	Historical ADF/cap m ³ /c/d	Spare Capacity m ³ /d Historical	Residual Capacity based on historical flow (Persons)	Spare Capacity m ³ /d MOE	Residual Capacity based on MOE Guidelines (Persons)
Stayner	2,500	1,500*	4,060***	0.369	850	2,091	673	1,496
Creemore	1,400	435**	1,400***	0.311	922	2,696	770	1,711
Total Municipal Residual Capacity						4,787		3,207

Footnotes:

- No raw sewage or effluent bypass events took place from either plant
- The Municipality does not have any combination sewers; however the Township is undertaking a 3 year program to identify and address I&I.
- The Township has undertaken a Stayner Servicing Plan, May 15, 2003 for the Sanitary Sewage System and the Water System for a 20 year time period (2021).

* Based on three years of historical data (2002-2004).

** The historical ADF is based on 2004 and 2005 data as the Township advised that the bulk of the service connections were not hooked up until 2004.

*** Based on one year of population data (2004).

For planning purposes, the Residual Capacity of the Stayner wastewater treatment facility could be considered as a range between 1,500 to 2,100 persons. There is sufficient historical data and therefore, that data can be used in Procedure D-5-1. With respect to the population data, there has not been any significant growth over the past 3 years and therefore no change in population. The Residual Capacity based on that method of assessment is 2,100 persons.

The range for the Creemore facility is considered to be 1,700 to 2,700 persons. With respect to the population data, there has not been any significant growth over the past 3 years and therefore no change in population. There is sufficient historical data and therefore, that data can be used in Procedure D-5-1. The Residual Capacity based on that method of assessment is 2,700 persons.

5.9 Town of New Tecumseth

The third paragraph, on page 29, should be replaced with the following:

The Sir Frederic Banting WWTP is a Class 2 (WWT) facility located on lot 1 at the Second Concession and services part of Alliston. The effluent is discharged into the Boyne River. The plant provides treatment, which includes grit removal, screening, extended aeration process and tertiary filtration with chlorine disinfection of the effluent. All the sludge from the Sir Frederic Banting WWTP is pumped via a forcemain to the Regional Wastewater Plant. At the present time, there are no outstanding Provincial Orders associated with the facility that would affect the rated capacity of the plant. In addition, the Town advises that there are no issues that prevent operating staff from

meeting the conditions of the current Certificate of Approval. This facility does not normally accept septage, however since the commencement of maintenance work at the Regional WPCP in April 2005 septage has been received at this facility. From April 2005 until September 2005 this facility has received 1,356 m³ of septage. It is not metered. The amount received is recorded by the hauler.

Table 8, the associated footnotes and the subsequent paragraph, on page 30, should be replaced with the following:

TABLE 8 – SUMMARY OF WASTEWATER TREATMENT FACILITIES

TOWN OF NEW TECUMSETH

System Name	Rated Capacity m ³ /d	Historical ADF m ³ /d	Serviced Population (Persons)	Historical ADF/cap m ³ /c/d	Spare Capacity m ³ /d Historical	Residual Capacity based on historical flow (Persons)	Spare Capacity m ³ /d MOE	Residual Capacity based on MOE Guidelines (Persons)
Tottenham	4,082	2,281*	5,000**	0.456	1,573	0	1,833	4,071
Sir Frederic Banting	5,681	3,360*	6,633**	0.507	1,985	3,562	4,091	5,991
Regional	5,063	3,499*	7,500**	0.467	1,214	0	165	3,751
Total Municipal Residual Capacity						3,562		13,813

Footnotes:

- *The Town is not undertaking a sewage separation program to reduce I&I*
- *There have been no bypass events at the Tottenham, Sir Frederic Banting and the New Tecumseth Regional plant at this time.*
- *The serviced population for the WWTPs is an estimate as of January 2005.*
- *There are outstanding Provincial Orders at both the Regional WPCP and the Tottenham WPCP. The Town has indicated that there are no other factors that they are aware of that would affect the rated capacities of the facilities. The Town has advised that the design of the Regional WPCP makes it difficult to meet the C of A requirements.*
- *A Town-Wide Class Environmental Assessment for Wastewater Treatment has been completed and approved.*
- * *Based on three years of historical data (2002-2004).*
- ** *Based on three years of population data (2002-2004).*

For planning purposes, the Residual Capacity of the Tottenham facility should be considered as 0 persons. This is due to the current Provincial Order and the fact that the Beeton Creek is considered to be extremely sensitive. However, if the issues associated with the Provincial Order can be addressed to the satisfaction of the Ministry of the Environment, the Residual Capacity could be as high as 3,150 persons. With respect to the Regional Plant, the Residual Capacity is also 0 due to the current work that is being done to address the Provincial Order. If the Plant can be returned to its design capacity, the Residual Capacity would be in the order of 2,350 persons. The

Residual Capacity of the Sir Frederic Banting WWTP ranges between 3,550 and 6,000 persons. Based on historical data and Procedure D-5-1, the Residual Capacity is actually 3,550 persons.

5.10 Town of Penetanguishene

The following footnote should be added following table 10 on page 32:

- The Town has completed a Class EA for Wastewater Treatment February, 2005. The preferred strategy included expanding the Main Street WWTP to 6,750 m³/day and maintaining the Fox Street WWTP.

5.14 Township of Springwater

The following paragraph should be added at the end of this section:

In addition to the Elmvalle wastewater treatment plant a new wastewater treatment plant was constructed and commissioned in Snow Valley in the fall of 2005. This wastewater treatment plant was not identified in the aforementioned table and attached appendices as it was under construction during the preparation of the original report and therefore it does not have any historical flow data. This wastewater treatment plant will be servicing the approved Snow Valley Secondary Plan which has approximately 800 units of future development.

5.15 Township of Tay

Table 14, the associated footnotes and the subsequent paragraph, on page 38 & 39, should be replaced with the following:

TABLE 14 – SUMMARY OF WASTEWATER TREATMENT FACILITY

TOWNSHIP OF TAY

System Name	Rated Capacity m ³ /d	Historical ADF m ³ /d	Serviced Population (Persons)	Historical ADF/cap m ³ /c/d	Spare Capacity m ³ /d	Residual Capacity based on historical flow (Persons)	Spare Capacity m ³ /d MOE	Residual Capacity based on MOE Guidelines (Persons)
Port McNicoll	1,918	1,172*	1,839**	0.637	629	897	1,090	2,423
Victoria Harbour	2,364	1,800*	3,636**	0.495	384	705	728	1,617
Total Municipal Residual Capacity						1,602		4,040

Footnotes:

- One treatment plant bypass event took place on August 13, 2001 at the Port McNicoll sewage treatment plant due to start-up problems with the plant control system. In October 2002, a plant bypass event took place releasing 35 m³ over a 3.5 hours period.
 - Two secondary sewage bypass events took place at the Port McNicoll sewage treatment plant in 2002. The first event took place over a twelve hour period in March releasing 250 m³ of sewage due to an alarm failure. The second event took place over a twelve hour period in June releasing 114 m³ of sewage due to sludge handling failure.
 - Two plant bypass events took place at the Port McNicoll sewage treatment plant in 2004. The first event took place March 5, releasing 708 m³ of sewage due to heavy rainfall and snowmelt. The second event took place May 24, releasing 1350 m³ of sewage due to heavy rainfall. One plant bypass also took place on January 14, 2005, 400 m³ of sewage was released through a controlled bypass due to rain and snowmelt.
 - There were no raw sewage by-passes in 2002 at the Victoria Harbour waste water treatment plant.
 - 1,482 m³ of mixed liquor was transported from Victoria Harbour to Port McNicoll to avoid bypass on February 26 and 27, 2002. Five filter bypasses were executed for maintenance purposes
 - One plant bypass event took place at the Victoria Harbour sewage treatment plant on March 24, 2003. 250 m³ of sewage was released over 2 hours. One filter bypass event took place from March 25 to 26 due to high flows.
 - Two plant bypass events took place at the Victoria Harbour sewage treatment plant in 2004. The first release of 620 m³ of sewage took place over a 2.25 hour period in March. The second bypass took place in May, releasing 5,700 m³ of sewage over a 20.75 hour period.
 - The Township advised that no sewer separation program is being undertaken, however an I&I study is being undertaken.
 - The Township has advised that a Class EA for Flow Equalization/Reduction at the Port McNicoll Wastewater Treatment Plant was undertaken February 2005. It is anticipated that the recommendations will restore the treatment capacity to that envisioned in the design of 4,224 persons.
- * Based on three years of historical data (2003 and 2005).
** Based on one year of population data (2005).

For planning purposes, the Residual Capacity of the Port McNicoll facility is the upper limit of 2,400 persons, based on MOE Guidelines, as there is insufficient historical data. The Victoria Harbour facility is also based on MOE Guidelines and has a residual capacity of 1,600 persons.

6.2 Township of Adjala-Tosorontio

An additional footnote is included below Table 16, on page 42, as follows:

- *Planning exercise only, actual numbers and values should be confirmed by further investigation prior to committing allocation of resources.*

6.5 Township of Clearview

Table 19, the associated footnotes and the subsequent paragraph, on page 46, should be replaced with the following:

**TABLE 19 - SUMMARY OF WATER SUPPLY SYSTEMS
TOWNSHIP OF CLEARVIEW**

System Name	Rated Capacity m ³ /d	Historical MDD m ³ /d	Serviced Population **** (Persons)	MDD/c/d m ³ /cap/d	Spare Supply Capacity m ³ /d Historical	Residual Capacity based on historical demand (Persons)	Spare Capacity m ³ /d MOE	Residual Capacity based on 0.45 m ³ /c/d and MDD factor (MDD) (Persons)
New Lowell	747 *	581**	672	0.865	107	113	-85	-69 (2.75)
Stayner	6,541	5,430**	4,166	1.303	766	396	2,791	3,101(2.0)
Creemore	2,688	1,747**	1,543	1.132	139	615	952	847 (2.5)
McKean	1,055	503**	392	1.283	502	355	570	461 (2.75)
Colling- Woodlands	270	190**	188	1.013	61	55	38	31 (2.75)
Buckingham Woods	76 *	59***	48	1.229	Not used	Insufficient Data	17	14 (2.75)
Total Municipal Residual Capacity						1,534		4,384

Footnotes:

- There are no outstanding Provincial Orders that would affect the rated capacities of the systems
- The New Lowell wells did have some issues with respect to excessive well drawdown but that seems to have been corrected through the enforcement of a lawn watering ban. The issue is being reviewed under the Township's Overall Water EA.
- The Township has completed a Class EA (Short Term) for the Stayner water supply system. The rated capacity as set out in the Class EA is 7,650 m³/day therefore, the additional committed capacity increase is approximately 1,110 m³/day (7,650 m³/day – 6,541 m³/day).
- The Township is currently finalizing the list of alternatives as part of an Overall Clearview Water Class EA to determine future water supplies for Nottawa/Batteaux, Osler Bluff area, Airport lands, Stayner, New Lowell and Brentwood.
- There has been little growth in Clearview throughout 2002, 2003 and 2004 therefore, the serviced population for all systems represents the average over the three years.
- The Township has undertaken a Servicing Plan for New Lowell for future water supply use.
- The Township has undertaken a Stayner Servicing Plan, May 15, 2003 for the Sanitary Sewage System and the Water System for a 20 year time period (2021).
- The Collingwoodlands and Buckingham Woods Subdivisions are built out with regards to residential units.

* Based on Permit To Take Water Rating

** Represents the highest maximum day demand for 2002-2004.

***Represents the highest maximum day demand for 2003 and 2004.

**** Based on one year of population data

For planning purposes the Residual Capacity of the Clearview water supply systems could be considered as a range as follows:

New Lowell	- 0 to 100 persons
Stayner	- 400 to 3,100 persons
Creemore	- 600 to 850 persons
McKean	- 350 to 450 persons
Colling-woodlands	- 0 persons (due to build out)
Buckingham Woods	- 0 persons

6.6 Town of Collingwood

The footnotes following Table 21, on page 48, should be replaced with the following:

Footnotes:

- *There have been no Provincial Orders with respect to Water that would affect the rated capacity of the facility. In addition, the CPU advises that there are no issues that prevent operating staff from meeting the conditions of the current Certificate of Approval.*

* *Represents the highest maximum day demand for 2002-2004.*

***Represents the highest serviced population for 2002-2004.*

6.13 Town of Penetanguishene

The following footnote should be added to Table 29, on page 59:

- *The Town has completed a Class EA for water supply. The selected option was to build a treatment system for the Robert St. West Wells and put the wells in operation.*

6.14 Township of Ramara

Table 30, the associated footnotes and the subsequent paragraphs, on page 60 & 61, should be replaced with the following:

TABLE 30 - SUMMARY OF WATER SUPPLY SYSTEMS

TOWNSHIP OF RAMARA

System Name	Rated Capacity m ³ /d	Historical MDD m ³ /d	Serviced Population (Persons)	MDD/c/d m ³ /cap/d	Spare Supply Capacity m ³ /d Historical	Residual Capacity based on historical demand (Persons)	Spare Capacity m ³ /d MOE	Residual Capacity based on 0.45 m ³ /c/d and MDD factor (MDD) (Persons)
Bayshore Village	1244	688*	675**	1.019	487	434	408	330 (2.75)
Park Lane	50	44*	43**	1.035	2	1	-3	-2 (2.75)
Lagoon City	4,000	2,548*	3,000**	0.849	1,197	1,281	956	951 (2.25)
Davy Drive	76	51*	80**	0.638	20	28	-23	-19 (2.75)
South Ramara	387	365*	213**	1.715	-14	-7	124	100 (2.75)
Val Harbour	207	172*	140**	1.231	18	13	34	28 (2.75)
Total Municipal Residual Capacity						1,751		1,388

Footnotes:

- - *The Township advised that the 2002 MDD for Bayshore Village is misleading as there was an event, such as a watermain break, that occurred which skewed the results. Therefore, the next highest MDD, 2005 was used for the assessment.*
- *There are no outstanding Provincial Orders that would affect the rated capacities of the facilities.*
- *There is no Permit to Take Water for Park Lane, as it is under 50,000 L/day.*
- * *Represents the highest maximum day demand for 2002-2005.*
- ***Represents the highest serviced population for 2002-2004.*

For planning purposes the ranges for Residual Capacities for the Ramara water supply systems that could be considered are as follows:

- Bayshore Village - 350 to 450 persons
- Park Lane - 0 persons
- Lagoon City - 950 to 1,300 persons
- Davy Drive - 0 to 50 persons
- South Ramara - 0 to 100 persons
- Val Harbour - 0 to 50 persons

Based on Procedure D-5-1 the historical data allows for the upper limit of Residual Capacity in all cases except for South Ramara and Val Harbour. In these cases Procedure D-5-1 limits the Residual Capacity to the lower limit.

6.15 Township of Severn

The last paragraph on page 62, should be replaced with the following:

For planning purposes the ranges for Residual Capacities for the Severn water supply systems that could be considered are as follows:

Severn Estates	- 50 persons
Bass Lake Woodlands	- 100 to 350 persons
Sandcastle Estates	- 100 to 150 persons
Washago	- 100 to 350 persons
Coldwater	- 450 to 600 persons
West Shore	- 500 persons (Based on MOE Guidelines)

Based on Procedure D-5-1 the historical data allows for the upper limit of Residual Capacity in all cases except for Bass Lake Woodlands and Sandcastle Estates. In these cases Procedure D-5-1 limits the Residual Capacity to the lower limit.

6.16 Township of Springwater

Table 32 and the associated footnotes on page 64 should be replaced with the following:

TABLE 32 - SUMMARY OF WATER SUPPLY SYSTEMS

TOWNSHIP OF SPRINGWATER

System Name	Rated Capacity m ³ /d	Historical MDD m ³ /d	Serviced Population (Persons)	MDD/c/d m ³ /cap/d	Spare Supply Capacity m ³ /d Historical	Residual Capacity based on historical demand (Persons)	Spare Capacity m ³ /d MOE	Residual Capacity based on 0.45 m ³ /c/d and MDD factor (MDD) (Persons)
Anten Mills	1,558 *	363**	348***	1.043	1,158	1,009	1,127	911 (2.75)
Del Trend	786 *	597**	318***	1.877	129	63	392	317 (2.75)
Elmvale	4,546	2,038**	2,289***	0.890	2,304	2,353	2,228	2,201(2.25)
Hillsdale	1,185	601**	1,068***	0.563	524	846	-17	-15 (2.5)
Midhurst	6,850 *	3,241**	2,904***	1.116	3,285	2,676	3,910	3,861 (2.25)
Minesing	740	742**	639***	1.161	-76	-60	-51	-41 (2.75)
Snow Valley	1,400 *	713**	507***	1.406	616	398	773	624 (2.75)
Vespra Downs	169 *	127**	69***	1.841	29	14	84	67 (2.75)
Total Municipal Residual Capacity						7,300		7,926

Footnotes:

- At the present time, there are no outstanding Provincial Orders associated with the facilities that would affect the rated capacity of the plants. OCWA advises that Hillsdale Well #1 was removed from service as a result of treatability problems associated with high pH and general raw water quality. The rated capacity of the system was reduced by 285m³/day to reflect this. Minesing has screens that plug. This is an on-going operational issue, which does not affect the capacity of the system. With respect to issues that are issues that prevent operators from meeting the conditions of the Certificate of Approval, OCWA advises that Hillsdale has residents that are not downstream of the chlorine contact chamber. OCWA also advises that Snow Valley and Phelpston has SCADA which is not recording and trending the required information to be in compliance with the regulations.

- The Phelpston Water Supply System was not operational until mid 2005 therefore, it was not assessed as there is insufficient information.

* Based on Permit To Take Water Rating

** Represents the highest maximum day demand for 2002-2004.

*** Based on one year of population data

The last paragraph on page 64 should be replaced with the following:

It should be noted that there is an existing small groundwater system serving 13 residential units in the Centre Vespra area. In July 2006 the Township completed an Schedule "B" Environmental Assessment (EA) to find a replacement water source for the Centre Vespra Water System. This Environmental Assessment concluded that the existing well providing water to the Centre Vespra

Water system should be decommissioned and that the Snow Valley Water System should be extended to service the existing and future residential units in the Centre Vespra settlement area.

