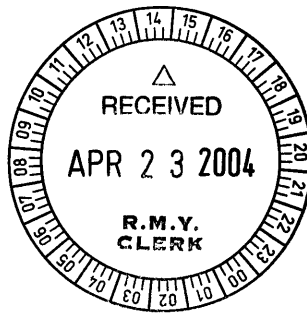
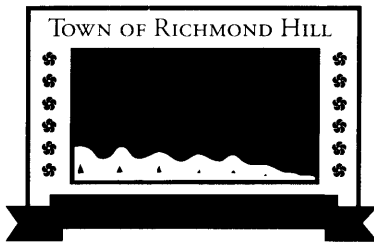




Town of Richmond Hill

REGION OF YORK
CLERK'S OFFICE

FILE No. - P06

*→ Chair
→ CAO → K. Schipper*

P.O. Box 300
25 East Beaver Creek Road
Richmond Hill, Ontario
Canada L4C 4Y5
(905) 771-8800
www.richmondhill.ca

April 20, 2004

Mr. Denis Kelly, Regional Clerk
The Regional Municipality of York
17250 Yonge Street
P.O. Box 147
Newmarket, Ontario
L3Y 6Z1

Dear Mr. Kelly:

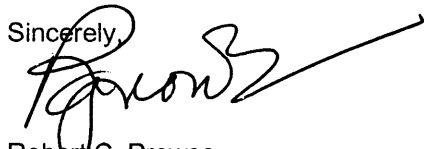
Re: "Region of York - Water and Sewer Capacity and Allocation to Plans of Subdivision - (SRE.04.061)"

Richmond Hill Town Council, at its meeting on April 15, 2004, approved the following resolution:

- "a) That a copy of SRE.04.061 be sent to the Regional Clerk and the Regional Municipality of York be encouraged to continue vigorously pursuing critical infrastructure projects that maintain the public health necessities of sanitary sewage servicing and potable water supply without interruption or delay;
- b) That Council not grant any further draft approvals or approve any new applications for residential site plans until such time as the Region confirms that there is sufficient capacity to allow such developments proceed;
- c) That senior staff continue to work with Regional staff, staff of adjoining municipalities and members of Regional Council from affected municipalities to track the timing of critical projects and associated approvals;
- d) That staff report back to Council at the earliest opportunity to advise of Regional servicing capabilities and, if necessary, recommended prioritization of development approval based on criteria that include safety, security and other community building priorities."

A copy of the report, as referred to in clause (a), is attached for your reference. If you require further information, please contact Bruce Macgregor at (905) 771-8800, extension 2527.

Sincerely,


Robert C. Prowse
Town Clerk

/lc

cc. B. Macgregor, Commissioner of Engineering and Public Works
J. Babcock, Commissioner of Planning and Development



TOWN OF RICHMOND HILL

COUNCIL MEETING

April 15, 2004

SRE.04.061

Agenda Item

14.0

Engineering & Public Works

SUBJECT: Region of York - Water and Sewer Capacity and Allocation to Plans of Subdivision - (SRE.04.061)

PURPOSE:

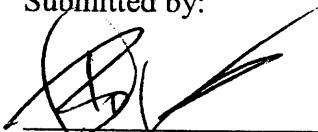
The purpose of this report is to advise Council of Regional concerns with respect to water and sewer servicing that are likely to impact the approval of development projects in the Town.

RECOMMENDATIONS:

- a) That a copy of this report be sent to the Regional Clerk and the Regional Municipality of York be encouraged to continue vigorously pursuing critical infrastructure projects that maintain the public health necessities of sanitary sewage servicing and potable water supply without interruption or delay.
- b) That Council not grant any further draft approvals or approve any new applications for residential site plans until such time as the Region confirms that there is sufficient capacity to allow such developments proceed.
- c) That senior staff continue to work with Regional staff, staff of adjoining municipalities and members of Regional Council from affected municipalities to track the timing of critical projects and associated approvals.
- d) That staff report back to Council at the earliest opportunity to advise of Regional servicing capabilities and, if necessary, recommended prioritization of development approval based on criteria that include safety, security and other community building priorities.

Contact: Bruce Macgregor, Ext 2527
Janet Babcock, Ext 2417

Submitted by:



Bruce Macgregor, P. Eng.
Commissioner of
Engineering & Public Works

and:



Janet Babcock, Commissioner
of Planning & Development

Approved by:



C. D. Weldon
Chief Administrative Officer

BACKGROUND:

In York Region, local municipalities are the approval authorities for plans of subdivision. Related Official Plan Amendments, Secondary Plans and Zoning Bylaws must comply with the Regional Official Plan (ROP). On occasion, an amendment of the Regional Official Plan is required to permit approval of a local amendment.

The first ROP was approved by the Province of Ontario in 1994. The ROP includes growth forecasts for local municipalities and has served as a basis for longer-term infrastructure planning completed by the Region since that time. The Regional growth forecasts for urban municipalities in York Region are identified in Table 1.

Table 1 - Growth Forecasts in York Region - Urban Municipalities

Source - York Region Official Plan (November, 2002 Office Consolidation)

Municipality	2006	2011	2016	2026
Markham	253,000	281,000	304,000	348,000
Vaughan	221,000	254,000	281,000	330,000
Richmond Hill	171,000	191,000	204,000	219,000
Newmarket	79,000	87,000	91,000	98,000
Aurora	49,000	56,000	63,000	75,000
Total Population	773,000	869,000	943,000	1,070,000

The projections also include employment forecasts in addition to the population projections. These projections serve as a basis for Regional infrastructure planning that typically extends out at least thirty (30) years (i.e. to 2036). Recent infrastructure planning documents completed by the Region in the last few years include:

- Water Supply Master Plan Update
- York Durham Sewage System (YDSS) Master Plan
- Transportation Master Plan

The funding requirements identified in the Master Plans support Regional Development Charges for water, sewer, road and transit improvements necessary to accommodate the anticipated growth.

In 2003, the Region advised of potential water supply limitations due to the timing of projects in Peel Region

Water supply for the south urban area of York Region (including Vaughan, Markham and Richmond Hill) comes from Lake Ontario via the City of Toronto. In recent years, Lake Ontario sourced water supply has also been directed, by the Region, to the municipalities of Aurora and Newmarket to supplement groundwater supplies. As part of its long term infrastructure planning, the Region has entered into an agreement with Peel Region to supply additional drinking water from Lake Ontario based filtration plants.

In September 2003, Regional staff met with staff of local municipalities to outline water supply capabilities in the shorter-term (i.e. the next 10 years). The capacities identified for the Town of Richmond Hill included the ability to service a population of up to 164,000 in 2003, increasing to a threshold population of 195,000 in 2004 (see Appendix 1) through 2009.

In 2004, the Region advised of more critical constraints in the delivery of sewage servicing projects

In February, 2004, Regional staff convened a meeting with Planning and Engineering staff from local municipalities to present further concerns about the timing of sewage projects.

The urban municipalities in York Region rely on sewage servicing that is also Lake Ontario based. A Regional trunk sewer system collects wastewater from local municipal networks and conveys sewage to the Duffin Creek wastewater treatment facility in Pickering. The system, known as the York-Durham Sewer System (YDSS), was constructed initially by the Province of Ontario in the late 1970s and early 1980s. Appendix 2 illustrates the extent of the trunk sewer system. Long term plans call for construction of a parallel trunk sewer system to meet the servicing needs of planned growth. Appendix 3 illustrates the planned extent of the sewer system in 2031.

The sewer works are planned in stages with the construction of vital downstream works (including treatment plant expansions) proceeding in advance of upstream extensions. Various components of the future system have been completed. In the next few years, additional projects are also planned, in orderly stages. These projects are identified on Appendix 4 and include:

- i. 16th Avenue trunk sewer (Phase 2 - from McCowan to Woodbine)
- ii. Southeast Collector Relief Sewer
- iii. 19th Avenue and Lower Leslie trunk sewers (located in Richmond Hill)
- iv. Humber/Peel Forcemain

Regional staff have recently expressed concern over the timing of completion of the 16th Avenue trunk sewer. The project is currently delayed due to outstanding environmental approvals related to temporary dewatering of the route. As of the end of March, the project has been delayed by at least a year and the schedule is not yet certain. It is estimated that once started, construction will take up to 36 months. The implication, according to Regional staff, is that the existing Regional trunk sewer system through Richmond Hill may be overloaded or surcharged as early as 2006.

Regional staff have proposed a process for managing servicing capacity allocation

In June 2003, Regional Council considered a report from its Planning and Economic Development Committee entitled Management of Servicing Capacity Allocation (see Appendix 5). A complementary report on the Transportation and Works Committee agenda (Appendix 6) provided clarification as to Regional capacity limitations. Both reports were adopted by Regional Council on June 26, 2003. The servicing capacity identified as being available to the Town of Richmond Hill would accommodate populations of 171,600 and 195,000 by 2006 and 2011 respectively. Both reports focus on water supply in the south urban area as the servicing constraint. The reports suggest using allocation strategies to phase development. The reports also refer to a "new reality" associated with "accelerated growth".

The process proposed by Regional staff deals only with water and sewer capacity. These are key services that remain vital to maintaining the high standards of public health widely expected throughout North America. The sewage servicing projects that are currently stalled were identified as “priority” projects by the Region in 2002. The term implies that if they are not constructed as scheduled, significant environmental and growth capacity consequences may result.

Population growth in the Town of Richmond Hill has been steady over recent years, increasing by approximately 7,000 persons per year. The forecast on the graph below (Figure 1) reflects that included in the Regional Official Plan in 2002. The expected growth is in line with earlier projections.