The third paragraph on page 65 should be replaced with the following:

For planning purposes the Residual Capacities for the Springwater water supply systems must be taken as the low end of the range due to a lack of historical population data.

- Anten Mills - 900 persons
- Del Trend - 50 persons
- Elmvale - 2,200 (see paragraph below)
- Hillsdale - 0 persons, includes allowance for designated industry
- Midhurst - 2,700 persons, includes allowance for designated industry
- Minesing - 0 persons
- Snow Valley - 400 persons
- Vespra Downs - 0 persons

6.17 Township of Tay

Table 33, the associated footnotes and the subsequent paragraph on page 66, should be replaced with the following:

TABLE 33 –SUMMARY OF WATER SUPPLY SYSTEMS

TOWNSHIP OF TAY

System Name	Rated Capacity m ³ /d	Historical MDD m ³ /d	Serviced Population (Persons)	MDD/c/d m ³ /cap/d	Spare Supply Capacity m ³ /d Historical	Residual Capacity based on historical demand (Persons)	Spare Capacity m ³ /d MOE	Residual Capacity based on 0.45 m ³ /c/d and MDD factor (MDD) (Persons)
Victoria Harbour/Port McNicoll	7,845	4,912**	6,060***	0.811	2,442	2,739	2,391	2,657(2.0)
Rope	274	188****	80****	2.350	67	26	175	141 (2.75)
Midland Bay Woods	301*	267**	230***	1.161	7	6	16	13 (2.75)
Bayberry Estates	392	68**	100***	0.680	318	424	269	217 (2.75)
Waubashene	1,225*	760**	1,200**	0.633	389	558	-125	-111 (2.5)
Total Municipal Residual Capacity						3,753		2,917

Footnotes:

- Provincial orders?

* Based on Permit To Take Water Rating

** Represents the highest maximum day demand over 2 years (2003-2004). In the case of Victoria Harbour/Port McNicoll, the two years are 2004 and 2005.

*** Represents the highest serviced population over 2 years (2003-2004). In the case of Victoria Harbour/Port McNicoll, the two years are 2004 and 2005.

**** Represents the highest MDD and serviced population over 3 years (2003-2005).

For planning purposes, the Residual Capacities for the Tay water supply systems, based on MOE Design Guidelines, could be considered as follows:

Victoria Harbour/Port McNicoll	- 1,400 persons (see note below)
Rope	- 50 persons (Based on Historical data)
Midland Bay Woods	- 0 persons (see note below)
Bayberry Estates	- 0 persons (see note below)
Waubashene	- 0 persons

The second paragraph on page 66 should be replaced with the following:

The Township has advised that as of March 2006, the water treatment plants in Midland Bay Woods and Bayberry Estates were eliminated. The Victoria Harbour/Port McNicoll water supply system now services these areas. By December 31, 2006, the Waubashene water supply will be eliminated and the area will also be serviced by the Victoria Harbour/Port McNicoll Water Treatment Plant. The eliminated systems show a residual capacity of zero and the Victoria Harbour/Port McNicoll residual capacity has been adjusted to compensate for the additional supply.

10.2.1 Township of Adjala-Tosorontio

The paragraph following Table 49, on page 97, should be replaced with the following:

Due to a lack of adequate groundwater supply, the Township is currently investigating a new well supply which will replace the existing supply. The new well supply is anticipated to be capable of producing adequate volumes to meet current demands plus address forecasted growth for Colgan. The Loretto Heights system is in close proximity to the Weca system, which has a residual capacity of 450 m³/d of water supply. Therefore, it is suggested that the Loretto Heights gap be supplied from the Weca system. The existing rated capacity of the Hockley system is 90 m³/d therefore, a significant increase is required to service the approved growth. Hockley is remote from other Township communities and a sharing of water supplies is not viable. The existing water supply system could be expanded with the addition of a new well and treatment works.

10.2.3 Town of Bradford West Gwillimbury

Wastewater

Table 55, 56, 57 and the associated text, on page 99 & 100, should be replaced with the following:

TABLE 55 – TOWN OF BRADFORD WEST GWILLIMBURY - FUTURE WASTEWATER SUPPLY GAP ANALYSIS

Wastewater Treatment System	Future Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$3,200 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Town of Bradford West Gwillimbury	26,700	22,150	27,250	2,050	-250	\$800,000

Therefore, Table 55 illustrates that the proposed expansion to the Wastewater Treatment Plant will provide sufficient capacity to service low intensification however, it is not sufficient for high intensification.

Water Supply

The Infrastructure Report concluded that the Town of Bradford West Gwillimbury currently has a water supply residual capacity of 1,500 persons. The water supply agreement with the Town of Innisfil, allows for an imminent supply of 750 m³/day. Table 56 presents the existing water supply gap analysis including the 750 m³/day additional supply.

TABLE 56 – TOWN OF BRADFORD WEST GWILLIMBURY - EXISTING WATER SUPPLY GAP ANALYSIS

Water Supply System	Existing Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$1,500 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Town of Bradford West Gwillimbury	1,500	22,150	27,250	-14,500	-18,100	\$27,000,000

The Water Supply Agreement with the Town of Innisfil identifies that the current water supply of 750 m³/day mentioned earlier will increase to 7,100 m³/day in February/March of 2007. Table 57 presents the future gap analysis including the 7,100 m³/day supply increase from Innisfil.

TABLE 57 – TOWN OF BRADFORD WEST GWILLIMBURY - FUTURE WATER SUPPLY GAP ANALYSIS

Water Supply System	Future Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$1,500 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Town of Bradford West Gwillimbury	10,550	22,150	27,250	-8,150	-11,750	\$20,000,000

Note 1: Estimated Cost includes expansion rate of \$1,500 m³ plus \$2,500,000 for an upgrade to the Transmission main feeding the Alcona Reservoir.

10.2.4 Township of Clearview

Table 58 the associated notes on pages 100 should be replaced with the following:

TABLE 58 – TOWNSHIP OF CLEARVIEW - EXISTING WASTEWATER SUPPLY GAP ANALYSIS

Wastewater Treatment System	Existing Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$3,200 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Stayner	2,100	21,150	27,300	-7,750	-10,250	\$49,700,000 ⁽¹⁾
Creemore	2,700	3,950	5,850	-450	-1,100	\$3,500,000

Note 1: Estimated Cost includes expansion rate of \$3,200 / m³ plus \$10,000,000 for Pump Station and forcemain to either Collingwood or Wasaga Beach

The first paragraph on page 101 should be replaced with the following:

With respect to servicing the Creemore capacity gap an expansion of the existing treatment plant, to provide tertiary treatment, is suggested at an estimated cost of 2,400,000.

Table 59 and the associated notes on page 101 should be replaced with the following:

TABLE 59 – TOWNSHIP OF CLEARVIEW - EXISTING WATER SUPPLY GAP ANALYSIS

Water Supply System	Existing Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$1,750 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
New Lowell	100	12,200	12,200	-11,500	-11,500	\$20,000,000
Stayner	400	21,150	27,300	-29,750	-38,550	\$67,500,000
Creemore	600	3,950	5,850	-4,150	-6,550	\$16,500,000 ⁽¹⁾
McKean Subdivision	350	0	0	500	500	No Gap
Colling-Woodlands	50	0	0	50	50	No Gap
Buckingham Woods	0	0	0	0	0	No Gap

Note 1: Estimated cost includes a supply rate of \$1,000 / m³ plus \$4,000,000 for a trunk watermain from the Regional Pipeline

10.2.5 Town of Collingwood

The first paragraph on page 103 as well as table 62 should be replaced with the following:

The Town is in the process of a plant expansion of approximately 30,300 m³/day. This new committed capacity has been included in Table 62:

TABLE 62 – TOWN OF COLLINGWOOD - FUTURE WATER SUPPLY GAP ANALYSIS

Water Supply System	Future Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$800 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Town of Collingwood	27,900	31,300	51,400	-3,800	-26,350	\$21,100,000

The second paragraph on page 104 should be replaced with the following:

The estimated capital cost for the Collingwood portion of the expansion would be approximately \$21,100,000.

10.2.7 Town of Innisfil

Tables 65 and 67 and the associated notes on pages 106 and 108 should be replaced with the following:

TABLE 65 – TOWN OF INNISFIL - EXISTING WASTEWATER SUPPLY GAP ANALYSIS

Wastewater Treatment System	Existing Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Alcona Lakeshore	15,800	15,750	15,750	0	0	N/A
Cookstown	600	850	850	-100	-100	\$500,000 ⁽¹⁾

Note 1: Estimated Cost assumes the Inflow/Infiltration would be reduced as opposed to expanding the Wastewater Treatment Plant

TABLE 67 – TOWN OF INNISFIL - FUTURE WATER SUPPLY GAP ANALYSIS

Water Supply System	Future Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$800 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Alcona Lakeshore	18,700	14,550	14,550	3,000	3,000	No Gap

Note 1: Estimated cost includes trunk watermain and a booster station.

Note 2: Estimated cost includes well abandonment, river crossing and trunk watermain to connect to Alcona/Bradford Watermain.

Note 3: Estimated cost includes supply rate of \$1,750 / m³, watermain from Alcona to Cookstown and treatment conversion.

10.2.9 Town of New Tecumseth

Wastewater

Table 70 and 71 and the associated footnotes on pages 109 and 110 should be replaced with the following:

TABLE 70 – TOWN OF NEW TECUMSETH - EXISTING WASTEWATER SUPPLY GAP ANALYSIS

Wastewater Treatment System	Existing Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$3,200 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Tottenham	0	6,850	11,350	-3,450	-5,700	\$18,200,000
Alliston Sir Frederic Banting & Regional WWTP *	3,550	8,900	14,750	-3,000	-6,250	\$20,000,000

* The existing residual capacities for the Regional and Sir Frederic Banting Plants are combined

TABLE 71 – TOWN OF NEW TECUMSETH - FUTURE WASTEWATER SUPPLY GAP ANALYSIS

Wastewater Treatment System	Future Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$3,200 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Tottenham	36,000	6,850	11,350	10,400	5,100	N/A
Alliston Sir Frederic Banting & Regional WWTP *		8,900	14,750			

* The existing residual capacities for the Regional and Sir Frederic Banting Plants are combined

The first paragraph on page 110 should be replaced with the following:

The Town has completed a Class EA with a preferred option of expanding the Regional WWTP, keeping the Sir Frederic WWTP at its current rated capacity and decommissioning the Tottenham WWTP. The expansion provides a committed capacity increase of approximately 16,642 m³/day.

10.2.12 Penetanguishene

Wastewater

An additional table, table 76A, should be included on page 114 to present the committed capacity increase of the water supply system.

**TABLE 76A – TOWN OF PENETANGUISENE –
FUTURE WASTEWATER SUPPLY GAP ANALYSIS**

Wastewater Treatment System	Future Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$2,200 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Fox Street	400	150	150	250	250	No Gap
Main Street	2,850	4,100	8,500	-1,100	-4,950	\$10,900,000

The following paragraph has been included following Table 76A on page 114:

The Town has completed a Class EA for the Main Street WWTP. The committed capacity increase is approximately 2,205 m³/day.

Water Supply

The first paragraph on page 115 should be replaced with the following:

The Town has completed a Class EA for the Payette water supply system. The selected option was to build a treatment system for the Robert St. West Wells and put the wells in operation. The estimated committed capacity increase is 3,300 m³/day. Table 77A present the gap analysis including the new capacity increase.

An additional table, table 77A, should be included on page 115 to present the committed capacity increase of the water supply system.

TABLE 77A – TOWN OF PENETANGUISENE - FUTURE WATER SUPPLY GAP ANALYSIS

Water Supply System	Future Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$1,100 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Payette	3,750	4,300	8,700	-750	-6,750	\$7,500,000
Lepage	300	0	0	350	350	No Gap

10.2.13 Township of Ramara

Water Supply

Table 79 and the associated notes on page 116 should be replaced with the following:

TABLE 79 – TOWNSHIP OF RAMARA - EXISTING WATER SUPPLY GAP ANALYSIS

Water Supply System	Existing Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$1,500 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Bayshore Village	450	250	250	200	200	No Gap
Park Lane	0	0	0	0	0	No Gap
Lagoon City/Brechin	1,300	2,750	4,800	-1,350	-3,250	\$5,000,000
Davy Drive	50	0	0	50	50	No Gap
South Ramara	-0	100	100	-200	-200	\$300,000
Val Harbour	0	50	50	-50	-50	\$50,000 ⁽²⁾

Note 1: Estimated Cost includes a supply increase rate of \$1,000 / m³.

Note 2: Estimated Cost includes a larger well pump.

The second paragraph on page 116 should be replaced by the following:

The Township advised that the 2002 MDD for Bayshore Village is misleading as there was an event, such as a watermain break, that occurred which skewed the results. Therefore, the next highest MDD, 2005 was used for the assessment. Therefore, a positive gap is created.

10.2.14 Township of Severn

Water Supply

Table 81 on page 118 should be replaced with the following:

TABLE 81 – TOWNSHIP OF SEVERN - EXISTING WATER SUPPLY GAP ANALYSIS

Water Supply System	Existing Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$800 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Severn Estates	50	0	0	50	50	No Gap
Bass Lake Woodlands	100	100	100	0	0	No Gap
Sandcastle Estates	100	0	0	150	150	No Gap
Washago	350	0	0	250	250	No Gap
Coldwater	600	1,350	1,350	-800	-800	\$650,000
West Shore	500	0	0	0	0	No Gap

10.2.15 Township of Springwater

Water Supply

Table 83 on page 119 should be replaced with the following:

TABLE 83 – TOWNSHIP OF SPRINGWATER - EXISTING WATER SUPPLY GAP ANALYSIS

Water Supply System	Existing Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$800 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Anten Mills	900	100	100	1,000	1,000	No Gap
Del Trend	50	0	0	100	100	No Gap
Elmvale	2,200	1,000	1,000	1,200	1,200	No Gap
Hillsdale	-0	1,150	1,150	-1,300	-1,300	\$1,000,000
Midhurst	2,700	150	150	3,150	3,150	No Gap
Minesing	-50	100	100	-200	-200	\$200,000
Snow Valley	400	150	150	400	400	No Gap
Vespra Downs	0	0	0	0	0	No Gap

10.2.16 Township of Tay

Wastewater

The third and fourth paragraphs on page 120 as well as Table 84 should be replaced with the following:

The Wastewater Treatments in Port McNicoll and Victoria Harbour have a combined existing residual capacity of 4,050 persons. Table 84 presents the combined gap analysis information for the systems:

TABLE 84 – TOWNSHIP OF TAY - EXISTING WASTEWATER SUPPLY GAP ANALYSIS

Wastewater Treatment System	Existing Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$3,200 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Port McNicoll / Village of Victoria Harbour	4,050	24,000	24,000	-9,000	-9,000	\$28,800,000

The combined AAPP is estimated to be 24,000 persons. Therefore, in order for that amount of development to occur, a major expansion to the wastewater treatment capacity is required. At a rate of \$3,200/m³ of capacity (tertiary treatment), the estimated capital cost is in the order of \$28,800,000.

Water Supply

Table 85 and the subsequent three paragraphs on page 121 should be replaced with the following:

TABLE 85 – TOWNSHIP OF TAY - EXISTING WATER SUPPLY GAP ANALYSIS

Water Supply System	Existing Residual Capacity (Persons)	Additional Approved Population Potential (Persons)		Existing Gap Analysis		Cost to Service Gap based on High Intensification (\$1,500 / m ³ /day)
		with Low Intensification (Persons)	with High Intensification (Persons)	with Low Intensification (m ³ /day)	with High Intensification (m ³ /day)	
Victoria Harbour/Port McNicoll	2,650	24,000	24,000	-19,200	-19,200	\$29,000,000
Rope	150	0	0	200	200	No Gap
Midland Bay Woods	0	0	0	0	0	No Gap
Bay Berry	200	0	0	250	250	No Gap
Waubauskene	-100	2,850	2,850	-3,300	-3,300	\$5,000,000

The water supply to Port McNicoll and Victoria Harbour has a residual capacity of 2,650 persons. However, the AAPP is 24,000 persons (both intensification scenarios). Therefore, there is a major gap in water servicing capacity. The estimated cost to service the gap is \$29,000,000.

There is no approved growth at the Rope, Midland Bay Woods and Bayberry supplies; therefore there is no capacity gap.

The Waubauskene system is a surface water supply with a rated capacity of 1,225m³/d. An expansion would involve quadrupling the existing facility. The estimated capital cost is in the order of \$5,000,000. However, the Township has advised that the Waubauskene water supply system will be eliminated in December 2006 and serviced by the Victoria Harbour/Port McNicoll WTP. Therefore, no expansion is necessary.

APPENDIX A - WASTEWATER TREATMENT CAPACITY ASSESSMENT

Wastewater System	Certificate of Approval No. / Date	Classification	Rated Average Daily Flow	Rated Peak Flow Rate	Average Daily Flow	Peak Flow	Raw Water Characteristics (average)					Effluent Limits from C of A (average)								Final Effluent (average)				Historical ADF / Cap	Population Persons	Persons Per Unit	Population (Units)	Spare Capacity Includes 10% buffer adder to Historical & Future Method 1	Residual Capacity	Residual Capacity	Spare Hydraulic Capacity	Residual Capacity	Residual Capacity	
							BOD5	Suspended Solids	Total Phosphorus	Nitrogen NH3 and NH4	BOD5 Concentration	BOD5 Loading	Suspended Solids Concentration	Suspended Solids Loading	Total Phosphorus Concentration	Total Phosphorus Loading	Nitrogen NH3 and NH4 Concentration	Nitrogen NH3 and NH4 Loading	BOD5	Suspended Solids	Total Phosphorus	Nitrogen NH3 and NH4												
							mg/L	mg/L	mg/L	mg/L	mg/L	kg/day	mg/L	kg/day	mg/L	kg/day	mg/L	kg/day	mg/L	mg/L	mg/L	mg/L												
Town of Bradford West Gwillimbury																																		
Wastewater Treatment (2002)	0016-4GALGG / Feb 8/00	Class 3 WWT	8,870	24,187	5,503	12,470	133.83	272.92	4.39	24.44	10.00	111.50	10.00	111.50	0.14	1.56	4.5 / 2.0			2.60	3.30	0.09	0.46											
Wastewater Treatment (2003)	0016-4GALGG / Feb 8/00	Class 3 WWT	8,870	24,187	5,418	9,895	181.88	222.67	4.04	23.81	10.00	111.50	10.00	111.50	0.14	1.56	4.5 / 2.0			2.60	3.60	0.10	0.15											
Wastewater Treatment (2004)	4233-623HNN / Aug 25/04	Class 3 WWT	8,870	24,187	5,832	12,885	145.38	196.71	3.73	22.16	10.00	111.50	10.00	111.50	0.14	1.56	4.5 / 2.0			2.50	3.70	0.11	0.16											
Average					5,584	11,750																	0.321	17,400	3.10	5,613	2,727	2,492	7,725	1,040	746	2,311		
City of Barrie																																		
Wastewater Treatment (2002)	0465-5ZBLQ8 / June 10/04	Class 4 WWT	57,100	135,720	46,165	79,035	144.08	142.58	4.23	22.85	15.00	857.00	15.00	857.00	0.24	13.70	4.0 / 10.0	228 / 571	6.83	5.62	0.12	2.90												
Wastewater Treatment (2003)	0465-5ZBLQ8 / June 10/04	Class 4 WWT	57,100	135,720	46,313	69,627	162.27	260.00	4.83	25.53	15.00	857.00	15.00	857.00	0.24	13.70	4.0 / 10.0	228 / 571	9.29	4.31	0.12	1.243 / 6.733												
Wastewater Treatment (2004)	0465-5ZBLQ8 / June 10/04	Class 4 WWT	57,100	135,720	48,630	68,077	233.33	314.17	5.08	24.00	15.00	857.00	15.00	857.00	0.24	13.70	4.0 / 10.0	228 / 571	10.28	4.88	0.16	1.52 / 7.167												
Average					47,036	72,246																0.404	116,300	2.70	43,074	5,361	4,463	12,050	4,765	3,922	10,589			
Township of Clearview																																		
Stayner Wastewater (2002)	4770-5Q7LW9 / Oct 8/03	Class 2 WWT	2,500	6,250	1,493		634.92	444.33	116.90	14.91	10.00	25.00	15.00	37.50	0.40	1.00	4.0 / 2.5 / 1.5	10 / 6.25 / 3.75	2.68	6.88	0.43	0.40												
Stayner Wastewater (2003)	4770-5Q7LW9 / Oct 8/03	Class 2 WWT	2,500	6,250	1,474	3,376	616.00	285.00	9.00		10.00	25.00	15.00	37.50	0.40	1.00	4.0 / 2.5 / 1.5	10 / 6.25 / 3.75	1.40	3.80	0.15													
Stayner Wastewater (2004)	4770-5Q7LW9 / Oct 8/03	Class 2 WWT	2,500	6,250	1,533	2,096	608.67	489.42	10.33		10.00	25.00	15.00	37.50	0.40	1.00	4.0 / 2.5 / 1.5	10 / 6.25 / 3.75	0.81	3.13	0.92	0.11												
Average					1,500	2,736																0.369	4,060	2.80	1,450	850	747	2,091	673	534	1,496			
Creemore Wastewater (2002)	3-0589-99-006 / Jul 23/99	Class 2 WWT	1,400		310	760	786.00	386.00	10.50	19.20	10.00	14.00	10.00	14.00	0.20	0.28	4.0 / 2.0	5.6 / 2.8	2.30	1.50	0.12	0.10												
Creemore Wastewater (2003)	3-0589-99-006 / Jul 23/99	Class 2 WWT	1,400		362	665	736.00	427.00	12.40	16.00	10.00	14.00	10.00	14.00	0.20	0.28	4.0 / 2.0	5.6 / 2.8	2.04	1.41	0.12	0.43												
Creemore Wastewater (2004) (Note 2)	3-0589-99-006 / Jul 23/99	Class 2 WWT	1,400		452	592	683.25	418.83	11.78	14.38	10.00	14.00	10.00	14.00	0.20	0.28	4.0 / 2.0	5.6 / 2.8	2.61	1.37	0.06	0.38												
Average					435	672																0.311	1,400	2.80	500	922	963	2,696	770	611	1,711			
Town of Collingwood																																		
Wastewater Treatment (2002)	2639-5TLQB2 / Dec 17/03	Class 3 WWT	24,545	60,900	16,025	33,881	163.00	130.00	4.60		25.00	613.70	25.00	613.70	1.00	24.50				5.30	6.10	0.57												
Wastewater Treatment (2003)	2639-5TLQB2 / Dec 17/03	Class 3 WWT	24,545	60,900	16,257	40,405	144.00	172.00	5.10		25.00	613.70	25.00	613.70	1.00	24.50				2.60	4.80	0.53												
Wastewater Treatment (2004)	2639-5TLQB2 / Dec 17/03	Class 3 WWT	24,545	60,900	16,147	60,890	180.00	203.00	6.60	61.00	25.00	613.70	25.00	613.70	1.00	24.50				1.30	5.40	0.38	0.12											
Average					16,151	45,059																1.078	14,979	2.40	6,241	6,779	2,381	5,715	17,804	16,486	39,565			
Township of Essa																																		
Angus Wastewater (2002)	4500-62PGYJ / Jan 6/05	Class 2 WWT	5,511	11,911	2,192	3,551	194.79	195.29	5.16	32.48	10.00	55.00	10.00	55.00	0.30	1.65	0.6 / 3.1	3.3 / 17	2.92	3.40	0.38	0.90												
Angus Wastewater (2003)	4500-62PGYJ / Jan 6/05	Class 2 WWT	5,511	11,911	2,086	3,685	221.71	201.86	5.83	41.21	10.00	55.00	10.00	55.00	0.30	1.65	0.6 / 3.1	3.3 / 17	4.26	4.26	0.42	2.31												
Angus Wastewater (2004)	4500-62PGYJ / Jan 6/05	Class 2 WWT	5,511	11,911	2,420	5,082	228.46	287.08	6.27	34.19	10.00	55.00	10.00	55.00	0.30	1.65	0.6 / 3.1	3.3 / 17	2.28	2.94	0.43	2.97												
Average					2,233	4,106																0.360	6,200	3.00	2,067	3,055	2,570	7,711	2,721	2,016	6,047			
Town of Innisfil																																		
Alcona Lakeshore Wastewater (2002)	5901-54UK7U / May 2/02	Class 2 WWT	14,370	39,960	6,940	15,634	85.00	132.00	2.98	16.90	10.00	144.00	15.00	216.00	0.30	2.20	5.00	72.00	1.90	2.00	0.09	0.21												
Alcona Lakeshore Wastewater (2003)	5901-54UK7U / May 2/02	Class 2 WWT	14,370	39,960	7,133	13,758	110.00	161.00	2.75	15.20	10.00	144.00	15.00	216.00	0.30	2.20	5.00	72.00	2.00	2.00	0.09	0.65												
Alcona Lakeshore Wastewater (2004)	5901-54UK7U / May 2/02	Class 2 WWT	14,370	39,960	7,413	16,403	103.00	127.00	2.57	15.20	10.00	144.00	15.00	216.00	0.30	2.20	5.00	72.00	2.00	2.00	0.09	0.60												
Average					7,162	15,265																0.374	19,170	3.00	6,390	6,492	5,265	15,796	5,744	4,254	12,763			
Cookstown Wastewater (2002)	3-0804-80-846 / Oct 23/86	Class 1 WWT	825	2,634	494	1,309	142.00	223.00	5.60	40.10	25.00		25.00		1.00		4.00		4.00	3.00	0.21	0.50												
Cookstown Wastewater (2003)	3-0804-80-846 / Oct 23/86	Class 1 WWT	825	2,634	536	1,802	163.00	209.00	6.40	45.00	25.00		25.00		1.00		4.00		7.00	4.00	0.15	2.45												
Cookstown Wastewater (2004)	3-0804-80-846 / Oct 23/86	Class 1 WWT	825	2,634	570	2,077	165.00	232.00	5.29	40.50	25.00		25.00		1.00		4.00		3.00	3.00	0.15	0.20												
Average					533	1,729																0.350	1,524	3.00	508	238	206	619	139	103	309			
Town of Midland																																		
Wastewater Treatment (2002)	3-1604-94-987 / Jan 7/98	Class 4 WWT	15,665	32,580	9,227	19,105					10.00		10.00		0.40	1716 kg/year	10 / 15																	
Wastewater Treatment (2003)	3-1604-94-987 / Jan 7/98	Class 4 WWT	15,665	32,580	8,695	20,717	62.40	175.00	3.70		10.00		10.00		0.40	1716 kg/year	10 / 15		2.20	3.40	0.11													
Wastewater Treatment (2004)	3-1604-94-987 / Jan 7/98	Class 4 WWT	15,665	32,580	8,688	14,418	63.90	146.00	3.30	N/A	10.00		10.00		0.40	1716 kg/year	10 / 15		2.07	2.90	0.15	N/A												
Average					8,870	18,080																0.634	14,000	2.70	5,185	5,908	3,140	8,477	9,365	7,708	20,811			
Town of New Tecumseth																																		
Tottenham Wastewater (2002)		Class 2 WWT			2,259	4,542	184.40	104.10	5.05										1.90	5.60	0.38	0.38												
Tottenham Wastewater (2003)	8405-5U9K4Y / Dec 22/03	Class 2 WWT	4,082	17,021	2,447	5,040	175.10	282.50	5.39		6.00	24.49	15.00	61.23	0.35 / 0.2 / 0.1	1.8 / 0.82 / 0.3	3.3 / 1.2 / 0.5		5.50	11.30	0.88 / 0.18 / 0.11													

APPENDIX A - WASTEWATER TREATMENT CAPACITY ASSESSMENT

Wastewater System	Certificate of Approval No. / Date	Classification	Rated Average Daily Flow m ³ /day	Rated Peak Flow Rate m ³ /day	Average Daily Flow m ³ /day	Peak Flow m ³ /day	Raw Water Characteristics (average)				Effluent Limits from C of A (average)								Final Effluent (average)				Historical ADF / Cap m ³ /cap/day	Population Persons	Persons Per Unit	Population (Units)	Spare Capacity Includes 10% buffer adder to Historical & Future Method 1 m ³ /day	Residual Capacity 10% buffer adder to Method 1 Persons	Residual Capacity Method 1 Persons	Spare Hydraulic Capacity Method 2 (MOE) m ³ /day	Residual Capacity Method 2 (MOE) Units	Residual Capacity Method 2 (MOE) Persons		
							BOD5	Suspended Solids	Total Phosphorus	Nitrogen NH3 and NH4	BOD5 Concentration	BOD5 Loading	Suspended Solids Concentration	Suspended Solids Loading	Total Phosphorus Concentration	Total Phosphorus Loading	Nitrogen NH3 and NH4 Concentration	Nitrogen NH3 and NH4 Loading	BOD5	Suspended Solids	Total Phosphorus	Nitrogen NH3 and NH4												
							mg/L	mg/L	mg/L	mg/L	mg/L	kg/day	mg/L	kg/day	mg/L	kg/day	mg/L	kg/day	mg/L	mg/L	mg/L	mg/L												
Township of Severn																																		
Washago Wastewater (2002)	3-1081-83-006 / Nov 18/83		228		83					25.00	1,024 kg/year	25.00	1,024 kg/year	1.00	41 kg/year			10.3 / 26.3	8.3 / 9.3	0.05 / 0.04														
Washago Wastewater (2003)	3-1081-83-006 / Nov 18/83		228		103					25.00	1,024 kg/year	25.00	1,024 kg/year	1.00	41 kg/year			2.3 / 8.7	3.3 / 3.7	0.16 / 0.06														
Washago Wastewater (2004)	3-1081-83-006 / Nov 18/83		228		91					25.00	1,024 kg/year	25.00	1,024 kg/year	1.00	41 kg/year			5.3 / 12	1.0 / 1.7	0.03 / 0.07														
Average					92	#DIV/0!																												
Coldwater (2002)	1-0020-66-742236 / Jul 25/00	Class 2 WWT			396	910	164.82	276.69	5.53	22.92											0.00	8.83	0.34	0.23										
Coldwater (2003)	1-0020-66-742236 / Jul 25/00	Class 2 WWT			365	1,035	135.29	177.43	4.41	22.13											0.00	8.28	0.27	3.26										
Coldwater (2004)	1-0020-66-742236 / Jul 25/00	Class 2 WWT	545		353	1,291	124.68	175.08	5.78	23.12											2.64	8.71	0.32	3.92										
Average			545		371	1,079																												
Cumberland Beach Wastewater (2002)	6791-62EJW5 / June 29, 04									10.00	13.90	10.00	13.90	0.15	0.21	3.0 / 7.0	4.2 / 9.7																	
Cumberland Beach Wastewater (2003)	6791-62EJW5 / June 29, 04									10.00	13.90	10.00	13.90	0.15	0.21	3.0 / 7.0	4.2 / 9.7																	
Cumberland Beach Wastewater (2004)	6791-62EJW5 / June 29, 04									10.00	13.90	10.00	13.90	0.15	0.21	3.0 / 7.0	4.2 / 9.7																	
Average			1,390	4,768	#DIV/0!	#DIV/0!																												
Township of Springwater																																		
Elmvale (2002)	4989-66ZRKT / Dec 6/04	Class 2 WWT	1,800	6,600	1,055	2,985	164.69	131.92	2.98	18.11	10.00	18.00	5.00	9.00	0.17	0.30					4.71	5.13	0.12	3.38										
Elmvale (2003)	4989-66ZRKT / Dec 6/04	Class 2 WWT	1,800	6,600	1,107	3,355	134.83	274.83	3.63	27.16	10.00	18.00	5.00	9.00	0.17	0.30					4.00	6.14	0.09	6.80										
Elmvale (2004)	4989-66ZRKT / Dec 6/04	Class 2 WWT	1,800	6,600	1,118	6,834	111.75	128.58	3.04	16.03	10.00	18.00	5.00	9.00	0.17	0.30					4.00	4.75	0.10	1.14										
Average					1,094	4,391																												
Township of Tay																																		
Port McNicoll Wastewater (2002)	2382-5J2RTB / Jan 28/03		1,918	3,836						15.00	28.77	15.00	28.77	0.25	0.48	5.0 / 15	9.59 / 28.77																	
Port McNicoll Wastewater (2003)	2382-5J2RTB / Jan 28/03		1,918	3,836	1,172					114.00	145.00	3.07	15.20	15.00	28.77	15.00	28.77	0.25	0.48	5.0 / 15	9.59 / 28.77	2.00	2.05	0.06	0.60									
Port McNicoll Wastewater (2004)	2382-5J2RTB / Jan 28/03		1,918	3,836	1,172					91.00	95.00	2.29	14.10	15.00	28.77	15.00	28.77	0.25	0.48	5.0 / 15	9.59 / 28.77	1.30	2.14	0.07	0.60									
Port McNicoll Wastewater (2005)	2382-5J2RTB / Jan 28/03		1,918		1,172																													
Average																																		
Village of Victoria Harbour Wastewater (2002)	1-797-82-006 / Sept 10/82		2,364	6,600			112.00	127.00	1.72	17 (ammonium)											2.35	2.42	0.07											
Village of Victoria Harbour Wastewater (2003)	1-797-82-006 / Sept 10/82		2,364	6,600	1,800																3.06	2.31	0.13											
Village of Victoria Harbour Wastewater (2004)	1-797-82-006 / Sept 10/82		2,364	6,600	1,800																3.05	2.06	0.07											
Village of Victoria Harbour Wastewater (2005)	1-797-82-006 / Sept 10/82		2,364		1,800																													
Average					1,800																													
Town of Wasaga Beach																																		
Wastewater Treatment (2002)	3-0314-96-006 / Apr 12/96	Class 3 WWT	15,433	38,210	3,682	7,789	390.50	415.00	3.60	20.65	10.00	154.00	10.00	154.00	0.20	3.09	1.1 / 5.0	17 / 77.2	2.00	3.50	0.05	0.10												
Wastewater Treatment (2003)	3-0314-96-006 / Apr 12/96	Class 3 WWT	15,433	38,210	3,960	7,691	48.00	167.00	2.88	19.60	10.00	154.00	10.00	154.00	0.20	3.09	1.1 / 5.0	17 / 77.2	3.00	4.00	0.07	0.11												
Wastewater Treatment (2004)	3-0314-96-006 / Apr 12/96	Class 3 WWT	15,433	38,210	4,638	13,696	147.00	180.00	3.54	17.85	10.00	154.00	10.00	154.00	0.20	3.09	1.1 / 5.0	17 / 77.2	4.00	3.00	0.11	0.10												
Average					4,093	9,725																												

Note 1: Potential Growth is based on existing service area. The future serviced population assumes that growth will be proportional to existing residential, commercial and industrial development.