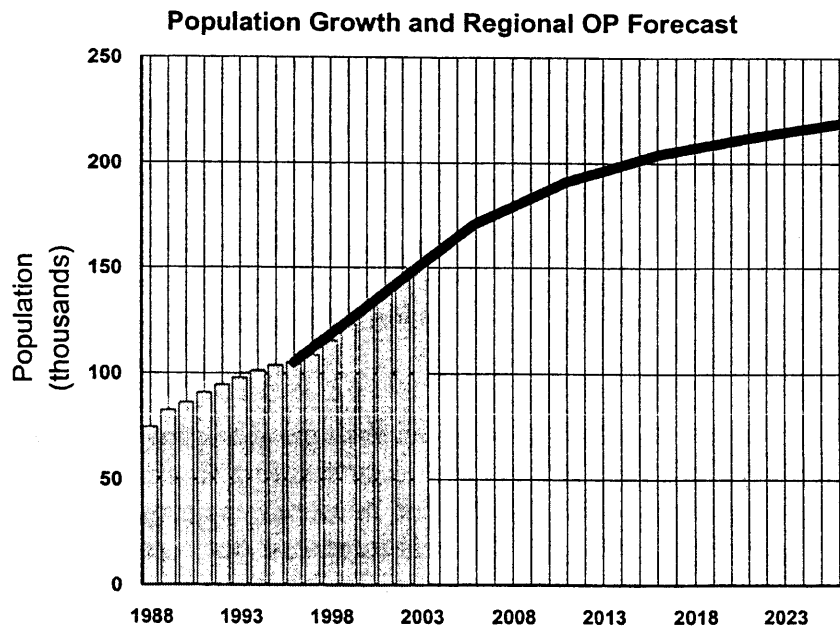


Figure 1

No additional Plans of Subdivision or residential Site Plan approvals should be issued

The Regional reports suggest that municipalities implement a tracking system to control allocation of servicing capacity through to the building permit stage. This is likely to be challenging since there has been no indication in recent approvals of these critical servicing constraints. Until now, there has been a reasonable expectation that upon receiving draft approval, sufficient servicing capacity is (or will be) available.

At the current time, the Town's population commitments, that is the sum of existing, registered and draft approved would generate an estimated population of approximately 197,500 persons. The Region's capacity constraint is 164,000 to 2004 and 195,000 to 2011. If growth occurs at an average of 2000 units per year (or 7,000 persons per year), the Town will be in line with the Region's projections. However, if as a result of market fluctuations, the Town's growth exceeds 2000 units per year, the potential exists that the Town will exceed the Region's capacity sooner than expected.

The difficulty is that while the Town approves units, servicing capacity is measured in population. The units are sold and built before the population can be measured and the Town has limited ability to restrict or deny building permits where the conditions of draft approval have been met. Further complicating the ability to ensure that capacity exists relative to development approvals, is the fact that most of the draft approved plans in the Town do not contain any conditions of draft approval which would restrict either the sale of the lots upon draft approval or the issuance of building permits. Many of the draft approved plans were approved by the OMB in the OPA 129 process in 1995 and do not contain restrictions on servicing capacity. Neither are there servicing restrictions in the more recently approved plans of subdivision by the Province on the Moraine. The implication is that the lots can be sold, irrespective of the servicing capacity which may or may not be available at the time of construction and occupancy.

More recently, the Region has issued conditions of draft approval which include the following condition:

"Prior to final approval, the Southeast Collector trunk sewer is required to be in service."

The Environmental Assessment for the Southeast Collector has not been completed and construction of this important connection to the Duffin Creek treatment facility is estimated to be, up to ten (10) years out. To give draft approval in 2004 to a subdivision where there is a potential that the servicing needed to accommodate the development is more than 10 years away, is not reasonable nor does it represent good planning. Draft approval entitles the landowner to sell the lots. If the lots are sold but can not be given "final approval" (i.e. registered), it leaves potential purchasers in a quandary. It might also raise the prospect that potential purchasers take action against the Town for allowing landowners to receive draft approval and sell them homes knowing that the servicing necessary to occupy that house is not currently available. In these circumstances, it is recommended that the Town not grant further draft approvals of subdivisions or site plans until such time as the servicing capacity and commitment can be confirmed.

Additional steps may need to be taken with uncertain implications on currently approved developments

Further delays in delivery of critical infrastructure, may require additional steps including, potentially:

- i. rescinding draft approval, or
- ii. amending conditions of draft approval to require that water and sewer servicing capacity be confirmed prior to any sales, pre servicing or related activities.

Council's authority to rescind draft approval is questionable particularly since the conditional approval is normally granted along with corresponding zoning. Either option will require more specific details from the Region (as to overall capacity) and, potentially, intervention by the Province (in the form of Zoning Orders, Policy Statement amendments, Planning Act amendments or regulation, etc.).

Prior to final registration of a plan and subject to the Region confirming capacity limitations, the Town may have to consider amending the conditions of draft approval (subject to the right of appeal by the owner to the O.M.B.), by inserting a condition related to the adequacy of municipal services. The adequacy of municipal services is a condition of subdivision approval, such is not a condition of rezoning or site plan approval under the *Planning Act*.

Development applications on employment lands are not constrained

Regional staff have previously advised that servicing capabilities are related to residential demands. Development of employment lands are not, at the present time, expected to be constrained.

FINANCIAL/STAFFING/OTHER IMPLICATIONS:

The financial implications of critical servicing delays may be significant. As the constraint continues, economic development initiatives may be compromised. In the shorter term, development charge and assessment growth revenue will be delayed. Longer term implications depend on when the infrastructure catches up to planned growth.

There are also costs associated with tracking allocation at the level of detail suggested by the Region. Current staff resources are minimally meeting the circulation and commenting requirements of the Planning Act. To fully implement the tracking system stipulated in Regional reports will likely require an additional full time staff member.

RELATIONSHIP TO THE STRATEGIC PLAN:

This report addresses the Strategic Plan goals of:

- demonstrating innovative and responsible municipal management; and
- enhancing our healthy and safe community.

CONCLUSIONS:

Delays in receiving approvals for critical Regional sewer projects have raised concerns over development phasing. Given the continued building boom in the Greater Toronto Area, the problem could be as imminent as 2006.

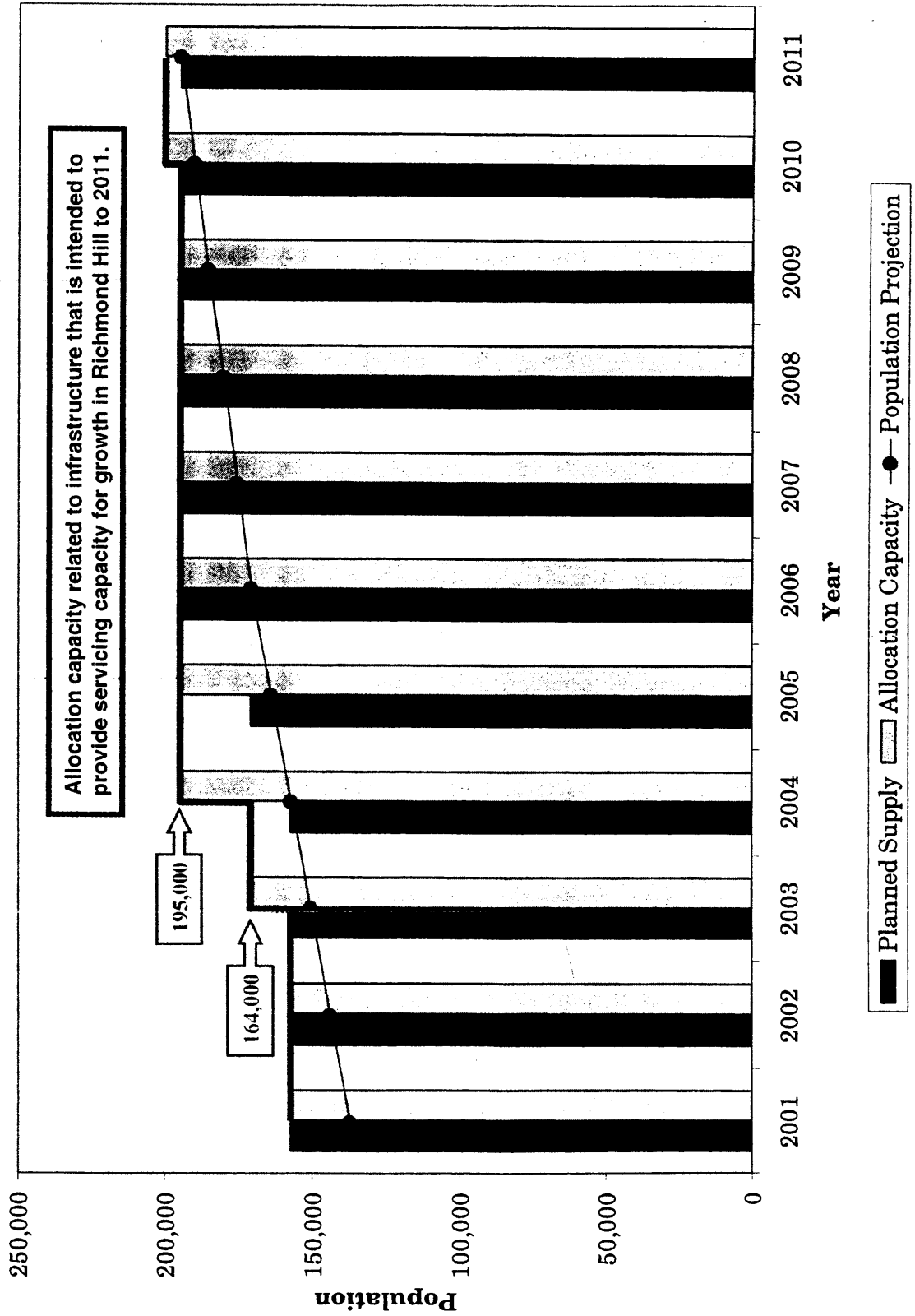
It is suggested that senior staff continue to work closely with Regional staff and the Town's members of Regional Council to vigorously pursue a resolution to this pending concern.