Note 2: The township advised that the 2004 and 2005 ADF data was best to use in the assessment as the bulk of the service connections were not hooked up until 2004. The Township provided the ADF for 2004 and 2005 of 435 m³/day

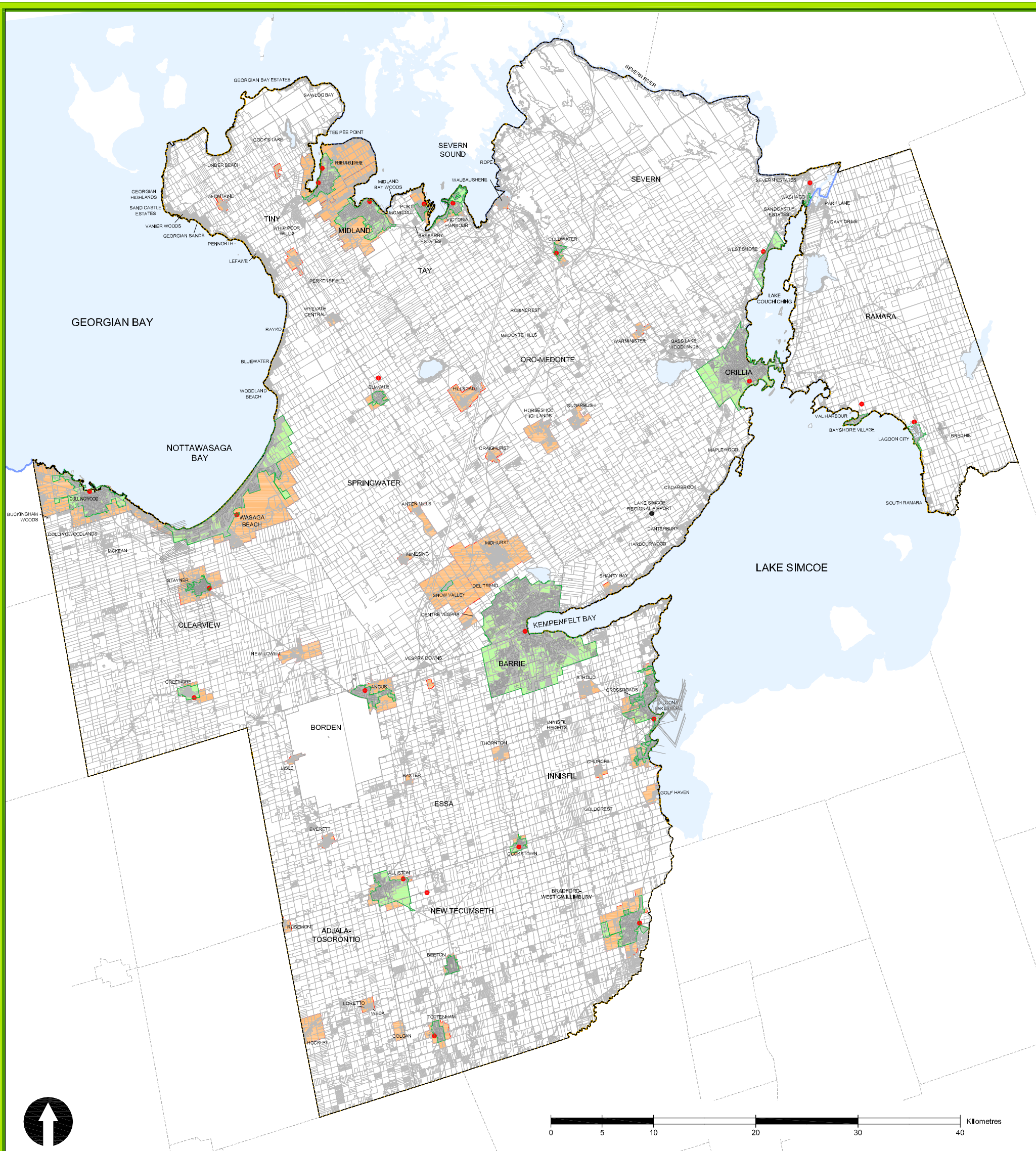
278,637

APPENDIX C- WATER SUPPLY CAPACITY ASSESSMENT

System	Certificate of Approval No. / Date	Rated Supply Capacity m ³ /day	Permit To Take Water No. / Expiry Date	Permitted Water Taking Capacity m ³ /day	System Classification	Historical MDD m ³ /day					Serviced Population No. of persons					Serviced Population No. of Units	MDD/Cap. m ³ /cap*d	Spare Supply Capacity Includes 10% buffer adder to Historical & Future m ³ /day	Spare Water Capacity m ³ /day	Residual Capacity		Spare Supply Capacity m ³ /day	Residual Capacity MOE		Persons Per Unit	
						2002	2003	2004	2005	Maximum	2002	2003	2004	2005	Maximum					Average	Method 1		Method 2 (MOE)			
																					No. of Units		No. of People	No. of Units		No. of People
Township of Adjala-Tosorontio																										
Everett	6756-65FKKY / March 16, 2005	3,916.8	93-P-3011 / January 15, 2013	3,920.0	large	1,182.6	1,244.4	1,253.4	1,253.4	1,638	1,752	1,902	1,902	614	0.659	2,538	3	1,129	3,501	1,777	510	1,580	3.10			
Colgan	0480-666HCF / Nov 2, 2004	286.6	5308-64MSDN / Sept 30, 2009	157.2	small	161.7	181.5	176.0	181.5			213	213	69	0.852	-42	-129	-15	-45	-106	-28	-86	3.10			
Lisle	3205-68LR5P / March 21, 2005	656.6	0583-692PFX / Dec 15, 2010	1,313.3	small	86.1	114.3	119.1	119.1			168	168	54	0.709	526	657	217	674	449	117	363	3.10			
Loretto Heights	6420-68YJB9 / March 21, 2005	136.8	01-P-1055 / May 31, 2011	163.8	small	65.7	69.6	64.5	69.6			78	78	25	0.892	60	27	20	61	40	10	33	3.10			
Rosemont	5945-68LR4L / March 21, 2005	73.4	95-P-5067 / March 31, 2006	130.9	small		53.0	61.0	61.0			141	141	45	0.433	6	57	4	13	-101	-26	-82	3.10			
Weca	2754-6ARLXG / June 1, 2005	915.8	01-P-1053 / June 15, 2011	915.8	small	289.8	232.5	284.7	289.8			246	246	79	1.178	597	0	149	461	611	159	494	3.10			
Hockley	8053-5VDLEY / March 3, 2004	90.0	00-P-1357 / January 31, 2011	90.0	small	62.1	47.1	52.0	62.1			42	42	14	1.479	22	0	4	13	38	10	31	3.10			
Total												2,790						4	13	38		2,332				
City of Barrie																										
Water Supply	0569-65FPQY / Oct 27, 2004	92,490.0	1345-6DSNKC / 2015/07/20	106,436.8	large	73,366.0	65,576.0	66,228.0	78,159.0	78,159.0	111,600	116,200	121,100	126,000	126,000	46,667	0.620	6,515	13,947	3,536	9,548	-1,065	-531	-1,434	2.70	
Town of Bradford West Gwillimbury																										
Water Supply	1242-6CAK5U / June 23, 2005	13,986.4	02-P3037 / Dec 31, 2005	13,226.4	large	11,180.0	11,749.0	11,302.0	11,749.0	17,300	17,700	18,400	18,400	5,935	0.639	1,063	0	537	1,513	-918	-365	-1,133	3.10			
Township of Clearview																										
New Lowell	7007-68CQ3R / Jan 5, 2005	1,166.4	91-P-3077 / March 31, 2011	746.5	large	568.0	493.0	581.0	581.0			672	672	240	0.865	107	-420	40	113	-85	-25	-69	2.80			
Stayner	6099-65AKES / Oct 14, 2004	6,540.5	92-P-3011 / July 15, 2012	6,544.8	large	5,334.0	5,430.0	5,146.0	5,430.0			4,166	4,166	1,488	1.303	567	4	141	396	2,791	1,107	3,101	2.80			
Creemore (Note 1)	1569-5CYQEZ / Aug 16, 2002	2,688.0	3762-5Y9MZ5 / May 15, 2011	2,688.0	large	1,747.0	2,317.0	1,522.0	1,747.0			1,543	1,543	551	1.132	766	0	220	615	952	302	847	2.80			
McKean Subdivision	9576-5SYS37 / Nov 12, 2003	1,055.0	3237-6CQPT8 / May 31, 2010	1,055.0	large	436.0	482.0	503.0	503.0			392	392	140	1.283	502	0	127	355	570	164	461	2.80			
Colling-Woodlands Subdivision	1843-5V7LD8 / Feb 4, 2004	270.0	00-P-1069 / Aug 31, 2010	270.0	small	190.0	148.6	129.0	190.0			188	188	67	1.013	61	0	20	55	38	11	31	2.80			
Buckingham Woods	6003-5RYH9F / Oct 10, 2003	131.0	2845-64PNQM / Aug 31, 2014	76.4	small		58.5	53.6	58.5			48	48	17	1.229	12	-55	3	9	17	5	14	2.80			
Total												7,008						3	9	17		4,384				
Town of Collingwood																										
Water Supply	3108-6JEKVG / Dec 9, 2005	20,640.0	91-P-3037 / Jan 31, 2011	168,350.0	large	17,877.0	17,069.0	15,567.0	17,877.0	16,526	17,035	17,551	17,551	7,313	1.019	975	147,710	363	870	5,634	2,745	6,589	2.40			
Township of Essa																										
Angus	2050-635HB3 / July 26, 2004	6,557.8	Mill: 90-P-0012 / July 31, 2011 McGeorge: 92-P-3119 / Nov 30, 2011	6,553.7	large	3,094.0	2,553.0	2,650.0	3,094.0	4,218		6,210	6,210	2,070	0.498	3,150	-4	1,916	5,748	965	357	1,072	3.00			
Thornton-Glen	7019-5V8S8S / Jan 19, 2004	1,540.0	03-P-1151 / Oct 15, 2005	1,866.2	large	513.0	523.0	658.0	658.0			750	750	250	0.877	816	326	282	846	612	165	494	3.00			
Baxter	6844-5W5HHB / March 19, 2004	225.0	5080-5ZCHCZ / Aug 31, 2008	255.0	small	132.0	118.0	102.4	132.0			156	156	52	0.846	80	30	29	86	32	9	26	3.00			
Total												7,116							86	32		1,592				
Town of Innisfil																										
Innisfil Heights	2089-5TES8G / Nov 21, 2003	2,799.0	1007-63JP54 / June 30, 2008	3,110.0	large	787.5	882.0	784.0	882.0			1,080	1,080	338	0.817	1,829	311	636	2,036	1,584	440	1,408	3.20			
Crossroads	1791-5W5QXB / Feb 13, 2004	2,030.0	1732-5YHR7D / April 30, 2009	2,030.0	large	900.0	830.0	770.0	900.0	1,715		1,715	1,715	536	0.525	1,040	0	563	1,802	1,011	28	89	3.20			
Stroud	6464-6E4RFC / July 20, 2005	2,097.6	00-P-1368 / Feb 15, 2011	2,711.9	large	1,700.0	1,418.0	1,459.0	1,700.0			1,872	1,872	585	0.908	228	614	71	228	-8	-2	-7	3.20			
Churchill	0718-62LJT4 / July 12, 2004	1,722.0	93-P-3019 / July 15, 2008	743.0	large	136.0	614.0	394.0	614.0	520		520	520	163	1.181	68	-979	16	52	100	25	80	3.20			
Golf Haven	0937-6FCSD9 / Aug 31, 2005	378.0	91-P-3006 / March 31, 2011	459.0	large	378.0	331.0	243.0	378.0			535	535	167	0.707	-38	81	-15	-49	-284	-72	-230	3.20			
Gold Crest	1894-62LNHL / July 12, 2004	324.0	00-P-1381 / Jan 15, 2011	648.0	large	196.0	245.0	133.0	245.0	195		195	195	61	1.256	55	324	12	39	83	21	67	3.20			
Cookstown	4916-5Z3PCN / June 4, 2004	851.0	96-P-1064 / Oct 20, 2009	1,571.0	large	921.0	863.0	814.0	921.0	1,390		1,390	1,390	434	0.663	-162	720	-70	-222	-713	-198	-634	3.20			
Alcona Lakeshore	7283-5GQL2F / Dec 11, 2002	12,700.0	4713-62UJAP / July 31, 2009	28,377.0	large	6,111.0	6,829.0	5,834.0	6,829.0	11,178	11,872	12,560	12,560	3,925	0.544	5,188	15,677	2,711	8,675	1,961	717	2,294	3.20			
Total												19,867							12,560			3,068				
Town of Midland																										
Water Supply	7076-63CRJM / Aug 24, 2004	21,877.0	97-P-1002 / April 24, 2007	20,775.7	large	15,811.0	13,221.0	11,507.0	15,811.0	16,430	16,430	16,700	16,700	6,185	0.947	3,384	-1,101	1,203	3,249	6,497	2,814	7,599	2.70			
Town of New Tecumseth																										
Alliston / Beeton / Hillcrest	8185-67FPTT / March 21, 2005	23,886.0	8607-62VKNL / Aug 30, 2014	15,205.0	large	15,666.8	14,872.6	13,455.2	15,666.8			13,355	13,355	4,605	1.173	6,652	-8,681	1,778	5,155	12,468	5,028	14,582	2.90			
Tottenham	3718-69UKMY / April 26, 2005	6,566.4	2535-5ZYLJF / July 7, 2004	6,000.0	large	3,506.1	3,002.9	3,105.0	3,506.1			4,750	4,750	1,638	0.738	2,143	-566	910	2,640	1,725	661	1,916	2.90			
Total												18,105							7,795			16,499				
City of Orillia																										
Water Supply	4059-6DSKXX / July 20, 2005	39,502.0	91-P-3036 / May 31, 2011	42,050.5	large	19,743.0	21,086.0	17,328.0	21,086.0	29,372	29,626	30,039	30,039	10,183	0.702	16,307	2,549	7,159	21,119	15,170	6,349	18,729	2.95			
Township of Oro-Medonte																										
Canterbury	8538-68YQ72 / Apr 18, 2005	209.1	92-P-3028 / Dec 15, 2011	209.1	small	48.0	50.0	46.0	50.0			46	46	16	1.087	154	0	46	129	152	44	123	2.80			
Craighurst	7367-5E9RLK / Oct 8, 2002	457.9	92-P-3120 / Dec 15, 2011	457.9	small	184.0	150.0	169.0	184.0			138	138	49	1.333	256	0	62	174	287	83	232	2.80			
Horseshoe Highlands	3693-5YBP9A / Apr 23, 2004	3,369.6	0404-5UHQDN / Dec 31, 2013	3,370.0	large	3,706.0	1,640.0	1,375.0	3,706.0			1,380	1,380	493	2.686	-707	0	-85	-239	1,817	577	1,615	2.80			
Maplewood	1546-5E4L9F / Sept 23, 2002	163.7	02-P-1314 / Oct 31, 2012	163.7	small	106.0	137.0	150.0	150.0			127	127	45	1.181	-1	0	0	6	2	5	2.80				
Robin Crest	1895-5C6QT5 / July 19, 2002	850.0	77-P-3033 / Sept 15, 2010	850.0	large	503.0	408.0	402.0	503.0			243	243	87	2.070	297	0	47	130	549	159	444	2.80			
Sugarbush	0724-6CBJ77 / May 20, 2005	2,485.4	1483-5MYQ36 / May 31, 2013	4,122.7	large	956.0	415.0	636.0	956.0			869	869	310	1.100	1,434	1,637	423	1,185	1,410	407	1,139	2.80			
Cedarbrook	5391-645PKP / Aug 24, 2004	196.1	95-P-5036 / March 31, 2006	392.3	small	69.0	86.0	37.0	86.0			65	65	23	1.323	102	196	25	70	116	33	93	2.80			
Harbourwood	0500-5DVHLZ / Sept 19, 2002	921.6	2334-5VKS38 / Jan 31, 2014	921.6	large	517.0	441.0	312.0	517.0			354	354	126	1.460	353	0	78	220	484	140	391	2.80			
Lake Simcoe Regional Airport	064																									