In the interim, it is strongly recommended that the Town not issue any new residential draft plan or site plan approvals until the extent of Regional servicing capacity is again restored to the 10 year levels previously identified.

Appendices:

- 1 - Town of Richmond Hill Allocation Management - Population
- 2 - YDSS Master Plan Base System - Extent of the Trunk Sewer System
- 3 - YDSS Master Plan Base System - Planned Extent of the Sewer System in 2031
- 4 - 2002 YDSS Master Plan Priority Projects
- 5 - Report - Management of Servicing Capacity
- 6 - Report - Water Supply Strategy Update

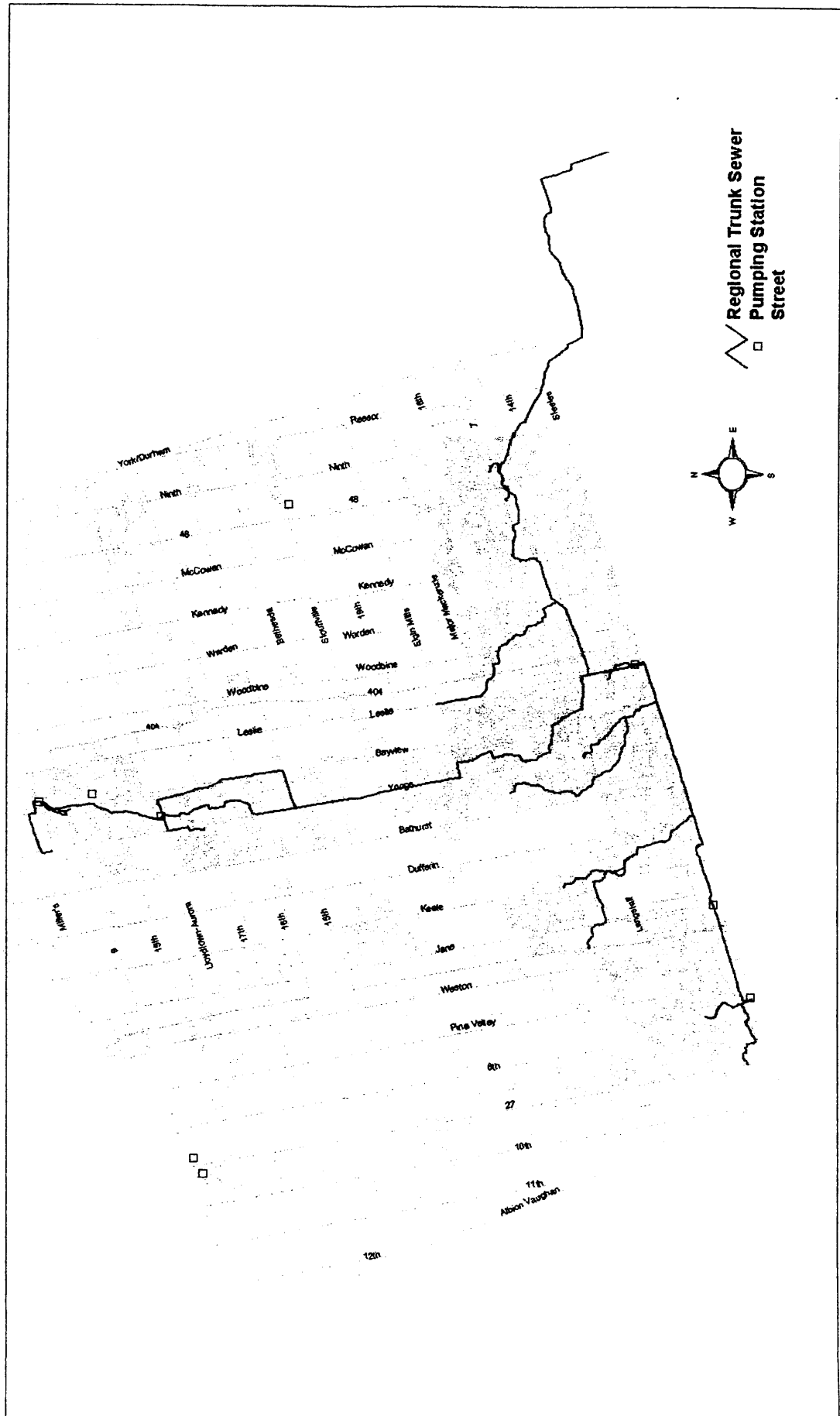
Town of Richmond Hill Allocation Management



Messages

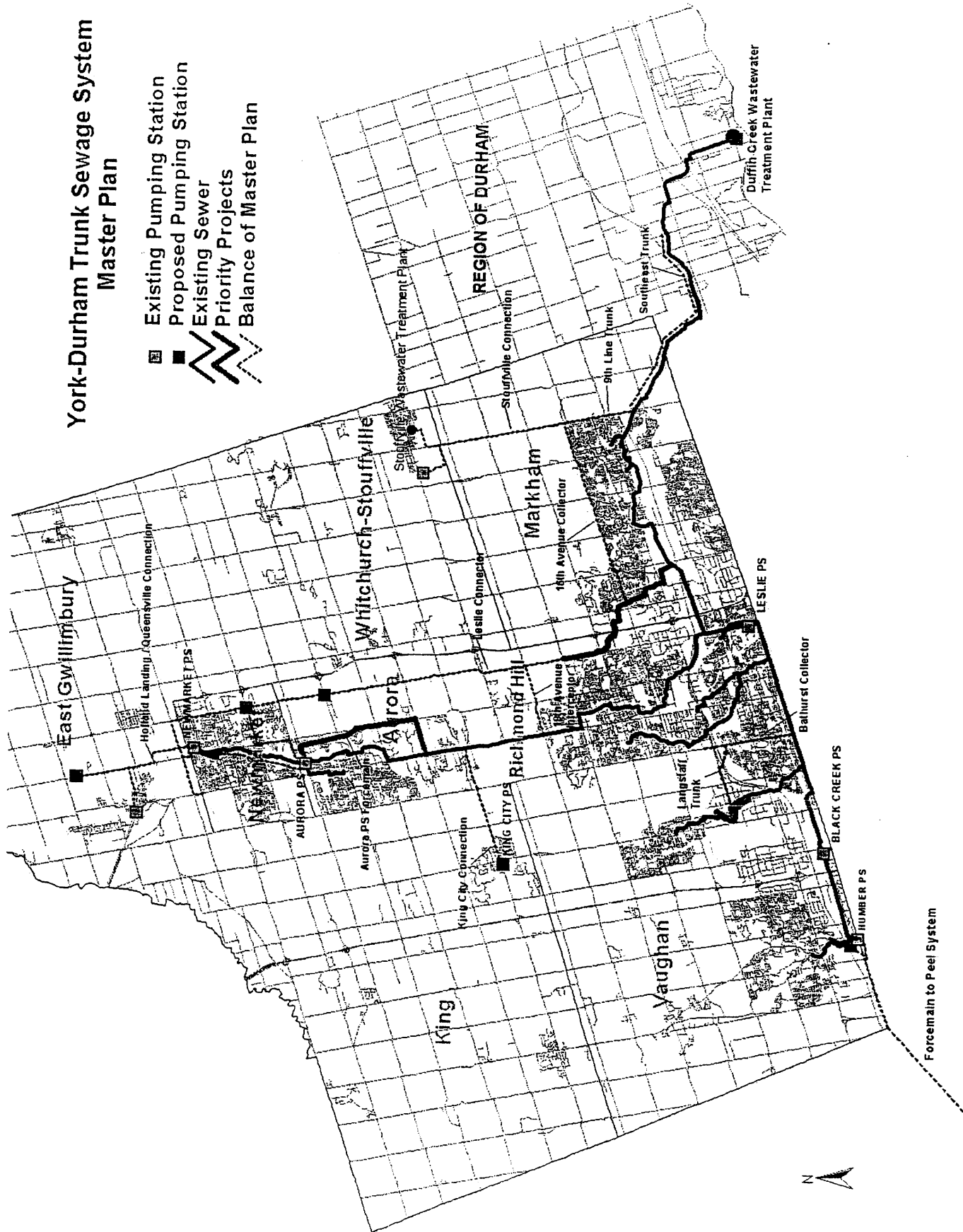
- ◆ The Region will meet the short and long term demand for servicing
- ◆ This is not business as usual
- ◆ Everyone needs to participate to manage the scarce resources
- ◆ Leadership is needed at all levels to implement tough and innovative solutions