APPENDIX C- WATER SUPPLY CAPACITY ASSESSMENT







System	Certificate of Approval No. / Date	Rated Supply Capacity m3/day	Permit To Take Water No. / Expiry Date	Permitted Water Taking Capacity m3/day	System Classification	Historical MDD m3/day					Serviced Population No. of persons					Serviced Population No. of Units	MDD/Cap. m3/cap'd	Spare Supply Capacity Includes 10% buffer m3/day	Spare Water Capacity m3/day	Residual Capacity adder to Historical & Future		Spare Supply Capacity m3/day	Residual Capacity MOE Method 2 (MOE)		Persons Per Unit	
						2002	2003	2004	2005	Maximum	2002	2003	2004	2005	Maximum					Average	No. of Units		No. of People	No. of Units		No. of People
																				Method 1						
Township of Ramara																										
Bayshore Village (Note 2)	7672-5W2SMC / Feb 23, 2004	1,243.8	4512-66JSJZ / Nov 1, 2014	1,243.8	large	1,062.0	672.0	514.9	688.0	688.0	595	638	675	675	270	1,019	487	0	174	434	408	132	330	2.50		
Park Lane	1218-5S5RTP / Nov 21, 2003	50.0			small	28.2	41.2	44.0	32.6	44.0	40	43	43	43	17	1,035	2	-50	1	1	-3	-1	-2	2.50		
Lagoon City/Brechin	5211-5QBLCG / Sept 22, 2003	4,000.0	76-P-3057	3,993.0	large	2,548.0	2,418.0	1,928.0	2,204.0	2,548.0	2,325	3,000	2,863	3,000	1,200	0.849	1,197	-7	513	1,281	956	380	951	2.50		
Davy Drive	8483-5W4JBX / March 3, 2004	75.7	7770-5QDQ5C / Aug 30, 2013	75.7	small	26.1	38.0	37.2	51.0	51.0	73	78	80	80	32	0.638	20	0	11	28	-23	-8	-19	2.50		
South Ramara	6028-5XSP5X / June 29, 2004	387.1	2683-5YWNWN / May 31, 2014	542.9	large	364.5	287.3	200.0	120.0	364.5	193	193	213	213	85	1.715	-14	156	-3	-7	124	40	100	2.50		
Val Harbour	8283-5VTMNH / March 3, 2004	207.4	94-P-3026 / Nov 30, 2011	207.4	small	151.0	172.4	84.5	145.4	172.4	98	113	140	140	56	1.231	18	0	5	13	34	11	28	2.50		
Total														4,150							1,751			1,388		
Township of Severn																										
Severn Estates	3942-63KJCU / Sept 1, 2004	108.9	5223-5W3S4A / Dec 31, 2009	185.0	small	47.0	43.0	37.0		47.0	62	62	62	23	0.757	57	76		25	69	108	10	26	2.70		
Bass Lake Woodlands	5215-5W9JME / March 29, 2004	818.0	87-P-3051 / Feb 28, 2014	1,211.2	large	548.0	448.0	331.0		548.0	319	324	321	324	120	1.691	215	393	43	116	417	125	337	2.70		
Sandcastle Estates	6974-66BLCH / Nov 22, 2004	388.8	03-P-1036 / May 31, 2008	388.8	small	236.1	130.8	111.0		236.1	167	167	167	167	62	1.410	129	0	31	83	182	54	147	2.70		
Washago	1161-5HKRK7 / Jan 8, 2003	544.3	1481-62LKL7 / Oct 31, 2008	544.3	large	227.3	252.0	206.0		252.0	316	316	365	365	135	0.691	267	0	130	351	93	28	75	2.70		
Coldwater	6242-63ZQHG / Sept 10, 2004	2,138.0	93-P-3071 / July 31, 2013	4,105.7	large	1,377.0	1,070.0	904.0		1,377.0	1,366	1,377	1,431	1,431	530	0.962	623	1,968	218	589	528	174	469	2.70		
West Shore	6526-5SDHEX / Oct 21, 03	2,780.0	4612-6E9PSB / Mar 31, 2015	3,041.3	large		N/A				N/A		2,250	2,250										496		
Total													4,599								1,208			1,550		
Township of Springwater																										
Anten Mills	7938-5YFPCA / Aug 16, 2004	2,086.6	7511-5MLRGP / May 16, 2013	1,557.6	large	346.0	363.0	360.0		363.0			348	348	116	1.043	1,158	-529	336	1,009	1,127	304	911	3.00		
Del Trend	8518-66LK6Y / Dec 16, 2004	1,840.3	92-P-3106 / Feb 28, 2012	786.0	large	597.0	579.0	501.0		597.0			318	318	106	1.877	129	-1,054	21	63	392	106	317	3.00		
Elmwale	2129-5TGMBU / Nov 21, 2003	4,546.0	91-P-3104 / Apr 15, 2011	4,546.0	large	1,363.0	2,038.0	1,341.0		2,038.0			2,289	2,289	763	0.890	2,304	0	784	2,353	2,228	734	2,201	3.00		
Hillsdale	3382-5Y4HW2 / June 7, 2004	1,185.0	4031-5YEMY2 / Apr 30, 2014	1,434.0	large	436.0	524.0	601.0		601.0			1,068	1,068	356	0.563	524	249	282	846	-17	-5	-15	3.00		
Midhurst	5775-6BNJ24 / April 22, 2005	7,102.0	92-P-3026 / Feb 28, 2011	6,850.0	large		3,241.0	2,969.0	3,233.0	3,241.0			2,904	2,904	968	1.116	3,285	-252	892	2,676	3,910	1,287	3,861	3.00		
Minesing	5492-5F4N2Y / Oct 25, 2002	740.0	5385-69GMBJ / May 31, 2013	740.0	large	742.0	533.0	408.0		742.0		639	639	213	1.161	-76	597	0	-20	-60	-51	-14	-41	3.00		
Snow Valley	7123-5YEL2Z / July 16, 2004	1,503.0	2328-69GKET / March 31, 2011	1,400.0	large	713.0	652.0	525.0		713.0			507	507	169	1.406	616	-103	133	398	773	208	624	3.00		
Vespra Downs	5754-66ES7P / Nov 8, 2004	449.3	0621-62MR3A / Aug 31, 2014	168.9	small	86.0	112.0	127.0		127.0			69	69	23	1.841	29	-280	5	14	84	22	67	3.00		
Total													8,142								7,300			7,926		
Township of Tay																										
Victoria Harbour/Port McNicoll	5358-645JVN / Oct 6, 2004	7,845.1	7621-606HNV / June 15, 2015	7,845.1	large			4,912.0	4,912.0	4,912.0			6,060	6,060	6,060	2,287	0.811	2,442	0	1,033	2,739	2,391	1,003	2,657	2.65	
Rope	8583-659NEA / Dec 8, 2004	274.0	92-P-3074 / March 15, 2012	273.9	small		188.0	188.0	188.0	188.0			60	60	80	80	30	2,350	67	0	10	26	175	53	141	2.65
Midland Bay Woods	2592-697MNY / Apr 22, 2005	328.0	91-P-3102 / Apr 15, 2011	301.0	large		267.0	219.0		267.0			230	230	87	1.161	7	-27	2	6	16	5	13	2.65		
Bay Berry	2256-69ULXS / Apr 18, 2005	392.3	91-P-3103 / Apr 30, 2011	392.8	small		46.0	68.0		68.0			100	100	38	0.680	318	1	160	424	269	82	217	2.65		
Waubashene	2173-69ERJG / Mar 21, 2005	1,227.0	91-P-3106 / Apr 15, 2011	1,225.0	large		760.0	673.0		760.0			1,200	1,200	453	0.633	389	-2	211	558	-125	-42	-111	2.65		
Total													7,670								3,753			2,917		
Township of Tiny																										
Perkinsfield	3459-6AGQSA / Apr 15, 2005	1,482.0	4238-5YXKRA / Aug 31, 2009	1,382.0	large		601.0	466.0	588.0	601.0			437	437	168	1.376	721	-100	183	476	841	262	680	2.60		
Bluewater	5101-5UZRWX / Feb 11, 2004	835.9	91-P-3065 / Apr 15, 2011	989.7	large		792.0	823.0	936.0	936.0			601	614	236	1.525	-194	154	-44	-115	77	24	62	2.60		
Georgian Bay Estates	8765-699PYP / March 16, 2005	949.2	91-P-3063 / April 15, 2011	949.2	large		409.0	505.0	647.0	647.0			549	559	215	1.157	238	0	72	187	257	80	208	2.60		
Georgian Sands	7408-5YYPLE / June 4, 2004	3,145.0	91-P-3022 / Apr 15, 2011	3,261.2	large		1,353.0	1,877.0	2,139.0	2,139.0			1,578	1,591	612	1.344	792	116	206	536	1,355	463	1,204	2.60		
LA Place	5292-6BWHLM / May 19, 2005	648.0	1276-66LJGU / Aug 31, 2009	198.1	small		139.0	149.0	195.0	195.0			140	148	57	1.316	-16	-450	-4	-11	15	5	12	2.60		
TeePee Points	7533-5Y2MY2 / May 12, 2004	288.0	91-P-3061 / April 15, 2011	122.8	small		165.0	117.0	165.0	165.0			237	237	91	0.697	-59	-165	-29	-77	-170	-53	-137	2.60		
Sand Castle Estates	8782-5SJHJU / Oct 21, 2003	490.0	92-P-3096 / Aug 15, 2012	491.0	small		57.0	71.0	112.0	112.0			75	83	32	1.346	367	1	95	248	387	120	313	2.60		
Vanier Woods	3163-5UYQP3 / Jan 26, 2003	360.0	92-P-3088 / Aug 15, 2012	360.0	small		74.0	115.0	123.0	123.0			96	104	40	1.183	225	0	66	173	231	72	187	2.60		
Wyevale Central	8301-6A9J8B / June 3, 2005	1,182.0	92-P-3080 / Aug 15, 2012	920.2	large		586.0	527.0	732.0	732.0			468	515	198	1.422	115	-262	28	73	283	88	229	2.60		
Cook's Lake	4642-6C5FU7 / May 13, 2005	655.0	91-P-3064 / April 15, 2011	400.0	small		174.0	174.0	207.0	207.0			224	224	86	0.926	172	-255	65	169	123	38	100	2.60		
Georgian Highlands	3187-62LQFA / July 27, 2004	751.7	01-P-1073 /	961.9	small		198.9	238.0	247.0	247.0			208	211	81	1.173	480	210	143	372	491	153	397	2.60		
Lefaive	6298-5SLR4M / Jan 26, 2004	308.7	92-P-3047 / Aug 15, 2012	607.7	small		122.0	121.0	161.0	161.0			172	172	66	0.938	132	299	49	128	96	30	78	2.60		
Pennorth	8055-5SQJP / Jan 26, 2004	61.4	91-P-3060 / April 15, 2011	61.4	small		48.9	84.7	95.0	95.0			83	83	32	1.142	-43	0	-13	-34	-42	-13	-34	2.60		
Rayko	3291-69EK69 / Mar 31, 2005	194.4	02-P-1372 / Feb 15, 2013	194.4	small		73.8	122.7	111.0	122.7			83	83	32	1.475	59	0	14	37	91	28	74	2.60		
Sawlog Bay	6554-5UYP6C / Jan 26, 2004	261.0	3203-5ZQPTB / June 30, 2009	189.0	small		131.0	82.0	108.0	131.0			88	91	35	1.440	45	-72	11	28	76	24	62	2.60		
Thunder Bay	9908-5SQQ8Z / Jan 30, 2014	200.0	0024-62TPFM / June 30, 2014	202.9	small		97.3	101.0	183.0	183.0			47	47	18	3.910	-1	3	0	0	142	44	115	2.60		
Whip-Poor-Will 2	0609-5UYHQ6 / Jan 26, 2004	360.0	02-P-1319 / Nov 30, 2007	720.0	small		372.0																			



Intergovernmental Action Plan for Simcoe, Barrie and Orillia


Appendix D - Existing Wastewater Serviced Areas (Addendum 2006)

LEGEND

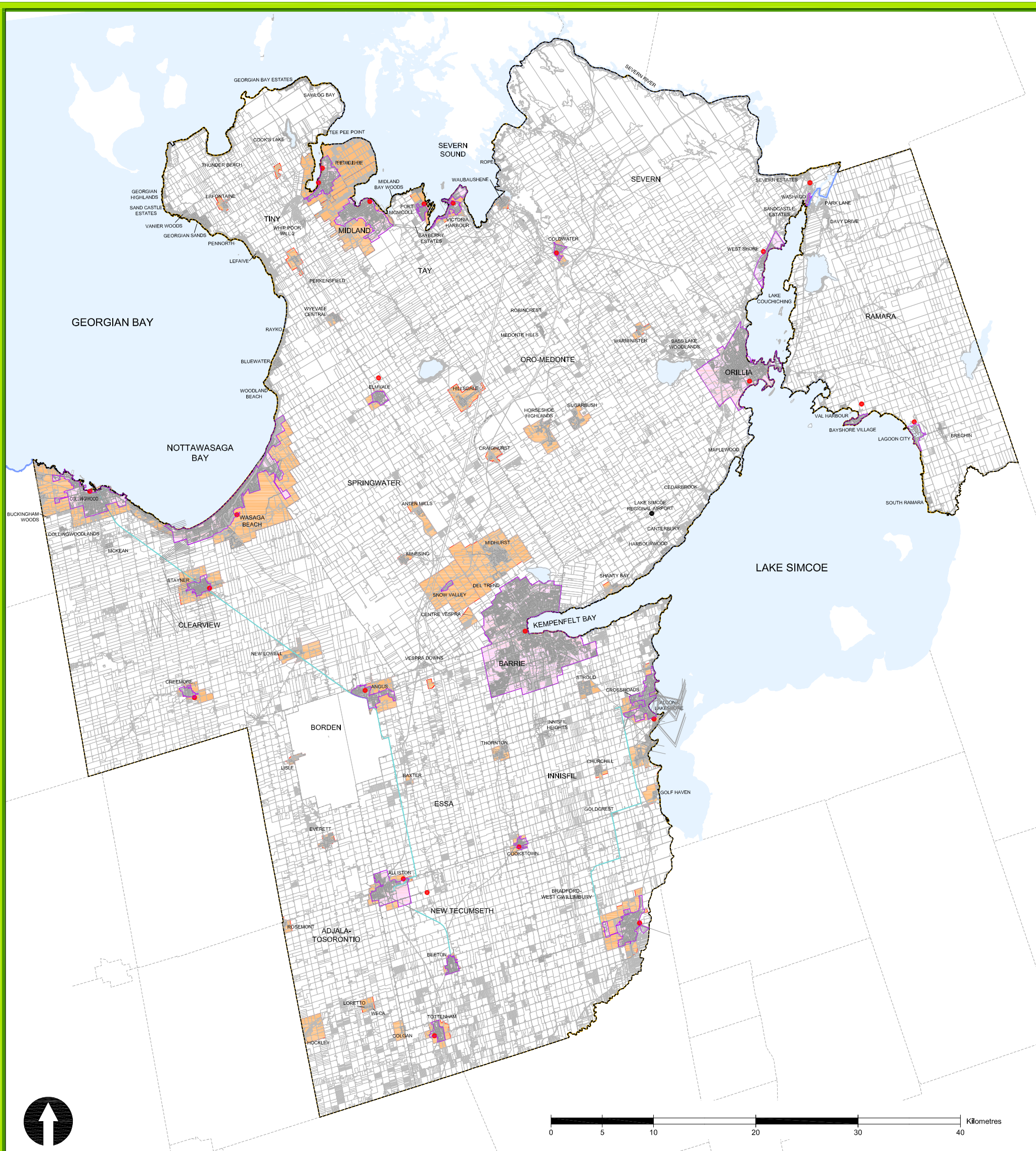
-  IGAP Study Boundary²
-  Area Municipalities²
-  Ponds and Lakes¹
-  Wastewater Treatment Plant
-  Wastewater Service Area Boundary⁴
-  Settlement Boundary⁵
(Not all settlement areas have municipal wastewater servicing)



**Dillon Consulting
Clara Consulting
Bourrie & Associates**

 Ontario
 Projection: UTM zone 17N NAD83
 Data Sources: 1. Ontario Ministry of Natural Resources,
 2. Ontario Ministry of Municipal Affairs and Housing,
 3. Simcoe County 4. Infrastructure Area Boundaries
 provided by Municipalities 5. Local Municipal Official Plans

Created by: JDC
 Checked by: JAM



Intergovernmental Action Plan for Simcoe, Barrie and Orillia

Appendix E - Existing Fully Serviced Areas (Addendum 2006)

LEGEND

- IGAP Study Boundary²
- Area Municipalities²
- Ponds and Lakes¹
- Transmission Mains
- Wastewater Treatment Plant
- Fully Serviced Area Boundary⁴
- Settlement Boundary⁵
(Not all settlement areas have municipal servicing)

Ontario
 Projection: UTM zone 17N NAD83
 Data Sources: 1. Ontario Ministry of Natural Resources,
 2. Ontario Ministry of Municipal Affairs and Housing,
 3. Simcoe County 4. Infrastructure Area Boundaries
 provided by Municipalities 5. Local Municipal Official Plans

Created by: JDC
 Checked by: JAM



**Dillon Consulting
 Clara Consulting
 Bourrie & Associates**

Appendix T - Wastewater Treatment GAP Analysis
(Based on Existing Infrastructure)

System	Existing Residual Capacity (Number of Persons)	Additional Approved Population Potential (Number of Persons)		Gap Analysis (Number of Persons)		Gap Analysis (m ³ /day)	
		with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)
Town of Bradford West Gwillimbury							
Total	2,300	22,150	27,250	-19,850	-24,950	-8,950	-11,250
City of Barrie							
Total	12,050	23,600	38,050	-38,000	-45,850	-16,900	-20,400
Equivalent future IC Allowance (See Notes 1 & 2)		26,450	19,850				
Township of Clearview							
Stayner	2,100	21,150	27,300	-19,050	-25,200	-7,750	-10,250
Creemore	2,700	3,950	5,850	-1,250	-3,150	-450	-1,100
Total	4,800	25,100	33,150	-20,300	-28,350	-8,200	-11,350
Town of Collingwood							
Total	5,700	31,300	51,400	-25,600	-45,700	-30,350	-54,200
Township of Essa							
Angus	7,700	7,400	7,400	300	300	100	100
Total	7,700	7,400	7,400	300	300	100	100
Town of Innisfil							
Alcona Lakeshore	15,800	15,750	15,750	50	50	0	0
Cookstown	600	850	850	-250	-250	-100	-100
Total	16,400	16,600	16,600	-200	-200	-100	-100
Town of Midland							
Total	8,500	8,900	12,950	-400	-4,450	-300	-3,100
Town of New Tecumseth							
Tottenham	0	6,850	11,350	-6,850	-11,350	-3,450	-5,700
Alliston Sir Frederic Banting & Regional WWTP	3,550	8,900	14,750	-5,350	-11,200	-3,000	-6,250
Total	3,550	15,750	26,100	-12,200	-22,550	-6,450	-11,950
City of Orillia							
Total	13,650	19,750	35,050	-6,100	-21,400	-3,950	-13,900
Town of Penetanguishene							
Fox Street	400	150	150	250	250	250	250
Main Street	350	4,100	8,500	-3,750	-8,150	-3,300	-7,150
Total	750	4,250	8,650	-3,500	-7,900	-3,050	-6,900
Township of Ramara							
Lagoon City	350	2,700	4,750	-2,350	-4,400	-1,500	-2,850
Bayshore Village	150	250	250	-100	-100	-50	-50
Total	500	2,950	5,000	-2,450	-4,500	-1,550	-2,900
Township of Severn							
Washago	400	0	0	400	400	150	150
Coldwater	450	1,350	1,350	-900	-900	-300	-300
West Shore	1,000	0	0	1,000	1,000	450	450
Total	1,850	1,350	1,350	500	500	300	300
Township of Springwater							
Elmvale	1,150	1,000	1,000	150	150	100	100
Total	1,150	1,000	1,000	150	150	100	100
Township of Tay							
Port McNicoll / Village of Victoria Harbour	4,050	24,000	24,000	-19,950	-19,950	-9,000	-9,000
Total	4,050	24,000	24,000	-19,950	-19,950	-9,000	-9,000
Town of Wasaga Beach							
Total	37,450	9,700	9,700	27,750	27,750	8,100	8,100
Study Area Total (See Note 3)	120,400	213,800	297,650	-119,850	-197,100	-80,200	-136,450

- Note 1: Equivalent population allowance, with No Intensification, for 10,702 m³/day ADF of future Industrial/Commercial (IC) development after Residential build out in 2011.
- Note 2: Equivalent population allowance, with High Intensification, for 8,027 m³/day ADF of future Industrial/Commercial (IC) development after Residential build out in 2012.
- Note 3: Excludes equivalent population allowance for Barrie's future IC development after Residential build out in 2011/2012.