2002 YDSS Master Plan Base System

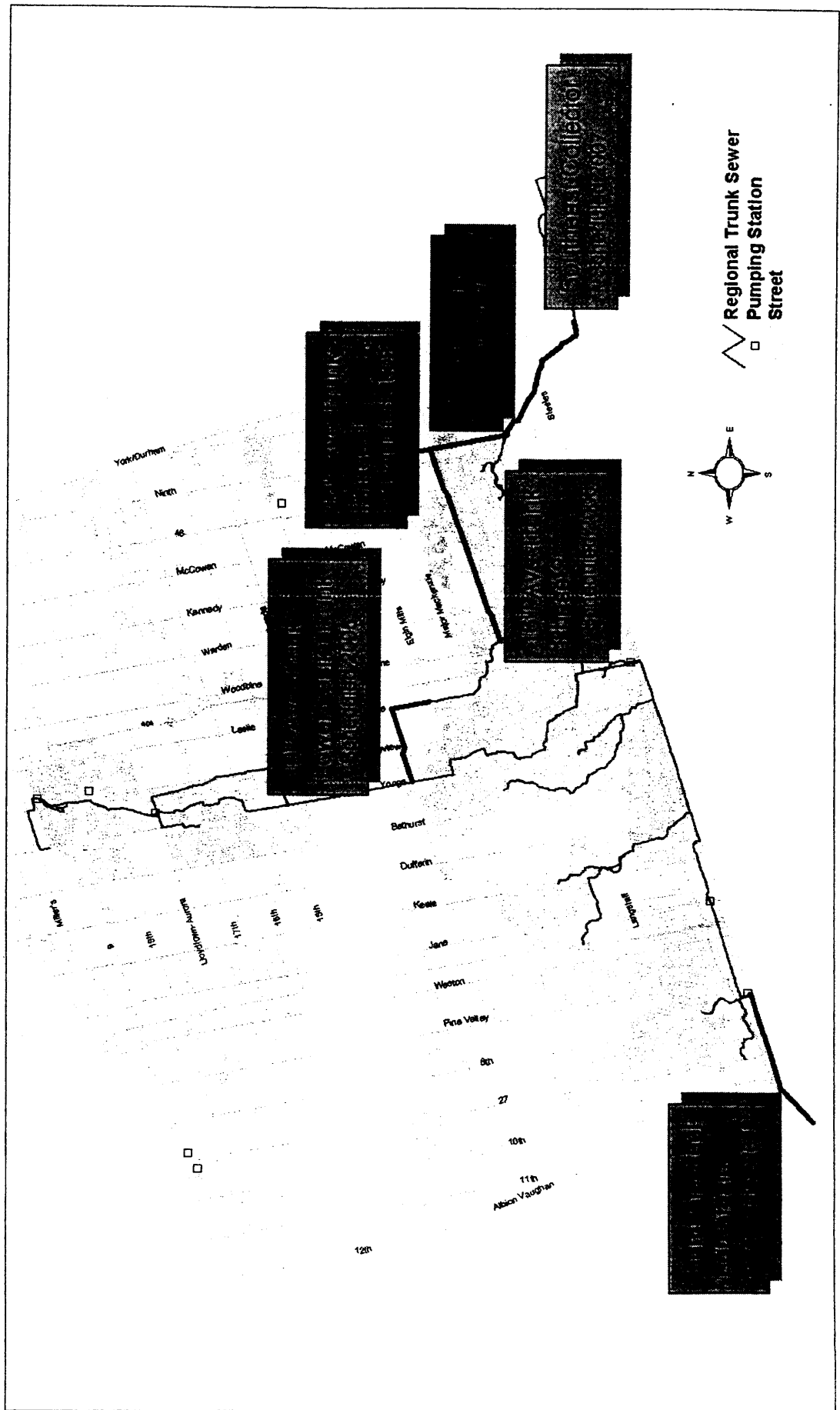


York-Durham Trunk Sewage System Master Plan

- Existing Pumping Station
- Proposed Pumping Station
- Existing Sewer
- Priority Projects
- Balance of Master Plan



2002 YDSS Master Plan Priority Projects





Office of the Regional Clerk
Corporate Services Department

June 27, 2003

Mr. Robert Prowse
Town Clerk
Town of Richmond Hill
Box 300, 225 East Beaver Creek Road
Ground Floor, South Side
Richmond Hill, Ontario L4C 4Y5

Dear Mr. Prowse:

Re: Management of Servicing Capacity Allocation

The Council of the Regional Municipality of York, at its meeting held on Thursday, June 26, 2003, adopted the following recommendations of the Planning and Economic Development Committee with respect to the report entitled "Management of Servicing Capacity Allocation":

1. The following, as detailed in the report, be endorsed in principle for further consultation with the area municipalities and the Urban Development Institute to define appropriate tools to manage allocation of servicing capacity:
 - a. Municipal wide staging and phasing plans implementing a three step allocation process of establishing capacity reserves on a concession block basis, creating detailed phasing development plans for each block and then allocating capacity to specific plans within the concession block (as described in Section 4.4.3).
 - b. Standard Secondary Plan policies requiring internal phasing plans (example in *Attachment 3*) to guide growth within each concession block.
 - c. Standard conditions of draft approval including specific phasing mechanisms and triggers (example in *Attachment 6*) to implement the phasing.
 - d. Enhanced tracking program (as described in Section 4.4.5) to monitor growth within each municipality.
2. Regional staff work together with local municipalities to refine the allocation management tools outlined in this report.
3. Regional staff work with the local municipalities to harmonize the preparation of municipal-wide staging/phasing plans.
4. Prior to the Region assigning additional water capacity beyond the June 2003 assignment, each area municipality prepare a municipal wide staging/phasing plan applying the principles contained in this report.

The ORMF Strategic Plan identifies potential opportunities to further strengthen the Region's commitment to the natural environment and therefore Vision 2026.

5. FINANCIAL IMPLICATIONS

Implementation of the Region's Greening Strategy and Land Securement Strategy are provided for in the Council approved budget. The creation and funding of the Oak Ridges Moraine Foundation provides opportunities to partner and lever Regional funds to achieve our greening objectives. To date the Foundation has not yet invested in York Region.

6. LOCAL MUNICIPAL IMPACT

The ORMF developed its preliminary vision in consultation with staff and stakeholders from government and non-government organizations. These comments were used to help create the ORMF's Strategic Plan and, the Plan suggests that the specific comments and program suggestions will be used in the implementation of the Strategic Plan.

Many of these same local municipalities are important partners in the York Region Greening Strategy and its Greenlands Property Securement Strategy. Staff from local municipalities are also members of the Region's Securement Working Group.

7. CONCLUSION

The Oak Ridges Moraine Foundation's the Strategic Plan is complimentary with the Region's Greening Strategy, Securement Strategy and the draft Regional Securement Criteria. It is recommended that Council endorse the general direction of the Strategic Plan and express York Region's desire to continue working in partnership with the ORMF to achieve common goals and objectives on the Oak Ridges Moraine.

The Senior Management Group has reviewed this report.

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

2

MANAGEMENT OF SERVICING CAPACITY ALLOCATION

The Planning and Economic Development Committee recommends the adoption of the recommendation contained in the following report, June 9, 2003, from the Commissioner of Planning and Development Services and the Commissioner of Transportation and Works:

1. RECOMMENDATIONS

It is recommended that:

1. The following, as detailed in the report, be endorsed in principle for further consultation with the area municipalities and the Urban Development Institute to define appropriate tools to manage allocation of servicing capacity:
 - a. Municipal wide staging and phasing plans implementing a three step allocation process of establishing capacity reserves on a concession block basis, creating detailed phasing development plans for each block and then allocating capacity to specific plans within the concession block (as described in Section 4.4.3).
 - b. Standard Secondary Plan policies requiring internal phasing plans (example in *Attachment 3*) to guide growth within each concession block.
 - c. Standard conditions of draft approval including specific phasing mechanisms and triggers (example in *Attachment 6*) to implement the phasing.
 - d. Enhanced tracking program (as described in Section 4.4.5) to monitor growth within each municipality.
2. Regional staff work together with local municipalities to refine the allocation management tools outlined in this report.
3. Regional staff work with the local municipalities to harmonize the preparation of municipal-wide staging/phasing plans.
4. Prior to the Region assigning additional water capacity beyond the June 2003 assignment, each area municipality prepare a municipal wide staging/phasing plan applying the principles contained in this report.
5. Regional Planning staff report back to Committee regarding the comments on the application and implementation of the approach to more efficiently manage allocation of servicing capacity noted in Section 4 of this report.

2. PURPOSE

The purpose of this report is to establish:

- Mechanisms to efficiently manage assignment and allocation of water and sewer servicing capacity.
- Best practise policies to be included in secondary plans that phase development so that it is consistent with the timing of the delivery of Regional servicing infrastructure.
- Standard condition(s) of draft plan approval that implement the phasing requirements set out secondary plans, block plans or tertiary plans that link the registration of phases of subdivision development with the availability of servicing capacity.

3. BACKGROUND

This report is a compendium to a report on the June 18, 2003 Transportation and Works Committee entitled "Long Term Water Strategy Update", which sets out, among other things, the up dated water allocation capacity for each area municipality and a new approach to tracking and monitoring of allocation capacity. Part of the message contained in that report highlights the importance of carefully managing our water capacity resource especially through the development approval process. This report proposes a suite of tools for the Region and local municipalities to assist in the management of infrastructure capacity. The application of these tools needs to be viewed as a partnership with shared responsibilities between the Region and local municipalities for successful management of capacity.

3.1 Historical Context Regarding Water Servicing Capacity

The Region assigns capacity to the area municipalities and the area municipalities allocate capacity to specific developments. During the 1980's and 90's growth in most area municipalities in York Region was not constrained by water supply. The new reality as highlighted in the Long Term Water Strategy Update report is that, for the next 30 years water will need to be carefully managed to ensure that growth is co-ordinated with the incremental increases in water from the Peel supply.

3.1.1 Region's New Framework for Servicing Allocation

In February 2003, Regional Council approved a new framework for the allocation of water and wastewater servicing capacity. The framework provides a process for the review and approval of development applications when servicing capacity is not immediately available but will be available within two years. It also provides a process for the execution of Pre-Paid Development Charge Credit Agreements for infrastructure that is beyond the two year horizon. The approach for the review and approval of Planning applications is shown on *Attachment 1* to this report.

The Region's new framework for servicing allocation recognizes the uniqueness of Pre-Paid Development Charge Credit Agreements because of the need to issue draft plan approval prior to the availability of servicing infrastructure in order to give applicants the ability to arrange appropriate financing for the necessary infrastructure.

These agreements need to balance a developer's requirement for certainty in the development approval process to secure financing with a municipality's need to achieve its vision for growing communities and provide infrastructure.

3.2 Current Situation Regarding Servicing Capacity

The Region provides water supply to the area municipalities to meet growth demands. This assigned servicing capacity is rapidly allocated by the area municipalities. In some cases capacity is allocated to large plans of subdivision (500 to 1,000 units) that have long build out timeframes (5 to 10 years). Once a plan of subdivision receives draft plan approval there is limited ability to retract draft approval and redistribute servicing allocation, even if the timing of development does not proceed as expected.

This situation leads to little or no capacity being available, on paper, although there is supply in the system. As a result, requests are continually made for additional capacity. Better measures are needed to efficiently manage allocation by providing the appropriate capacity at the right time.

3.3 New Reality

3.3.1 Allocation Protocol

In order to ensure water and sewer servicing capacity is assigned and allocated very efficiently it is necessary to match the timing of delivery of servicing infrastructure with accurate population and employment forecasts (demand). Compared to the current method of allocating capacity this would be somewhat similar to “just in time” delivery of both Regional and local servicing infrastructure.

3.3.2 Monitoring and Tracking

One of the tools that both the area municipalities and the Region will be relying on is accurate, up to date monitoring and tracking of servicing capacity. Tracking of water and sewer usage through building permit and/or occupancy permit and accurate calculation of residual capacity is needed to implement the “just in time” infrastructure delivery.

Pre-paid Development Charge Credit Agreements (developer front-end financing of servicing infrastructure) puts additional emphasis on the need for accurate tracking as “front ending”, by its definition, may result in revisions to the distribution of population and employment forecasts for given time periods.

4. ANALYSIS AND OPTIONS

4.1 Objectives

The new reality of implementing planned development includes the requirement to manage a finite supply of water capacity. Objectives of new measures for assigning and allocating servicing capacity include:

- Ensuring allocation of appropriate servicing capacity when required, not prematurely.
- Allocating capacity to the initial phase of a large plan of subdivision and allocating capacity to future phases closer to the actual time of construction, based on clear, reasonable and easy to monitor triggers.
- Using building permits as a trigger in phased development to allow capacity to be allocated to subsequent phases.
- Providing servicing capacity at the right time to phased development that satisfies the applicable triggers.
- Providing for additional servicing capacity based on need established by up to date monitoring and tracking.
- Giving municipalities a tool to assist in encouraging desirable development.

Meeting the above noted objectives will achieve a real time, responsive, accurate, flexible system that provides an early warning system/trigger throughout, to ensure the right amount of servicing is provided at the right time to the appropriate development.

4.2 Options

Options to assign and allocate servicing capacity include:

- i. Maintaining the status quo of the Region assigning as much servicing capacity to the area municipalities as the Regional infrastructure will permit and the area municipalities allocating the capacity when it is assigned.
- ii. The Region assigning smaller volumes of servicing capacity that meet, for instance a 3 year demand for draft approvals and registrations of plans of subdivision, in accordance with the Provincial Policy Statement.
- iii. The Region assigning servicing capacity to meet forecasted demand. Area municipalities preparing municipal staging and phasing plans and utilizing conditions of draft approval to efficiently manage the allocation of capacity.

Option 1 has served a purpose in a time when servicing capacity was abundant, but does not work well in a rapid growth environment where “just in time” servicing is the reality. Option 2 may work, but is administratively heavy and there is a risk that the granting of additional capacity would not be responsive to market conditions. Option 2 may also lead to continuous requests for additional servicing capacity.

Option 2 may be appropriate when assigning capacity to area municipalities that are undergoing urban expansions that involve multiple secondary plans or block plans. Using Option 2 would assist area municipalities in directing capacity to select areas as opposed to small portions of numerous secondary plans. Further discussion will take place on this matter between Regional staff and staff from the local municipalities.

Option 3 provides a means to meet demand and manage allocation more efficiently by blending a strategic view of how the resource can be managed over the long term with the specific tools to implement the strategy.

4.3 Consultation with Area Municipalities

On May 2, 2003 Regional staff met with the Planning Commissioners and Directors in York Region to present an overview of long term water supply and planning issues associated with the water strategy. Regional staff have met individually with staff (engineering and planning) from each municipality to discuss their short term water capacity and to discuss in more detail the most appropriate way to distribute supply for accelerated growth and the need to change the implementation/delivery of servicing.

There has been consensus that there is a need to develop approaches and mechanisms that assist municipalities to maintain municipal flexibility and also to encourage the type of development that meets the city building objectives of the municipalities.

4.4 Implementation

The framework for managing allocation of servicing capacity is provided by the existing policies of both the Regional Official Plan and the local Official Plans that advocate using staging and phasing plans.

4.4.1 Regional Official Plan

The Regional Official Plan contains a number of policies that require development to be phased, based on availability of servicing infrastructure. Section 5.2.3 e) and 6.7.6 e) of the Regional Official Plan advocate the use of staging and/or phasing plans for new development within Urban Areas or in Urban Area expansions. These policies clearly establish the principles for strategic and careful management of infrastructure. No change is recommended to the Regional Official Plan. These policies are listed in *Attachment 2*.

4.4.2 Area Municipal Official Plans

Most local Official Plans, and Secondary Plans contain policies for phasing of development. The best practice of these policies is provided in Attachment 3 to this report. These policies generally require development to be phased in accordance with development staging and phasing plans and be contiguous to existing development and should be included in all new secondary plans or block plans that are in the approval process.

Attachments 4 and 5 illustrate the relationship of staging and phasing plans with Regional and area municipal Official Plan policy documents.

4.4.3 Municipal-wide Infrastructure Phasing and Staging Plans

As contemplated in Sections 6.7.6 and 6.7.7 of the Regional Official Plan, each area municipality should prepare a municipal wide water and sewer staging/phasing plan that establishes the priorities, amount and location of new development based on the desired vision of the local municipalities for growth co-ordinated with the timing of the necessary infrastructure to service the development. The phasing of development within each stage would be determined by the incremental increases to Regional servicing infrastructure.

This type of approach achieves the desired objectives. It provides clarity for the development industry as well as the local council by providing objective rationale for development rather than assigning capacity to the "first one to ask."

4.4.3.1 Principles for Municipal Staging and Phasing Plans

Establishing municipal staging and phasing plans involve basic steps that may include the following principles:

Step 1: Each municipality would be advised of the timing and amount of infrastructure capacity by the Region. Based on this information each area municipality would establish long term water and sewer servicing capacity reserves for each of its new communities or secondary plan areas. The reserve would identify key dates and infrastructure components that are required to deliver that capacity to the reserve area.

An important component of this Step is for each area municipality to establish a "municipal reserve" to enable the municipality to address new development that may not have been anticipated or to hold as an incentive for development in key development areas.

Step 2: Within each new secondary plan, or reserve area, the area municipality would establish a more detailed phasing plan to address both the short term and long term development built out. The phasing of development would be tied to the timing of delivery of servicing infrastructure.

Step 3: The capacity would be allocated to draft plans based on specific criteria to prioritize the allocation of the servicing capacity.

Many of the area municipalities have followed these steps for allocation of sanitary sewer capacity and these steps could now also be applied to allocation of water capacity.

4.4.3.2 Example of Approach to Staging and Phasing Plans

The approach that the Town of Markham employs and is presently refining, appears to be the best practice for a municipal-wide phasing/staging program. In December 1998 Markham staff and Council rationalized how total capacity should be divided among the new Secondary Plan areas. (Step 1) Each new community (concession block) receives an overall "reserve" of allocation. Growth in each new community is governed by a Council approved phasing and staging plan that ensures that development and infrastructure are co-ordinated as allocation is given to each plan of subdivision. Both the Town and Trustee for the Developer's Group then authorize a specific allocation of capacity from the "reserve" at the time a draft plan is approved (Step 2). Most draft plans are also phased, based on allocation of capacity. Markham staff report to Council on the status of water capacity and allocation on an annual basis.

The Town then has the ability to re-allocate the reserve to different areas if a block is not using the reserve as planned (i.e. use it or lose it). Part of Markham's practice is to also hold a certain amount of capacity in a Town reserve. This allows Markham Council the flexibility to respond and proceed with development that meets identified municipal objectives or address any unanticipated market change.

Markham also employs a detailed monitoring system that carefully tracks used, committed and unused capacity that provides advanced notice of future potential issues. The City of Vaughan has also employed a similar system for sewage allocation.

The Town of Newmarket has recently carried out a redistribution exercise where unused allocation is taken back by the Town and given to development that is ready to proceed. This “use-it-or-lose-it” approach should be incorporated into municipalities allocation practices.