Appendix U - Wastewater Treatment GAP Analysis
(Based on Existing + EA Approved Infrastructure)

System	Existing Residual Capacity (Number of Persons)	Committed Capacity Increases (as Identified by Class EA's and Design Briefs) (Number of Persons)	Additional Approved Population Potential (Number of Persons)		Gap Analysis (Number of Persons)		Gap Analysis (m ³ /day)	
			with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)
Town of Bradford West Gwillimbury								
Total (see note 1)	2,300	24,400	22,150	27,250	4,550	-550	2,050	-250
City of Barrie								
Total	12,050	42,500	23,600	38,050	4,500	-3,350	2,000	-1,500
Equivalent future IC Allowance (See Note 2 & 3)			26,450	19,850				
Township of Clearview								
Stayner	2,100	0	21,150	27,300	-19,050	-25,200	-7,750	-10,250
Creemore	2,700	0	3,950	5,850	-1,250	-3,150	-450	-1,100
Total	4,800	0	25,100	33,150	-20,300	-28,350	-8,200	-11,350
Town of Collingwood								
Total	5,700	0	31,300	51,400	-25,600	-45,700	-30,350	-54,200
Township of Essa								
Angus	7,700		7,400	7,400	300	300	100	100
Total	7,700	0	7,400	7,400	300	300	100	100
Town of Innisfil								
Alcona Lakeshore	15,800	0	15,750	15,750	50	50	0	0
Cookstown	600	0	850	850	-250	-250	-100	-100
Total	16,400	0	16,600	16,600	-200	-200	-100	-100
Town of Midland								
Total	8,500	0	8,900	12,950	-400	-4,450	-300	-3,100
Town of New Tecumseth								
Tottenham (see note 4)	0		6,850	11,350				
Alliston Sir Frederic Banting & Regional WWTP (see note 5)	3,550	32,450	8,900	14,750	20,250	9,900	10,400	5,100
Total	3,550	32,450	15,750	26,100	20,250	9,900	10,400	5,100
City of Orillia								
Total	13,650	0	19,750	35,050	-6,100	-21,400	-3,950	-13,900
Town of Penetanguishene								
Fox Street	400	0	150	150	250	250	250	250
Main Street (see note 6)	350	2,500	4,100	8,500	-1,250	-5,650	-1,100	-4,950
Total	750	2,500	4,250	8,650	-1,000	-5,400	-850	-4,700
Township of Ramara								
Lagoon City	350	0	2,700	4,750	-2,350	-4,400	-1,500	-2,850
Bayshore Village	150	0	250	250	-100	-100	-50	-50
Total	500	0	2,950	5,000	-2,450	-4,500	-1,550	-2,900
Township of Severn								
Washago	400	0	0	0	400	400	150	150
Coldwater	450	0	1,350	1,350	-900	-900	-300	-300
West Shore	1,000	0	0	0	1,000	1,000	450	450
Total	1,850	0	1,350	1,350	500	500	300	300
Township of Springwater								
Elmvale	1,150	0	1,000	1,000	150	150	100	100
Total	1,150	0	1,000	1,000	150	150	100	100
Township of Tay								
Port McNicoll / Village of Victoria Harbour	4,050	0	24,000	24,000	-19,950	-19,950	-9,000	-9,000
Total	4,050	0	24,000	24,000	-19,950	-19,950	-9,000	-9,000
Town of Wasaga Beach								
Total	37,450	0	9,700	9,700	27,750	27,750	8,100	8,100
Study Area Total (See Note 6)	120,400	101,850	213,800	297,650	-18,000	-95,250	-31,250	-87,300

Note 1: Includes additional capacity increase of 17,400 m³/day from expansion and the Historical Residual Capacity (assuming that problems with the influent flow meter have been resolved) minus the MOE Residual Capacity.

Note 2: Equivalent population allowance for 10,702 m³/day ADF of future Industrial/Commercial (IC) development after Residential build out in 2011.

Note 3: Equivalent population allowance, with High Intensification, for 8,027 m³/day ADF of future Industrial/Commercial (IC) development after Residential build out in 2012.

Note 4: Existing Residual Capacity is zero due to Provincial Orders.

Note 5: Existing Residual Capacity of the Regional Treatment Plant is zero due to Provincial Orders. The Committed Capacity increase includes an expansion to the Regional Wastewater Treatment Plant. The Tottenham WWTP would be decommissioned and the Sir Frederic WWTP would reach the full capacity.

Note 6: Includes the committed capacity increase of 2,205 m³/day for the Main Street WWTP.

Note 7: Excludes equivalent population allowance for Barrie's future IC development after Residential build out in 2011.

Appendix V - Water Capacity GAP Analysis (Based on Existing Infrastructure)

System	Existing Residual Capacity (Number of Persons)	Additional Approved Population Potential (Number of Persons)		Gap Analysis (Number of Persons)		Gap Analysis (m ³ /day)	
		with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)
Township of Adjala-Tosorontio							
Everett	3,500	1,300	1,300	2,200	2,200	1,600	1,600
Colgan	-50	50	50	-100	-100	-100	-100
Lisle	650	100	100	550	550	450	450
Loretto Heights	50	250	250	-200	-200	-200	-200
Rosemont	0	0	0	0	0	0	0
Weca	450	0	0	450	450	600	600
Hockley	0	100	100	-100	-100	-150	-150
Total	4,600	1,800	1,800	2,800	2,800	2,200	2,200
City of Barrie							
Water Supply		23,600	38,050				
Equivalent future IC Allowance (See Note 1)	9,550	41,700	41,700	-55,750	-70,200	-38,050	-47,900
Town of Bradford West Gwillimbury							
Water Supply	1,500	22,150	27,250	-20,650	-25,750	-14,500	-18,100
Township of Clearview							
New Lowell	100	12,200	12,200	-12,100	-12,100	-11,500	-11,500
Stayner	400	21,150	27,300	-20,750	-26,900	-29,750	-38,550
Creemore	600	3,950	5,850	-3,350	-5,250	-4,150	-6,550
McKean Subdivision	350	0	0	350	350	500	500
Colling-Woodlands Subdivision	50	0	0	50	50	50	50
Buckingham Woods	0	0	0	0	0	0	0
Total	1,500	37,300	45,350	-35,800	-43,850	-44,850	-56,050
Town of Collingwood							
Water Supply	850	31,300	51,400	-30,450	-50,550	-34,100	-56,650
Township of Essa							
Angus	5,750	7,400	7,400	-1,650	-1,650	-900	-900
Thornton-Glen	850	200	200	650	650	650	650
Baxter	100	600	600	-500	-500	-450	-450
Total	6,700	8,200	8,200	-1,500	-1,500	-700	-700
Town of Innisfil							
Innisfil Heights	2,050	0	0	2,050	2,050	1,850	1,850
Crossroads	1,800	0	0	1,800	1,800	1,050	1,050
Stroud	250	400	400	-150	-150	-150	-150
Churchill	50	250	250	-200	-200	-250	-250
Goldcrest (Golf Haven and Gold Crest)	-0	250	250	-250	-250	-200	-200
Cookstown	-200	850	850	-1,050	-1,050	-1,450	-1,450
Alcona Lakeshore	8,650	14,550	14,550	-5,900	-5,900	-4,300	-4,300
Total	12,600	16,300	16,300	-3,700	-3,700	-3,450	-3,450
Town of Midland							
Water Supply	3,250	8,900	12,950	-5,650	-9,700	-5,900	-10,100
Town of New Tecumseth							
Alliston / Beeton / Hillcrest	5,150	8,900	14,750	-3,750	-9,600	-4,850	-12,400
Tottenham	2,650	6,850	11,350	-4,200	-8,700	-3,400	-7,050
Total	7,800	15,750	26,100	-7,950	-18,300	-8,250	-19,450
City of Orillia							
Water Supply	18,750	19,750	35,050	-1,000	-16,300	-800	-13,200
Township of Oro-Medonte							
Canterbury	150	0	0	150	150	200	200
Craighurst	150	0	0	150	150	200	200
Horseshoe Highlands	-250	2,800	2,800	-3,050	-3,050	-9,000	-9,000
Maplewood	-0	0	0	-0	-0	0	0
Robin Crest	150	550	550	-400	-400	-900	-900
Sugarbush	1,200	1,400	1,400	-200	-200	-250	-250
Cedarbrook	50	0	0	50	50	50	50
Harbourwood	200	0	0	200	200	300	300
Lake Simcoe Regional Airport	100	0	0	100	100	50	50
Medonte Hills	0	50	50	-50	-50	-50	-50
Shanty Bay	550	500	500	50	50	50	50
Warminster	-50	650	650	-700	-700	-850	-850
Total	2,250	5,950	5,950	-3,700	-3,700	-10,200	-10,200
Town of Penetanguishene							
Payette	1,350	4,300	8,700	-2,950	-7,350	-4,050	-10,050
Lepage	300	0	0	300	300	350	350
Total	1,650	4,300	8,700	-2,650	-7,050	-3,700	-9,700
Township of Ramara							
Bayshore Village	450	250	250	200	200	200	200
Park Lane	0	0	0	0	0	0	0
Lagoon City/Brechin	1,300	2,750	4,800	-1,450	-3,500	-1,350	-3,250
Davy Drive	50	0	0	50	50	50	50
South Ramara	-0	100	100	-100	-100	-200	-200
Val Harbour	0	50	50	-50	-50	-50	-50
Total	1,800	3,150	5,200	-1,350	-3,400	-1,350	-3,250

Appendix V - Water Capacity GAP Analysis (Based on Existing Infrastructure)

System	Existing Residual Capacity (Number of Persons)	Additional Approved Population Potential (Number of Persons)		Gap Analysis (Number of Persons)		Gap Analysis (m ³ /day)	
		with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)
Township of Severn							
Severn Estates	50	0	0	50	50	50	50
Bass Lake Woodlands	100	100	100	0	0	0	0
Sandcastle Estates	100	0	0	100	100	150	150
Washago	350	0	0	350	350	250	250
Coldwater	600	1,350	1,350	-750	-750	-800	-800
West Shore	500	0	0	500	500	0	0
Total	1,700	1,450	1,450	250	250	-350	-350
Township of Springwater							
Anten Mills	900	100	100	800	800	1,000	1,000
Del Trend	50	0	0	50	50	100	100
Elmvale	2,200	1,000	1,000	1,200	1,200	1,200	1,200
Hillsdale	-0	1,150	1,150	-1,150	-1,150	-1,300	-1,300
Midhurst	2,700	150	150	2,550	2,550	3,150	3,150
Minesing	-50	100	100	-150	-150	-200	-200
Snow Valley	400	150	150	250	250	400	400
Vespra Downs	0	0	0	0	0	0	0
Total	6,200	2,650	2,650	3,550	3,550	4,350	4,350
Township of Tay							
Victoria Harbour/Port McNicoll	2,650	24,000	24,000	-21,350	-21,350	-19,200	-19,200
Rope	150	0	0	150	150	200	200
Midland Bay Woods	0	0	0	0	0	0	0
Bay Berry	200	0	0	200	200	250	250
Waubashene	-100	2,850	2,850	-2,950	-2,950	-3,300	-3,300
Total	2,900	26,850	26,850	-23,950	-23,950	-22,050	-22,050
Township of Tiny							
Perkinsfield	500	200	200	300	300	450	450
Bluewater	-100	450	450	-550	-550	-900	-900
Georgian Bay Estates	200	350	350	-150	-150	-200	-200
Georgian Sands	550	800	800	-250	-250	-350	-350
LA Place	-0	150	150	-150	-150	-200	-200
TeePee Points	-100	0	0	-100	-100	-100	-100
Sand Castle Estates	250	200	200	50	50	50	50
Vanier Woods	150	150	150	0	0	0	0
Wyevale Central	50	300	300	-250	-250	-400	-400
Cook's Lake	150	50	50	100	100	100	100
Georgian Highlands	350	100	100	250	250	300	300
Lefaive	150	100	100	50	50	50	50
Pennorth	-50	0	0	-50	-50	-50	-50
Rayko	50	50	50	0	0	0	0
Sawlog Bay	50	100	100	-50	-50	-100	-100
Thunder Bay	-0	50	50	-50	-50	-200	-200
Whip-Poor-Will 2	-50	50	50	-100	-100	-350	-350
Woodland Beach	-0	250	250	-250	-250	-1,100	-1,100
Total	2,150	3,350	3,350	-1,200	-1,200	-3,000	-3,000
Town of Wasaga Beach							
Water Supply	8,400	9,700	9,700	-1,300	-1,300	-1,450	-1,450
Study Area Total (See Note 2)							
	94,150	242,450	326,300	-190,000	-273,850	-186,150	-269,050

Note 1: Equivalent population allowance for 25,875 m³/day MDD (12,263 x 2.11) of future Industrial/Commercial (IC) development after Residential build out in 2011.

Note 2: Excludes equivalent population allowance for Barrie's future IC development after Residential build out in 2011.

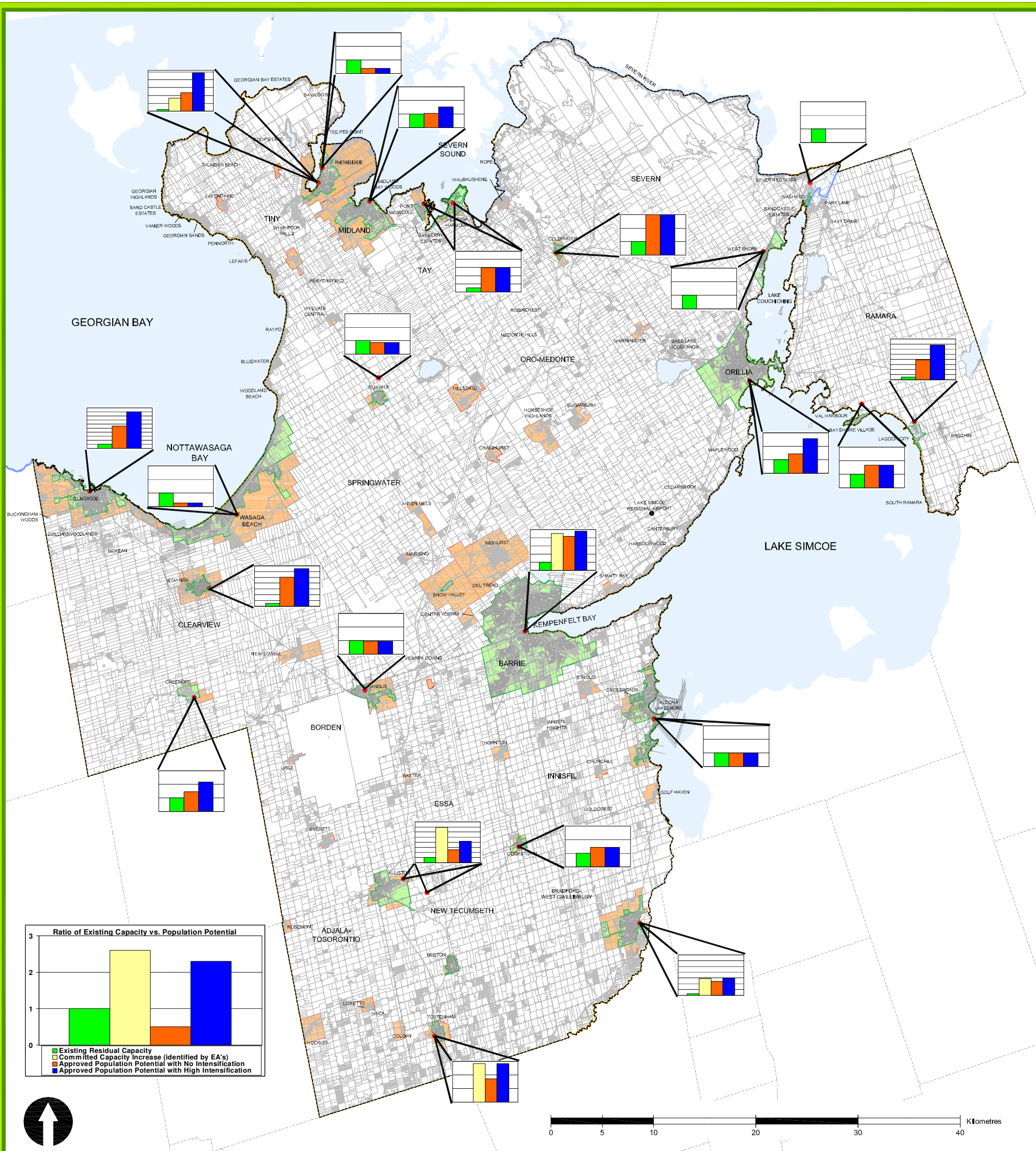
Appendix W - Water Capacity GAP Analysis (Based on Existing + EA Approved Infrastructure)