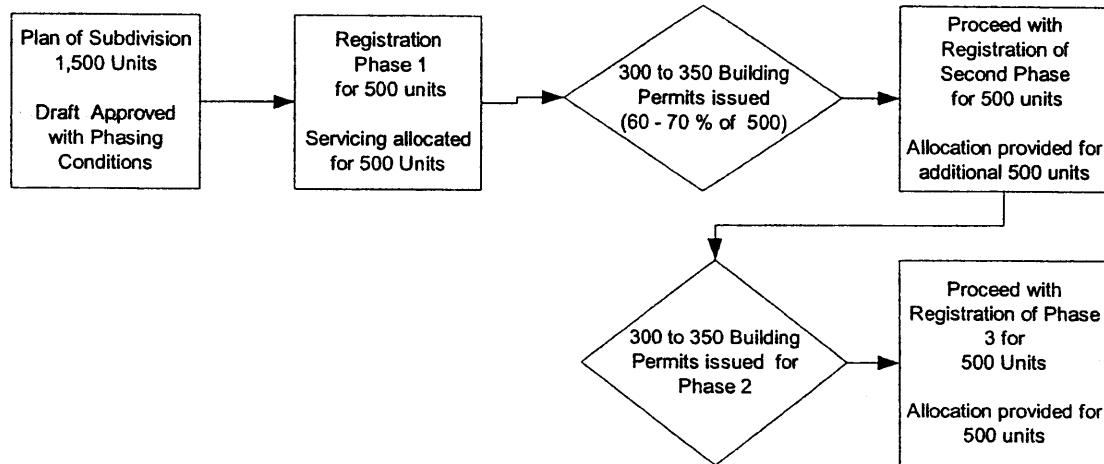
Markham staff is also in the process of developing a screening tool based on a checklist approach, that prioritizes development relative to the overall needs of the municipality (Step 3). The checklist approach will give priority to development that meets the specified criteria. Some of the factors that are being considered for "priority development" include:

- Development in the regional centre (Markham Centre).
- Infill development and redevelopment along key transit corridors.
- Development that delivers a key piece of infrastructure or environmentally significant area.
- Development containing a school or other community facility - (public benefit).
- Provision of development that supports the Town’s smart growth initiatives, and demonstrates exception urban design.

It is recommended that preparation of staging and phasing plans applying this three step approach be harmonized by Regional staff working with Markham staff to finalize the checklist and formalize Markham’s process in a single document and encouraging other area municipalities to adopt the process to their approval environment.

4.4.4 Draft Plan of Subdivision Conditions

Implementation of effective capacity management also requires new specific conditions of draft plan approval that link serving capacity to phasing. An example of this would be a condition that requires building permits to be issued for 60 or 70 % of the development of phase 1 of a large plan prior to the registration of phase 2. Subsequent phases would also require issuance of building permits for 60 or 70 % of the previous phase before registration could occur. Figure No. 1 shows the triggering of registration for phases of a large plan of subdivision. Area municipalities may also choose to be more restrictive by limiting the number of units draft approved. As the approval authority, the area municipalities determine the extent and number of phases. This approach has been used effectively by the Town of Aurora to stage development.

Figure No. 1**Example of Phasing Program of a 1,500 Unit Plan of Subdivision**

Conditions of draft plan approval should also contain provisions for taking away servicing capacity and reallocating it to another development if a plan of subdivision is not registered within 2 years from the date of draft plan approval. Most plans of subdivision within urban areas are registered within 1 year from the date of draft plan approval. Two years should provide adequate time to register in the event of unusual circumstances. Proposed conditions are shown in *Attachment 6*.

4.4.5 Monitoring and Tracking Allocation

Tracking and monitoring development better will require additional information to be provided when plans of subdivision are circulated to the Region. To assist the Region as a commenting agency on plans of subdivision, information for specific plans of subdivision should be provided by the area municipalities or applicants including:

- Water Pressure District No.
- Total capacity
- Capacity used and committed
- Residual capacity
- Wastewater system capacity – used and committed
- Residual capacity
- Identified as a priority development in staging/phasing plan.

This information will speed the review of the plan and also provide an indication of how the development fits into the priorities of the municipality. An important aspect of the information is the anticipated build out horizon of the plan. Plans with a long build out period should have phased approval.

Attachment 7 to this report illustrates when phasing conditions should be applied, and the requirement for additional information at the subdivision submission stage.

4.4.6 Region's New Framework for Servicing Allocation

In February 2003 Regional Council approved a new framework for the allocation of water and wastewater servicing capacity. The framework provided area municipalities the ability to endorse "approval in principal" for phased plans of subdivision with formal draft approval of future phases to be issued by their staff at a later date. This ability can also be used in conjunction with conditions of draft plan approval that require building thresholds to be met prior to registration of future phases, or possibly formal draft approval of future phases.

4.5 Relationship to Vision 2026

Vision 2026 states that using infrastructure efficiently in urban areas is part of a strategic approach to growth management. This report is consistent with the goal of Vision 2026 to provide cost effective and efficient serving capacity for balanced growth.

5. FINANCIAL IMPLICATIONS

More efficient use of servicing infrastructure is better use of tax dollars. More efficient servicing infrastructure leads to more compact land use patterns resulting in more efficient delivery of community services.

6. LOCAL MUNICIPAL IMPACT

Management of infrastructure is a partnership between the Region and area municipality. New measures for allocating servicing capacity will provide opportunity to service developments that are ready to proceed that would have been delayed awaiting servicing allocation capacity. Further discussions with the municipalities are needed to finalize the suite of capacity management tools.

7. CONCLUSION

Timing of development depends, in part, on the timing of servicing infrastructure, and particularly the provision of water supply in York Region. A partnership between the Region and local municipalities is needed to ensure that assigned and allocated capacity is used efficiently. It is proposed that a suite of tools be implemented to provide mechanisms that more consistently link development with the timing of servicing infrastructure. Each area municipality should prepare a comprehensive municipal wide staging/phasing plan identifying the amount and location of development prior to the Region assigning additional water supply capacity.

Phasing of plans of subdivisions by use of conditions that only permit registration of subsequent phases once building thresholds are met should provide more efficient

management of servicing capacity. The area municipalities and the Region should work together to establish conditions of draft approval that closely link the registration of phases of plans of subdivision with the availability of servicing infrastructure.

The Senior Management Group has reviewed this report.

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

3
AMENDMENT NO. 603, CITY OF VAUGHAN
PLANNING REPORT NO. 1517OP

The Planning and Economic Development Committee deferred consideration of the report, May 27, 2003, from the Commissioner of Planning and Development Services and the Commissioner of Transportation and Works to allow additional time to consult with interested parties.

4
A WATERSHED PLAN FOR DUFFINS CREEK AND CARRUTHERS CREEK

The Planning and Economic Development Committee recommends the following:

1. The presentation by Alan Wells, on behalf of the Duffins Creek Task Force, regarding the Watershed Plan for Duffins Creek and Carruthers Creek, be received;
2. The recommendations contained in the following report, May 20, 2003, from the Commissioner of Planning and Development Services and the Commissioner of Transportation and Works, be adopted:

1. RECOMMENDATIONS

It is recommended that:

1. Council endorse in principle the report entitled "A Watershed Plan For Duffins Creek and Carruthers Creek" subject to clarification of the following:
 - a. Implementation mechanisms, governance and funding arrangements.
 - b. Provincial expectations for Watershed Plans within the Oak Ridges Moraine Conservation Plan area as provided through the forthcoming Provincial Technical Guidelines.
 - c. Impacts of the emerging Provincial Source Water Protection policies on watershed planning.
2. The Region participate further in implementation of the Watershed Plan and work co-operatively with staff of the Toronto and Region Conservation Authority (TRCA) and other municipalities, agencies, residents, and stakeholders in this endeavour.

June 18, 2003

2

WATER SUPPLY STRATEGY UPDATE

The Transportation and Works Committee recommends:

1. The presentation by Kees Schipper, Commissioner of Transportation and Works, be received; and
2. The recommendations contained in the following report, June 11, 2003, from the Commissioner of Transportation and Works be adopted, subject to inserting replacements for Pages 7, 8, 17 and 18 of the Committee meeting Agenda material:

1. RECOMMENDATIONS

It is recommended that:

1. Appropriate staff be authorized to proceed with negotiations with City of Toronto staff regarding the amendment of the current Water Supply Agreement, and report back to Council with the proposed principles of the amended agreement in Spring 2004.
2. Regional Council endorse revisions of the existing water service allocation limits as outlined in this report for planning purposes.
3. A copy of this report be forwarded by the Regional Clerk to the Councils of the local municipalities and the City of Toronto.
4. Regional Council request Peel Region to provide a quarterly report on the status of the short term water projects related to the Peel Water Supply Project.

2. EXECUTIVE SUMMARY

2.1 Peel Water Supply

The Water Supply agreement with Peel Region is based on a staged approach designed to meet York's projected yearly maximum day demands up to 2031. The infrastructure program developed by Peel Region will meet the demand projections for both York and Peel. The critical Peel Feedermain project is proceeding according to schedule, for implementation and ultimate delivery by December 2004. Other infrastructure, primarily treatment plant expansions will be implemented to provide incremental increases in supply capacity over the next 30 years.

2.2 Toronto/York Joint Optimization Study

The focus of the Joint Optimization Study was the long-term supply needs and infrastructure program for the combined Toronto and York water systems. The optimum

water supply limits recommended from the study are summarized in Table i. The capital expenditures required for the integrated Toronto/York system is presented in Table ii.

Table i
Supply to the York Water System

Supply Source	2011 (ML/day)	2031 (ML/day)
Toronto	486	528
Peel	134	328
Groundwater	69	69
Totals	689	925

Table ii
Toronto/York Integrated System
Capital Expenditures (\$million)

Location of Works	2003-2011	2012-2031	Total
JOS Results			
York	\$223	\$187	\$410
Toronto ⁽¹⁾	\$352	\$128	\$480
Peel Cost Shared	\$196	\$81	\$277
Total Cost	\$771	\$396	\$1,167

⁽¹⁾ A portion of the works within Toronto will be cost shared with York

The results from the JOS will provide the framework for an amended water supply agreement with the City of Toronto that will be discussed at the staff level over the next year. The principles of an amended agreement will be reported to Council in spring 2004.

York Region has experienced accelerated growth rates over the last several years. This trend is expected to continue in the short term. York Region staff have asked City of Toronto staff to consider increasing the maximum supply in 2003 and 2004 in order to meet the short term increase in demands in York. On May 21, 2003, Toronto Council approved an amendment to the current water supply agreement to 430 ML/day in 2003 and 460 ML/day in 2004. This amounts to a total increase of 20 ML/day beyond the limit of the current agreement by 2004. York staff had originally requested an amount higher than that provided, but are satisfied that the amounts granted are sufficient.

2.3 Master Plan Update

The focus of the Master Plan was the detailed long-term and short-term servicing and operational needs of York Region. The capital expenditures identified in the Master Plan are presented in Table iii.

Table iii
Capital Expenditures (\$million)

	2006	2011	2016	2026	2036	Totals
Master Plan Results						
York Water System						
Watermains	117.0	91.6	46.3	8.1		263.0
Pumping Stations	16.2	18.0	9.8			44.0
Storage	16.3	7.7	5.9	7.6	2.0	39.5
Supply and Treatment	9.6	2.4	7.9	6.1		26.0
Decommissioning	0.2	0.3	0.3	0.2		1.0
Satellite Communities	38.2	21.3	8.9		12.0	80.4
Peel Cost Shared	120.7	75.0	57.0	24.3		277.0
Total Cost	318.2	216.3	136.1	46.3	14.0	730.9

2.4 Assignment of Water Capacity

The Regional Planning Department in conjunction with local municipalities has developed a high growth scenario to reflect the short term accelerated growth anticipated in certain areas of the Region (see Table iv). The accelerated population represents approximately 68,000 persons greater than the Regional Official Plan projection by 2011. These population forecasts have been used to generate a water demand forecast. The demand forecast has been used to determine the infrastructure program for each water service area in the Region and to identify the allocation capacity for the local municipalities.

Table iv
Short Term Accelerated Growth Scenario

Service Area	2006	2011
Vaughan	261,750	296,100
Richmond Hill	171,600	195,000
Markham	269,380	293,700
Aurora	49,000	56,100
Newmarket	79,000	87,000
Queensville, Sharon, Holland Landing	13,000	21,500

Capacity for the Integrated York Water System and Yonge Street Aquifer service areas is based on the available and planned supply from Toronto, Peel and groundwater. Allocation capacity is also dependent on the completion of the Peel Water Supply Project as well as a number of Priority Projects (Aurora-Newmarket Water Supply Project, McNaughton Road / Major Mackenzie Drive watermain, Markham PD6 reservoir and watermain). Table v summarizes the allocation capacity for this service area.

Table v
Allocation of Water Capacity in the Integrated York Water System
and Yonge Street Aquifer System

Municipality	2003 Projected Populated	Current Assignment of Water Capacity	Proposed 2003 Allocation Capacity	Proposed 2004 Allocation Capacity
Vaughan	219,021	227,800 ¹	241,800	296,100
Richmond Hill	151,346	157,400 ¹	164,100	195,000
Markham	238,024	250,000	258,900	296,100
Aurora	44,590	52,000	52,000	56,100
Newmarket	72,524	80,000	80,000	87,000
Queensville, Sharon, Holland Landing	12,890	15,000	15,000	21,400

¹ Estimated allocation of water capacity based on current total supply capacity.

The allocation capacity for the satellite communities, presented in Table vi, is dependent on well supplies and the requirement for system storage.

Table vi
Water Capacity in the Satellite Communities

Municipality	Population (2001)	Current Capacity	New Capacity	Infrastructure Required	Planned Year Capacity Available
Ballantrae	2,750	3,660	6,550	• New wells	2006
Stouffville	12,000	18,000	21,000	• Elevated Tank	2004
			28,000	• New wells	2006
Schomberg	1,500	2,500	4,300	• New wells	2006
				• Elevated Tank	
King City	4,800	4,800	6,000	• Elevated Tank	2005
			12,500	• New wells	2006
Nobleton	3,200	5,000	8,500	• New wells,	2011
				Elevated Tank	
Kleinburg	3,100	4,000	4,070	• Elevated Tank	2005
			7,000	• New wells	2006
Keswick, Sutton, Lakeshore	21,000 4,400	24,200 5,670	45,000	• Georgina Water Treatment Plant	2005
Mount Albert	2,800	2,800	5,100	• Elevated Tank	2004
			5,700	• New wells	2011

Tracking and monitoring of water capacity and allocation requires a co-ordinated effort between each of the municipalities and staff at the Region.

3. PURPOSE

The purpose of this report is to:

1. Provide Council with the final results from the Toronto/York Joint Optimization Study and the Master Plan Update.
2. Seek authorization to negotiate with City of Toronto staff for the purpose of developing the proposed principles of an amended Water Supply Agreement.
3. Present Council with the water allocation capacity for each of the local municipalities.
4. Propose a new approach to tracking and monitoring of allocation capacity.

4. BACKGROUND

Two water filtration plants and eight groundwater-based systems, together with an integrated system shared with the City of Toronto, provide water supply in the Region of York. In 2002, York delivered more than 100-million m³ of potable water across the region with approximately 80% from Lake Ontario to the south urban area. The southern municipalities of Markham, Vaughan, and Richmond Hill receive their water supply from the York Water System – an extension of the Lake Ontario-based system serving the City of Toronto. Recently the Lake Ontario-based supply was introduced to Aurora and Newmarket, to supplement the groundwater supply provided by the Yonge Street Aquifer System. The northern communities are serviced through municipal groundwater wells and Lake Simcoe-based water treatment facilities in the Georgina Water System.

The Region's long term water strategy includes an integrated supply from the City of Toronto and, as approved by Regional Council at its meeting of June 28, 2001, a new supply from the Regional Municipality of Peel. There are a number of projects currently underway pertaining to the implementation of the Long Term Water Strategy, including the Toronto/York Joint Optimization Study, the new Peel Water Supply, and the Master Plan Update. This report will provide an update to the status of the overall Long Term Water Strategy.

4.1 Peel Water Supply

At its meeting of December 6, 2001 (Clause 1 of Report No. 2 of the Commissioner of Transportation and Works and the Commissioner of Finance), Regional Council authorized staff to withdraw the Individual Environmental Assessment for the Durham West Long Term Water Supply solution in favour of an agreement for long term water supply from the Region of Peel. The agreement has been executed by York Region and Peel Region and planning, design and construction of capital works for treatment and transmission are currently underway in both municipalities.

Peel Region is currently completing an addendum to the Water and Wastewater Servicing Master Plan for the Lake Based System. This addendum will provide the basis for revisions to the estimated capital costs and scheduling for York infrastructure in Peel Region ('Schedule B' from the York/Peel Agreement). A draft revision to Schedule B has been provided by Peel and reflects the projects and timing in the 2003 Peel Capital Plan. Schedule B will be updated by Peel Region on an ongoing basis in accordance with the capital budget process and the York/Peel Joint Water Committee. This Committee is comprised of staff representatives from both Peel and York that meet regularly to discuss any issues that relate to the agreement.

4.2 Toronto/York Joint Optimization Study

Earth Tech Canada Inc. has completed the Joint Optimization Study (JOS) technical evaluation. The purpose of the Joint Optimization Study is to identify and recommend a long-term servicing strategy for the York and Toronto Water Systems, including the amount of water to be supplied from the City of Toronto and the Region of Peel, as well as infrastructure requirements for 2011 and 2031. The joint Region of York and the City of Toronto study utilized optimization technology to evaluate a number of hydraulic modelling scenarios.

The results from the JOS will also provide the framework for an amended water supply and cost sharing agreement with Toronto.

4.3 Master Plan Update

United Utilities Canada Limited in association with MacViro Consultants Inc. has completed the technical evaluation of the Master Plan Update.

The Master Plan Update has defined how growth expectations and water service improvements should be co-ordinated throughout the Region, including the new supply from Peel Region. The Master Plan Update will ensure that each water service area in each local municipality is examined, and that long-term water infrastructure requirements are identified in a phased-in program for inclusion in the Region's 10-Year capital program and Development Charge By-Law Update.

4.4 Assignment of Water Capacity

Water allocation for the communities in York Region is established to respond to the anticipated growth requirements provided by each local municipality.

1. Population and employment projections are developed and agreed between local Municipality and Regional staff.
2. The projections are used by the Region to develop Master Plans for water (and wastewater) infrastructure.
3. The Master Plan provides the basis for development and implementation of the Region's 10-year Capital Program.
4. Pursuant to the Region's policy, capacity is released up to two years in advance of construction of the works, subject to certain conditions.

Water capacity is based on the capabilities of the Region's water systems to meet the demands of the communities it services. The Region assigns water capacity to the local municipalities who, subsequently, are responsible for allocating to the individual plans of subdivision. Water allocation is used by the Region in the review of land development applications circulated by the local municipalities, and in planning for future capacity requirements.

Because the Regional infrastructure program is inherently linked to the forecasts, allocation capacity is similarly linked to the population projection.