System	Existing Residual Capacity (Number of Persons)	Committed Capacity Increases (as Identified by Class EA's and Design Briefs) (Number of Persons)	Additional Approved Population Potential (Number of Persons)		Gap Analysis (Number of Persons)		Gap Analysis (m ³ /day)	
			with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)
Township of Adjala-Tosorontio								
Everett	3,500	0	1,300	1,300	2,200	2,200	1,600	1,600
Colgan	-50	0	50	50	-100	-100	-100	-100
Lisle	650	0	100	100	550	550	450	450
Loretto Heights	50	0	250	250	-200	-200	-200	-200
Rosemont	0	0	0	0	0	0	0	0
Weca	450	0	0	0	450	450	600	600
Hockley	0	0	100	100	-100	-100	-150	-150
Total	4,600	0	1,800	1,800	2,800	2,800	2,200	2,200
City of Barrie								
Water Supply	9,550	87,950	23,600	38,050	32,200	17,750	21,950	12,100
Equivalent future IC Allowance (See Note 1)			41,700	41,700				
Town of Bradford West Gwillimbury								
Water Supply (see note 2)	1,500	9,050	22,150	27,250	-11,600	-16,700	-8,150	-11,750
Township of Clearview								
New Lowell	100	0	12,200	12,200	-12,100	-12,100	-11,500	-11,500
Stayner	400	0	21,150	27,300	-20,750	-26,900	-29,750	-38,550
Creemore	600	0	3,950	5,850	-3,350	-5,250	-4,150	-6,550
McKean Subdivision	350	0	0	0	350	350	500	500
Colling-Woodlands Subdivision	50	0	0	0	50	50	50	50
Buckingham Woods	0	0	0	0	0	0	0	0
Total	1,500	0	37,300	45,350	-35,800	-43,850	-44,850	-56,050
Town of Collingwood								
Water Supply (See note 3)	850	27,050	31,300	51,400	-3,400	-23,500	-3,800	-26,350
Township of Essa								
Angus	5,750	0	7,400	7,400	-1,650	-1,650	-900	-900
Thornton-Glen	850	0	200	200	650	650	650	650
Baxter	100	0	600	600	-500	-500	-450	-450
Total	6,700	0	8,200	8,200	-1,500	-1,500	-700	-700
Town of Innisfil								
Innisfil Heights	2,050	0	0	0	2,050	2,050	1,850	1,850
Crossroads	1,800	0	0	0	1,800	1,800	1,050	1,050
Stroud	250	0	400	400	-150	-150	-150	-150
Churchill	50	0	250	250	-200	-200	-250	-250
Goldcrest (Golf Haven and Gold Crest)	-0	0	250	250	-250	-250	-200	-200
Cookstown	-200	0	850	850	-1,050	-1,050	-1,450	-1,450
Alcona Lakeshore (see note 4)	8,650	10,050	14,550	14,550	4,150	4,150	3,000	3,000
Total	12,600	10,050	16,300	16,300	6,350	6,350	3,850	3,850
Town of Midland								
Water Supply	3,250	0	8,900	12,950	-5,650	-9,700	-5,900	-10,100
Town of New Tecumseth								
Alliston / Beeton / Hillcrest	5,150	0	8,900	14,750	-3,750	-9,600	-4,850	-12,400
Tottenham	2,650	0	6,850	11,350	-4,200	-8,700	-3,400	-7,050
Total	7,800	0	15,750	26,100	-7,950	-18,300	-8,250	-19,450
City of Orillia								
Water Supply	18,750	0	19,750	35,050	-1,000	-16,300	-800	-13,200
Township of Oro-Medonte								
Canterbury	150	0	0	0	150	150	200	200
Craighurst	150	0	0	0	150	150	200	200
Horseshoe Highlands	-250	0	2,800	2,800	-3,050	-3,050	-9,000	-9,000
Maplewood	-0	0	0	0	0	0	0	0
Robin Crest	150	0	550	550	-400	-400	-900	-900
Sugarbush	1,200	0	1,400	1,400	-200	-200	-250	-250
Cedarbrook	50	0	0	0	50	50	50	50
Harbourwood	200	0	0	0	200	200	300	300
Lake Simcoe Regional Airport	100	0	0	0	100	100	50	50
Medonte Hills	0	0	50	50	-50	-50	-50	-50
Shanty Bay	550	0	500	500	50	50	50	50
Warminster	-50	0	650	650	-700	-700	-850	-850
Total	2,250	0	5,950	5,950	-3,700	-3,700	-10,200	-10,200
Town of Penetanguishene								
Payette (see Note 5)	1,350	2,400	4,300	8,700	-550	-4,950	-750	-6,750
Lepage	300	0	0	0	300	300	350	350
Total	1,650	2,400	4,300	8,700	-250	-4,650	-400	-6,400
Township of Ramara								
Bayshore Village	450	0	250	250	200	200	200	200
Park Lane	0	0	0	0	0	0	0	0
Lagoon City/Brechin	1,300	0	2,750	4,800	-1,450	-3,500	-1,350	-3,250
Davy Drive	50	0	0	0	50	50	50	50
South Ramara	-0	0	100	100	-100	-100	-200	-200
Val Harbour	0	0	50	50	-50	-50	-50	-50
Total	1,800	0	3,150	5,200	-1,350	-3,400	-1,350	-3,250

Appendix W - Water Capacity GAP Analysis (Based on Existing + EA Approved Infrastructure)

System	Existing Residual Capacity (Number of Persons)	Committed Capacity Increases (as Identified by Class EA's and Design Briefs) (Number of Persons)	Additional Approved Population Potential (Number of Persons)		Gap Analysis (Number of Persons)		Gap Analysis (m ³ /day)	
			with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)
Township of Severn								
Severn Estates	50		0	0	50	50	50	50
Bass Lake Woodlands	100	0	100	100	0	0	0	0
Sandcastle Estates	100	0	0	0	100	100	150	150
Washago	350	0	0	0	350	350	250	250
Coldwater	600	0	1,350	1,350	-750	-750	-800	-800
West Shore	500	0	0	0	500	500	0	0
Total	1,700	0	1,450	1,450	250	250	-350	-350
Township of Springwater								
Anten Mills	900		100	100	800	800	1,000	1,000
Del Trend	50	0	0	0	50	50	100	100
Elmvale	2,200	0	1,000	1,000	1,200	1,200	1,200	1,200
Hillsdale	-0	0	1,150	1,150	-1,150	-1,150	-1,300	-1,300
Midhurst	2,700	0	150	150	2,550	2,550	3,150	3,150
Minesing	-50	0	100	100	-150	-150	-200	-200
Snow Valley	400	0	150	150	250	250	400	400
Vespra Downs	0	0	0	0	0	0	0	0
Total	6,200	0	2,650	2,650	3,550	3,550	4,350	4,350
Township of Tay								
Victoria Harbour/Port McNicoll	2,650	0	24,000	24,000	-21,350	-21,350	-19,200	-19,200
Rope	150	0	0	0	150	150	200	200
Midland Bay Woods	0	0	0	0	0	0	0	0
Bay Berry	200	0	0	0	200	200	250	250
Waubashene	-100	0	2,850	2,850	-2,950	-2,950	-3,300	-3,300
Total	2,900	0	26,850	26,850	-23,950	-23,950	-22,050	-22,050
Township of Tiny								
Perkinsfield	500	0	200	200	300	300	450	450
Bluewater	-100	0	450	450	-550	-550	-900	-900
Georgian Bay Estates	200	0	350	350	-150	-150	-200	-200
Georgian Sands	550	0	800	800	-250	-250	-350	-350
LA Place	-0	0	150	150	-150	-150	-200	-200
TeePee Points	-100	0	0	0	-100	-100	-100	-100
Sand Castle Estates	250	0	200	200	50	50	50	50
Vanier Woods	150	0	150	150	0	0	0	0
Wyevale Central	50	0	300	300	-250	-250	-400	-400
Cook's Lake	150	0	50	50	100	100	100	100
Georgian Highlands	350	0	100	100	250	250	300	300
Lefaive	150	0	100	100	50	50	50	50
Pennorth	-50	0	0	0	-50	-50	-50	-50
Rayko	50	0	50	50	0	0	0	0
Sawlog Bay	50	0	100	100	-50	-50	-100	-100
Thunder Bay	-0	0	50	50	-50	-50	-200	-200
Whip-Poor-Will 2	-50	0	50	50	-100	-100	-350	-350
Woodland Beach	-0	0	250	250	-250	-250	-1,100	-1,100
Total	2,150	0	3,350	3,350	-1,200	-1,200	-3,000	-3,000
Town of Wasaga Beach								
Water Supply	8,400	0	9,700	9,700	-1,300	-1,300	-1,450	-1,450
Study Area Total (See Note 6)	94,150	136,500	242,450	326,300	-53,500	-137,350	-78,900	-161,800

- Equivalent population allowance for 25,875 m³/day MDD (12,263 x 2.11) of future Industrial/Commercial (IC)
- Note 1: development after Residential build out in 2011. Committed Capacity increase includes new Surface Water Treatment Plant Capacity of 60,000 m³/day.
- Note 2: Includes 7,100 m³/day capacity increase from Innisfil after the Alcona Lakeshore Water Treatment Plant Expansion in Feb 2007 minus the imminent 750 m³/day supply allocated to the existing BWG supply.
- Note 3: Includes the expansion to the Collingwood Water Treatment Plant of 16,000 m³/day.
- Note 4: Includes the expansion to the Alcona Lakeshore WFP capacity increase of 13,097 m³/day minus the 7,100 m³/day allocated to BWG.
- Note 5: Includes the expansion to the Payette Water Supply of 3,300 m³/day.
- Note 6: Excludes equivalent population allowance for Barrie's future IC development after Residential build out in 2011.



Intergovernmental Action Plan for Simcoe, Barrie and Orillia

Appendix X - Graphical Representation of Wastewater Treatment (Addendum 2006)

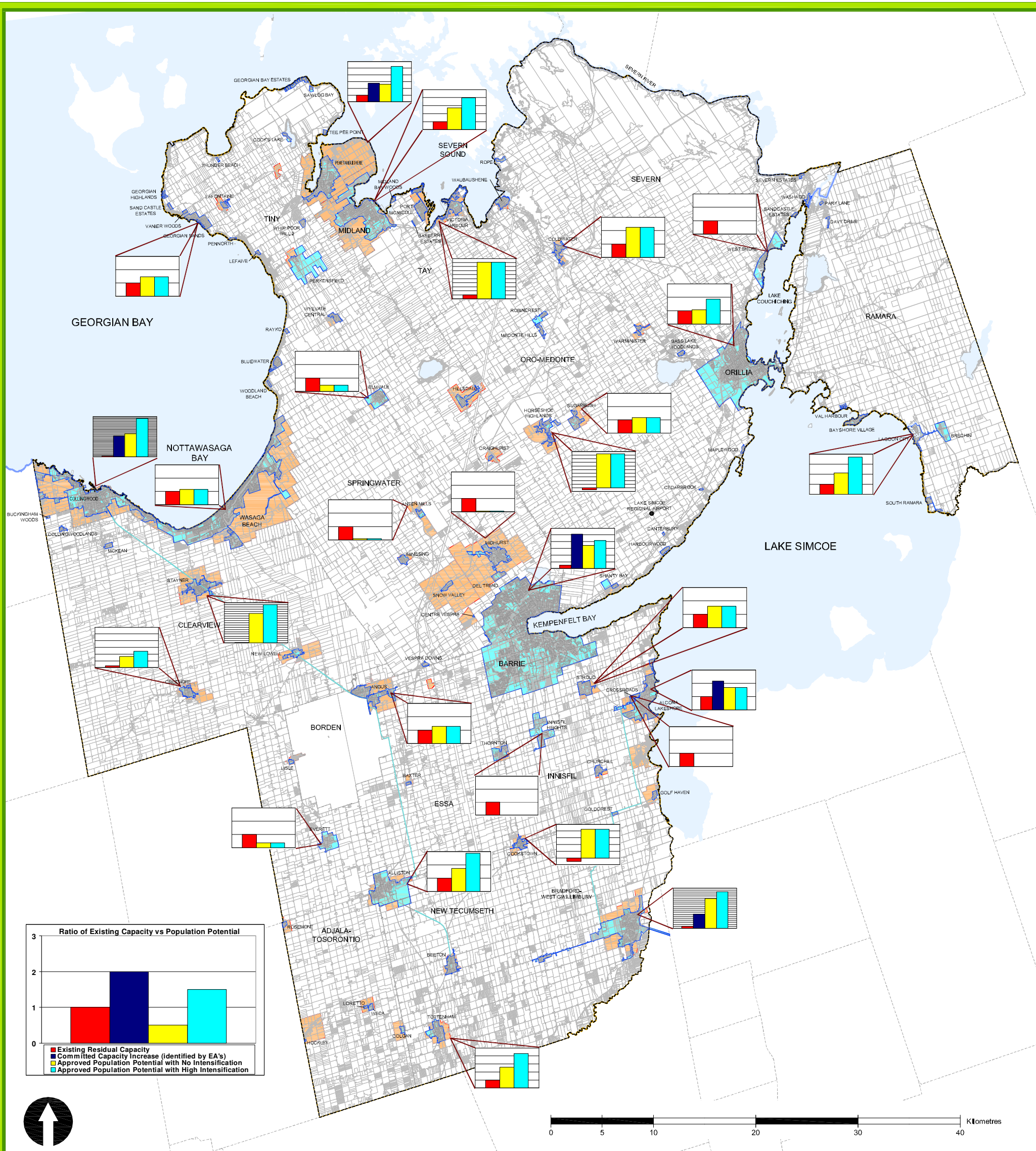
Capacity Gap Analysis

- LEGEND**
- IGAP Study Boundary²
 - Area Municipalities²
 - Ponds and Lakes¹
 - Wastewater Treatment Plant
 - Wastewater Service Area Boundary⁴
 - Settlement Boundary⁵
(Not all settlement areas have municipal wastewater servicing)



**Dillon Consulting
Clara Consulting
Bourrie & Associates**

Ontario
 Projection: UTM zone 17N NAD83
 Data Sources: 1. Ontario Ministry of Natural Resources,
 2. Ontario Ministry of Municipal Affairs and Housing,
 3. Simcoe County 4. Infrastructure Area Boundaries
 provided by Municipalities 5. Local Municipal Official Plans
 Created by: JDC
 Checked by: JAM



Intergovernmental Action Plan for Simcoe, Barrie and Orillia

Appendix Y - Graphical Representation of Water Supply Capacity Gap Analysis (Major Systems Only) (Addendum 2006)

Ontario
 Projection: UTM zone 17N NAD83
 Data Sources: 1. Ontario Ministry of Natural Resources,
 2. Ontario Ministry of Municipal Affairs and Housing,
 3. Simcoe County 4. Infrastructure Area Boundaries
 provided by Municipalities 5. Local Municipal Official Plans
 Created by: JDC
 Checked by: JAM

Anley CONSULTING ENGINEERS PLANNERS
Dillon Consulting
Clara Consulting
Bourrie & Associates

Appendix Z - Suggested Alternatives to Overcome the Wastewater Treatment Gap

System	Current Rated Capacity (m ³ /day)	Committed Capacity Increases (m ³ /day) (as Identified by Class EA's and Design Briefs)	Ultimate Required Capacity (m ³ /day)		Additional Capacity Required (m ³ /day)		Alternatives to Close Gap	Evaluation Criteria			Suggested Course of Action	
			with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)		Environmental	Estimated Costs	Other Issues		
Town of Bradford West Gwillimbury	8,870	10,980	17,798	20,093	2,050	-11,250	Expand Wastewater Plant in accordance with Approved Environmental Assessment	Low (Due to approved EA)	\$36,000,000	Review Impacts on Lake Simcoe via ACS Model	Expand Existing Wastewater Plant	
City of Barrie	57,100	18,900	74,005	77,498	-16,900	-20,400	Expand Wastewater Plant in accordance with Approved Environmental Assessment	Low (Due to approved EA)	\$51,000,000	Review Impacts on Lake Simcoe via ACS Model	Expand Existing Wastewater Plant	
Township of Clearview	Stayner	2,500	0	10,246	12,746	-7,750	-10,250	Existing WPCP cannot be expanded due to limits on receiving Lamont Creek Raw wastewater could be pumped to either Collingwood or Wasaga Beach Treated effluent could be pumped to another discharge point	Extremely High Medium or High High	\$42,800,000	N/A Cross Boundary Servicing Agreements Required Cross Boundary Servicing Agreements Required	Pump raw sewage to Wasaga Beach and/or Collingwood. However in addition the potential growth should be re-evaluated
	Creemore	1,400	0	1,829	2,478	-450	-800	Expanding the WPCP may have constraints from the receiving stream (Mad River) Raw wastewater could be pumped to either Collingwood or Wasaga Beach Treated effluent could be pumped to another discharge point	High High High		\$2,600,000	
Town of Collingwood	24,545	0	54,890	78,730	-30,350	-54,200	Expand the Existing WPCP	High	\$151,800,000	Review Impacts of new outfall on Georgian Bay via ACS Model		Complete Environmental Assessment to review all alternatives, however, it is also suggested that an intensive program to eliminate I/I be implemented to reduce flows. Subsequently Expand Existing Wastewater Treatment Plant.
Township of Essa - Angus	5,511	0	5,388	5,388	100	100	No Gap	N/A	N/A	N/A	No Expansion Necessary	
Town of Innisfil	Alcona Lakeshore	14,370	0	14,351	14,351	0	0	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Cookstown	825	0	914	914	-100	-100	Expand existing WPCP using existing discharge stream Pump Wastewater to another facility (Alliston or Alcona) Expand existing WPCP and discharge effluent elsewhere Reduce I/I and Per Capita Flows	Extremely High High High Low	\$700,000 \$8,500,000 \$8,500,000 \$500,000	Review Impacts on receiving stream via ACS Model Possibly Cross Boundary Servicing Agreements Required Possibly Cross Boundary Servicing Agreements Required N/A	Reinvestigate the Historical Flows as the flow meter(s) were faulty in 2003 & 2004. In the interim reduce historical per capita flow by eliminating Inflow/Infiltration (I/I).
Town of Midland	15,665	0	15,960	18,782	-300	-3,100	Expand existing WPCP	High	\$6,800,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude Expand Existing Wastewater Treatment Plant.	
Town of New Tecumseth	Tottenham	2,509	16,642	5,946	8,203	-3,450	-5,700	Expand existing WPCP using existing discharge stream Divert Wastewater and associated loadings to Alliston Regional Plant and decommission existing plant.	High High	\$18,200,000 \$22,740,000	Review Impacts on receiving stream via ACS Model Review Impacts on receiving stream via ACS Model	In accordance with the completed EA, decommission the Tottenham WWTP and divert wastewater to the Alliston Regional WWTP.
	Alliston Sir Frederic Banting & Regional WWTP	9,530		12,505	15,765	-3,000	-6,250	Retrofit Existing & Expand WPCP using existing discharge stream	High	\$20,000,000	Review Impacts on receiving stream via ACS Model	
City of Orillia	27,300	0	31,265	41,197	-3,950	-13,900	Expand existing WPCP	High	\$44,500,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude Expand Existing Wastewater Treatment Plant.	
Town of Penetanguishene	Fox Street	1,500	0	1,271	1,271	250	250	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Main Street	4,545	2,205	7,832	11,690	-3,300	-7,150	Expand Wastewater Plant in accordance with Approved Environmental Assessment	High	\$15,700,000	Review Impacts of new outfall on Georgian Bay	Expand Existing Wastewater Plant
Township of Ramara	Lagoon City	1,713	0	3,238	4,563	-1,500	-2,850	Expand the Existing WPCP	High	\$9,100,000	Review Impacts of new outfall on Georgian Bay	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude Expand Existing Wastewater Treatment Plant.
	Bayshore Village	399	0	447	447	-50	-50	Reduce Per Capita Flows to the Existing Wastewater Plant	High	\$200,000	Review Impacts of new outfall on Georgian Bay	Complete an intensive program to eliminate Inflow & Infiltration to reduce flows.
Township of Severn	Washago	228	0	102	102	150	150	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Coldwater	545	0	825	825	-300	-300	Expand existing WPCP	High	\$1,000,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude Expand Existing Wastewater Treatment Plant.
	West Shore	1,390	0	940	940	450	450	No Gap	N/A	N/A	N/A	No Expansion Necessary
Township of Springwater - Elmvale	1,800	0	1,728	1,728	100	100	No Gap	N/A	N/A	N/A	No Expansion Necessary	
Township of Tay - Port McNicoll / Village of Victoria Harbour	4,282	0	11,628	11,628	-7,350	-7,350	Expand existing WPCP	High	\$23,500,000	N/A	Complete an Environmental Assessment to review all alternatives, however, the potential growth should be re-evaluated first.	
Town of Wasaga Beach	15,433	0	7,333	7,333	8,100	8,100	No Gap	N/A	N/A	N/A	No Expansion Necessary	

\$464,140,000

Appendix AA - Suggested Alternatives to Overcome the Water Supply Gap

System		Current Rated Capacity (m ³ /day)	Committed Capacity Increases (m ³ /day) (as Identified by Class EA's and Design Briefs)	Ultimate Required Capacity (m ³ /day)		Additional Capacity Required (m ³ /day)		Alternatives to Close Gap	Evaluation Criteria			Suggested Course of Action
				with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)		Environmental	Estimated Costs	Other Issues	
Township of Adjala-Tosorontio	Everett	3,916.8	0	2,317	2,317	1,600	1,600	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Colgan	157.2	0	257	257	-100	-100	Equip the wells with larger capacity pumps.	Low	\$20,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Equip the wells with larger capacity pumps.
	Lisle	656.6	0	207	207	450	450	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Loretto Heights	136.8	0	337	337	-200	-200	Supply water from another facility such as Weca.	Medium	\$200,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Supply from other source.
	Rosemont	73.4	0	73	73	0	0	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Weca	915.8	0	316	316	600	600	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Hockley	90.0	0	240	240	-150	-150	Develop a new well with treatment works.	Medium	\$200,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop a new groundwater well.
City of Barrie		92,490.0	60,000	130,540	140,390	-38,050	-47,900	Construction of new water filtration plant in accordance with Approved Environmental Assessment.	Low	\$52,500,000	N/A	Construct a new Water Filtration Plant.
Town of Bradford West Gwillimbury		13,986.4	6,350	28,486	32,086	-14,500	-18,100	Supply 13,000 m ³ water from the Alcona water supply in accordance with the Approved Environmental Assessment and Water supply agreement.	Low	\$27,000,000	An upgrade to the trunk watermain feeding the Alcona Reservoir will need to be upgraded. The estimated cost is included.	Supply water from Alcona.
Township of Clearview	New Lowell	746.5	0	12,247	12,247	-11,500	-11,500	Supply through the existing tee connection from the regional pipeline (Collingwood to Alliston).	High	\$20,000,000	Due to a single source feed, the municipality should construct a minimum of 48 hours storage which is not included in the estimated cost. Expansion will also include trunk watermain from the regional pipeline to a reservoir which is included.	Complete an Environmental Assessment to review all alternatives, however, the potential growth should be re-evaluated first.
	Stayner	6,540.5	0	36,291	45,091	-29,750	-38,550	Supply through the existing tee connection from the regional pipeline (Collingwood to Alliston).	High	\$67,500,000	Due to a single source feed, the municipality should construct a minimum of 48 hours storage which is not included in the estimated cost. Expansion will also include trunk watermain from the regional pipeline to a reservoir which is included.	Complete an Environmental Assessment to review all alternatives, however, the potential growth should be re-evaluated first.
	Creemore	2,688.0	0	6,838	9,238	-4,150	-6,550	Supply through the existing tee connection from the regional pipeline (Collingwood to Alliston).	High	\$11,500,000	Due to a single source feed, the municipality should construct a minimum of 48 hours storage which is not included in the estimated cost. Expansion will also include trunk watermain from the regional pipeline to a reservoir which is included.	Complete an Environmental Assessment to review all alternatives, however, the potential growth should be re-evaluated first.
	McKean Subdivision	1,055.0	0	555	555	500	500	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Colling-Woodlands Subdivision	270.0	0	220	220	50	50	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Buckingham Woods	76.4	0	76	76	0	0	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Town of Collingwood		20,640.0	30,300	54,740	77,290	-34,100	-56,650	1. Complete Current Approved Expansion 2. Complete further expansion of the existing Water Filtration Plant.	Low	\$45,300,000	N/A
Township of Essa	Angus	6,553.7	0	7,454	7,454	-900	-900	Construct a new well.	Medium	\$700,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Construct a new well.
	Thornton-Glen	1,540.0	0	890	890	650	650	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Baxter	225.0	0	675	675	-450	-450	Connect to Regional Pipeline.	Medium	\$800,000	Due to a single source feed, the municipality should construct a minimum of 48 hours storage which is not included in the estimated cost. Expansion will also include trunk watermain from the regional pipeline to the reservoir which is included.	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Connect to Regional Pipeline.

Appendix AA - Suggested Alternatives to Overcome the Water Supply Gap

System	Current Rated Capacity (m ³ /day)	Committed Capacity Increases (m ³ /day) (as Identified by Class EA's and Design Briefs)	Ultimate Required Capacity (m ³ /day)		Additional Capacity Required (m ³ /day)		Alternatives to Close Gap	Evaluation Criteria			Suggested Course of Action	
			with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)		Environmental	Estimated Costs	Other Issues		
Town of Innisfil	Innisfil Heights	2,799.0	0	949	949	1,850	1,850	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Crossroads	2,030.0	0	980	980	1,050	1,050	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Stroud	2,097.6	0	2,248	2,248	-150	-150	Develop a new well with treatment works.	Medium	\$250,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop a new groundwater well.
	Churchill	743.0	0	993	993	-250	-250	Supply from the Alcona to Bradford pipeline.	Medium	\$1,000,000	Booster station and trunk watermain will be required, estimated cost is included.	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, connect to the Alcona Water System .
	Goldcrest (Golf Haven and Gold Crest)	702.0	0	902	902	-200	-200	Supply from the Alcona to Bradford pipeline.	Medium	\$1,500,000	Abandon existing well supply systems.	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, connect to the Alcona Water System.
	Cookstown	851.0	0	2,301	2,301	-1,450	-1,450	Supply water from the Alcona water supply in accordance with an Approved Environmental Assessment.	Medium	\$6,000,000	Additional Capacity would be required at the Alcona WFP. The estimated supply cost has been included.	Construct watermain from Alcona/BWG Pipeline in Accordance with EA.
	Alcona Lakeshore	12,700.0	5,997	17,000	17,000	-4,300	-4,300	Expand the existing water filtration plant in accordance with Approved Environmental Assessment.	High	\$6,500,000	N/A	Expand Existing Water Filtration Plant.
Town of Midland		20,775.7	0	26,676	30,876	-5,900	-10,100	Develop a surface water supply system.	High	\$11,000,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop a new groundwater well.
								Develop of a new well with treatment works.	Medium	\$8,000,000	Assumes available groundwater supply.	
Town of New Tecumseth	Alliston / Beeton / Hillcrest	23,886.0	0	28,736	36,286	-4,850	-12,400	Supply water from the Collingwood to Alliston Regional Pipeline in accordance with the Approved Environmental Assessment.	Medium	\$18,500,000	N/A	Increase existing supply from the Collingwood/New Tecumseth Pipeline.
	Tottenham	6,000.0	0	9,400	13,050	-3,400	-7,050	Supply water from the Collingwood to Alliston Regional Pipeline.	Medium	\$12,500,000	Trunk watermain and booster stations will need to be constructed for supply from Beeton to Tottenham, estimated cost is included.	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Supply from Collingwood/New Tecumseth Pipeline.
City of Orillia		39,502.0	0	40,302	52,702	-800	-13,200	Expand the existing surface water filtration plant.	High	\$19,800,000	Review impacts on Lake Simcoe as surface water source.	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Expand Existing Water Filtration Plant.
Township of Oro-Medonte	Canterbury	209.1	0	9	9	200	200	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Craighurst	457.9	0	258	258	200	200	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Horseshoe Highlands	3,369.6	0	12,370	12,370	-9,000	-9,000	Develop two new wells with treatment works.	Medium	\$7,200,000	The treatment facility will have to be increased in capacity, the estimated cost is included.	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop two new groundwater wells.
	Maplewood	163.7	0	164	164	0	0	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Robin Crest	850.0	0	1,750	1,750	-900	-900	Develop two new wells with treatment works.	Medium	\$700,000	The treatment facility, reservoirs and high lift pump stations will need to be expanded, estimated cost is included.	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop two new groundwater wells.
	Sugarbush	2,485.4	0	2,735	2,735	-250	-250	Develop a new well with treatment works.	Medium	\$200,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop a new groundwater well.
	Cedarbrook	196.1	0	146	146	50	50	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Harbourwood	921.6	0	622	622	300	300	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Lake Simcoe Regional Airport	73.0	0	23	23	50	50	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Medonte Hills	393.0	0	443	443	-50	-50	Install a new well pump into the existing well.	Medium	\$50,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop a new groundwater well.
	Shanty Bay	1,220.0	0	1,170	1,170	50	50	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Warminster	600.0	0	1,450	1,450	-850	-850	Develop a new well with treatment works.	Medium	\$1,300,000	The treatment facility, reservoirs and high lift pump stations and inground reservoir will need to be expanded, estimated cost is included.	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop a new groundwater well.

Appendix AA - Suggested Alternatives to Overcome the Water Supply Gap

System		Current Rated Capacity (m ³ /day)	Committed Capacity Increases (m ³ /day) (as Identified by Class EA's and Design Briefs)	Ultimate Required Capacity (m ³ /day)		Additional Capacity Required (m ³ /day)		Alternatives to Close Gap	Evaluation Criteria			Suggested Course of Action
				with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)		Environmental	Estimated Costs	Other Issues	
Town of Penetanguishene	Payette	11,000.0	3,300	15,050	21,050	-4,050	-10,050	Develop additional ground water wells.	High	\$11,000,000	N/A	A Class EA has been completed and the preferred option is to build a treatment facility at the Robert St. West wells and put the wells into operation.
	Lepage	432.0	0	82	82	350	350	No Gap	N/A	N/A	N/A	No Expansion Necessary
Township of Ramara	Bayshore Village	1,243.8	0	1,044	1,044	200	200	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Park Lane	50.0	0	50	50	0	0	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Lagoon City/Brechin	4,000.0	0	5,350	7,250	-1,350	-3,250	Expand the existing surface water treatment plant .	High	\$5,000,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Expand Existing Water Filtration Plant.
	Davy Drive	75.7	0	26	26	50	50	No Gap	N/A	N/A	N/A	No Expansion Necessary
	South Ramara	387.1	0	587	587	-200	-200	Expand the existing water supply.	Medium	\$300,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Expand Existing Water Supply Source.
	Val Harbour	207.4	0	257	257	-50	-50	Install a new well pump into the existing well.	Medium	\$50,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Expand Existing Water Supply Source.
Township of Severn	Severn Estates	108.9		59	59	50	50	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Bass Lake Woodlands	818.0	0	818	818	0	0	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Sandcastle Estates	388.8	0	239	239	150	150	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Washago	544.3	0	294	294	250	250	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Coldwater	2,138.0	0	2,938	2,938	-800	-800	Expand the existing groundwater supply source.	Medium	\$650,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Expand Existing Water Supply Source.
	West Shore	2,780.0	0	2,780	2,780	0	0	No Gap	N/A	N/A	N/A	No Expansion Necessary
Township of Springwater	Anten Mills	1,557.6		558	558	1,000	1,000	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Del Trend	786.0	0	686	686	100	100	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Elmvale	4,546.0	0	3,346	3,346	1,200	1,200	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Hillsdale	1,185.0	0	2,485	2,485	-1,300	-1,300	Expand the existing groundwater supply source.	Medium	\$1,000,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Expand Existing Water Supply Source.
	Midhurst	6,850.0	0	3,700	3,700	3,150	3,150	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Minesing	740.0	0	940	940	-200	-200	Currently being expanded to supply 200 m ³ /day gap.	N/A	\$200,000	N/A	Expansion in progress.
	Snow Valley	1,400.0	0	1,000	1,000	400	400	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Vespra Downs	169.0	0	169	169	0	0	No Gap	N/A	N/A	N/A	No Expansion Necessary
Township of Tay	Victoria Harbour/Port McNicoll	7,845.1	0	27,045	27,045	-19,200	-19,200	Expand the existing surface water treatment plant .	High	\$28,800,000	N/A	Complete an Environmental Assessment to review all alternatives, however, the potential growth should be re-evaluated first.
	Rope	274.0	0	74	74	200	200	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Midland Bay Woods	301.0	0	301	301	0	0	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Bay Berry	392.3	0	142	142	250	250	No Gap	N/A	N/A	N/A	No Expansion Necessary
	Waubashene	1,225.0	0	4,525	4,525	-3,300	-3,300	Expand the existing surface water treatment plant .	High	\$5,000,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Expand Existing Water Filtration Plant.

Appendix AA - Suggested Alternatives to Overcome the Water Supply Gap

System	Current Rated Capacity (m ³ /day)	Committed Capacity Increases (m ³ /day) (as Identified by Class EA's and Design Briefs)	Ultimate Required Capacity (m ³ /day)		Additional Capacity Required (m ³ /day)		Alternatives to Close Gap	Evaluation Criteria			Suggested Course of Action
			with No Intensification	with Highest Intensification (Max of 4 scenarios)	with No Intensification	with Highest Intensification (Max of 4 scenarios)		Environmental	Estimated Costs	Other Issues	
Perkinsfield	1,382.0	0	932	932	450	450	No Gap	N/A	N/A	N/A	No Expansion Necessary
Bluewater	835.9	0	1,736	1,736	-900	-900	Develop new wells with treatment works.	Medium	\$1,100,000	The treatment facility and reservoir will have to be expanded, estimated cost is included.	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop new groundwater wells.
Georgian Bay Estates	949.2	0	1,149	1,149	-200	-200	Develop a new well with treatment works	Medium	\$200,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop a new groundwater well.
Georgian Sands	3,145.0	0	3,495	3,495	-350	-350	Expand the existing groundwater supply source.	Medium	\$300,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Expand the existing groundwater supply.
LA Place	198.0	0	398	398	-200	-200	Develop a new well with treatment works.	Medium	\$200,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop a new groundwater well.
TeePee Points	123.0	0	223	223	-100	-100	Install a new well pump into the existing well.	Low	\$50,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Install a new well pump.
Sand Castle Estates	490.0	0	440	440	50	50	No Gap	N/A	N/A	N/A	No Expansion Necessary
Vanier Woods	360.0	0	360	360	0	0	No Gap	N/A	N/A	N/A	No Expansion Necessary
Wyevale Central	920.0	0	1,320	1,320	-400	-400	Install a new well pump into one of the existing wells.	Low	\$50,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Install a new well pump into one of the existing wells.
Cook's Lake	400.0	0	300	300	100	100	No Gap	N/A	N/A	N/A	No Expansion Necessary
Georgian Highlands	751.7	0	452	452	300	300	No Gap	N/A	N/A	N/A	No Expansion Necessary
Lefaive	308.7	0	259	259	50	50	No Gap	N/A	N/A	N/A	No Expansion Necessary
Pennorth	61.4	0	111	111	-50	-50	Install a new well pump into the existing well.	Low	\$50,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Install a new well pump.
Rayko	194.4	0	194	194	0	0	No Gap	N/A	N/A	N/A	No Expansion Necessary
Sawlog Bay	189.0	0	289	289	-100	-100	Install a new well pump into one of the existing wells.	Low	\$50,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Install a new well pump into one of the existing wells.
Thunder Bay	200.0	0	400	400	-200	-200	Expand the existing groundwater supply source by duplicating the existing system.	Medium	\$200,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Expand the existing groundwater supply with additional wells.
Whip-Poor-Will 2	360.0	0	710	710	-350	-350	Develop a new well with treatment works.	Medium	\$300,000	N/A	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop a new groundwater well.
Woodland Beach	170.0	0	1,270	1,270	-1,100	-1,100	Develop new wells with treatment works.	Medium	\$1,400,000	The treatment facility and reservoir will have to be expanded, estimated cost is included.	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Develop new groundwater wells.
Township of Tiny											
Town of Wasaga Beach	31,415.0	0	32,865	32,865	-1,450	-1,450	Operate Existing Offline Groundwater Well	L.S.	\$250,000	The treatment facility and reservoir will have to be expanded.	Complete Environmental Assessment to review all alternatives, however, it is presumed that this will conclude, Operate existing offline groundwater source.

\$376,370,000