4.5 Short Term Accelerated Growth and Water Demands

York Region has experienced accelerated growth rates over the last several years. This trend is expected to continue in the short term. This triggered the need to update growth projections and develop water demand projections to ensure the timely delivery of infrastructure and servicing capacity to meet the projected growth. As such, the Regional Planning Department in conjunction with local municipalities has developed high growth scenarios to reflect the short term accelerated growth anticipated in certain areas of York. These assumptions were used to generate demand projections for use in the Water Master Plan Update.

5. ANALYSIS AND OPTIONS

5.1 Peel Water Supply

The Water Supply Agreement with Peel Region is based on a staged approach designed to meet York's projected demands up to 2031. These yearly demands are based on growth projections prepared by York's Planning Department. The infrastructure program developed by Peel Region has been recently revised based on Peel's review of its Water and Wastewater Servicing Master Plan for the Lake Based System (draft results only). This program will meet the demand projections for growth in both York and Peel. According to Region of Peel staff, the critical projects within Peel Region are proceeding according to schedule, for implementation and ultimate delivery by December 2004. Table 1 summarizes all of the revised cost-shared projects.

Table 1
Revised Schedule for Peel Water Supply
DRAFT

Year Required	Description	Cumulative Supply Capacity to York	York's cost share (\$millions)
2005	- NE Brampton Feedermain from Beckett-Sproule PS to Airport Rd PS - York transmission main from Airport Rd PS to Peel/York Boundary - New Airport Rd PS - New electrical system at Lakeview WTP	19.4 ML/day	72.6
2006	- Lakeview WTP Expansion - New PS at Lakeview WTP	133.9 ML/day	48.1
2007	Hanlan to Beckett –Sproule Transmission Main	133.9 ML/day	35.4
2009	- Hanlan PS - Beckett-Sproule Transfer Station	133.9 ML/day	13.5
2011	- Lorne Park WTP Expansion - Airport Rd PS Expansion	210.5 ML/day	26.1
2016	Lakeview WTP Expansion	303.6 ML/day	57.0
2021	- Beckett-Sproule Transfer Station Expansion - Airport Road PS Expansion	303.6 ML/day	1.1
2024	- Burnamthorpe to Hanlan PS Transmission Main - Hanlan PS Expansion	388.3 ML/day	23.2
Total Cost			\$277.0

The Peel Water Supply Agreement specifies the projected yearly maximum day demands for York. Peel is committed to providing water supply to York to meet these yearly projections. It is important to note that the timing of the infrastructure program shown in Table 1 within Peel Region may change. As long as the yearly supply limits to York are maintained, Peel may adjust the supply capacity limits on the infrastructure expansions and the construction schedule.

The details and status of the Peel Feedermain project are tabled in a separate report to the June 18, 2003 meeting of the Transportation and Works Committee entitled "York Peel Feedermain Project Status Update".

5.2 Toronto/York Joint Optimization Study

The hydraulic modelling, optimization and technical assessment of the Toronto and York water systems was finalized by Earth Tech Canada Inc. and the Draft Consolidated Report was submitted to the City of Toronto and York Region in April 2003.

The focus of the JOS was the long-term supply needs for the combined Toronto and York water systems. The study recommends the optimum water supply limits in 2011 and 2031 which are summarized in Table 2.

Table 2
Supply to the York Water System

Supply Source	2011 (ML/day)	2031 (ML/day)
Toronto	486	528
Peel	134	328
Groundwater	69	69
Totals	689	925

The JOS recommends a maximum day supply from Toronto to York in 2011 of approximately 486 ML/day and in 2031 of approximately 528 ML/day. The JOS recommends that the Peel water supply be utilized to near its full available capacity; 134 ML/day in 2011 and 328 ML/day in 2031, and that the groundwater supply from the Yonge Street Aquifer remain unchanged. The limits of water supply from Toronto, Peel and groundwater sources will continue to be reviewed and refined.

The total estimated cost to 2031 for the recommended infrastructure solution is \$1,167 million of which \$687 million will be for works in York Region. Additionally, it is expected that some portion of the \$480 million for works in Toronto will be cost-shared with York Region. The cost sharing for these works will be based on agreed principles and determined in later negotiations with the City of Toronto.

5.2.1 Amendment to Current Agreement

The results from the Joint Optimization Study will provide the framework for an amended water supply agreement with the City of Toronto. The agreement will specify the yearly supply limits to meet York's projected demands as well as the phasing of the required infrastructure.

Discussions have been initiated with City of Toronto staff regarding cost sharing of the infrastructure identified in the Joint Optimization Study. The 1998 Water Supply Agreement between the City of Toronto and York Region will be amended to incorporate the updated supply volumes and infrastructure cost sharing arrangements. These revisions will be discussed at the staff level over the next year with the principles of an amended agreement with Toronto reported to Council in spring 2004.

5.2.2 Interim Short Term Supply

The current agreement with the City of Toronto specifies a maximum supply of 419 ML/day in 2003 and 440 ML/day in 2004. York Region staff have asked City of Toronto staff to consider increasing the maximum supply in 2003 and 2004 in order to meet the short-term increase in demands in York. On May 21, 2003 Toronto Council approved an amendment to the current water supply agreement to 430 ML/day in 2003 and 460 ML/day in 2004. York staff had originally requested an amount higher than that provided, but are satisfied that the amounts granted are sufficient.

The introduction of Peel water into Pressure District 6 in Maple will necessitate the redistribution of water supply from Toronto, to concentrate supply to the central and eastern parts of the Region. During the initial years, the redistribution of water from Toronto will not require an amendment to the existing agreement with the City as the total supply will not exceed the current limit of 440 ML/d. The redistribution requires an agreement at staff level only.

The short-term and long-term water supply requirements and detailed infrastructure program within York Region have been addressed through the Master Plan Update as outlined in Section 5.3.

5.3 Master Plan Update

A Public Information Centre was held on February 11, 2003 to review and confirm the objectives of the Master Plan Update, to provide information on the alternatives being considered relating to long term water supply in the Region, and to receive comments from the public on the planned activities.

The technical assessment was finalized in April 2003, including integration of the JOS results and consideration of an accelerated growth projection. Final documentation will be completed in June and a public meeting will be held following the presentation of this report to Regional Council.

Population growth anticipated for each service area in the integrated York Water System/Yonge Street Aquifer System is shown in Table 3.

Table 3
Serviced Population - York Water System/Yonge Street Aquifer System

Service Area	2001	2026
Aurora	41,650	75,000
Markham	217,120	348,000
Newmarket	68,207	98,000
Queensville		34,416
Sharon	-	
Holland Landing		15,060
Richmond Hill	137,843	219,000
Vaughan	190,535	324,091

Population growth anticipated for the Georgina Water System and each of the satellite systems is shown in Table 4.

Table 4
Serviced Population
Georgina Water System and Satellite Systems

Service Area	2001	2026
Keswick	21,000	49,645
Lakeshore	-	1,690
Sutton	4,400	14,328
Ballantrae/Musselman's Lake	2,750	6,194
King City	4,800	12,500
Kleinburg	3,100	5,909
Mount Albert	2,800	5,459
Nobleton	3,200	7,493
Schomberg	1,500	3,301
Stouffville	12,000	26,312

A summary of the proposed capital works and phasing plan to 2036 to meet the long term water servicing requirements for each of the local Municipalities is included in Attachment 1. A plan of the system in 2036 is included in Attachment 2. The results of the Master Plan Update were subsequently used to establish water allocation capacity limits and targets for the water service areas in each of the local Municipalities.

5.4 Assignment of Water Capacity

5.4.1 Determination of Water Capacity to Meet Growth Demands

The Regional Planning Department in conjunction with local municipalities has developed a high growth scenario to reflect the short term accelerated growth anticipated

in certain areas of the Region (see Table 5). The accelerated population scenario represents 68,000 persons greater than identified the Regional Official Plan projection by 2011. These assumptions were used to generate demand projections for use in the Water Master Plan Update. These population forecasts have been used to generate a water demand forecast. This demand forecast has been used to determine the infrastructure program for each water service area in the Region and to identify the allocation capacity for the local municipalities.

Table 5
Short Term Accelerated Growth Scenario

Service Area	2006	2011
Vaughan	261,750	296,100
Richmond Hill	171,600	195,000
Markham	269,380	293,700
Aurora	49,000	56,100
Newmarket	79,000	87,000
Queensville, Sharon, Holland Landing	13,000	21,500

In the past York Region has enjoyed the luxury of a surplus of water capacity, in the availability of water from Toronto as well as from the Yonge Street Aquifer. The Region is now nearing the end of the current agreement with the City of Toronto (2004). As well, the Yonge Street Aquifer has a limited capacity beyond its current supply. The Region's supply sources, as well as the infrastructure program, are meeting the demands of growth with 'just in time' delivery. Due to the rapid growth the Region has experienced over the last few years, the supply of water must be managed more carefully.

The capacity for these service areas is based on the available and planned supply from Toronto, Peel and groundwater. Allocation capacity is also dependent on the completion of the Peel Water Supply Project as well as a number of Priority Projects (Aurora-Newmarket Water Supply Project, McNaughton Road / Major Mackenzie Drive watermain, Markham PD6 reservoir and watermain).

In accordance with Council policy, capacity is being provided for development approval purposes in 2003 based on the completion of the Peel Feedermain in December 2004. Additional allocation capacity will be provided in 2004 and will reflect the physical system capacity available to 2011. This allocation will be provided subject to the satisfactory progress of the relevant Priority Projects as listed below:

- Vaughan – Peel Feedermain.
- Richmond Hill – McNaughton / Major Mackenzie watermain.
- Markham – PD6 Reservoir and watermain, McNaughton / Major Mackenzie watermain.
- Aurora and Newmarket – Aurora / Newmarket Water Supply.
- Holland Landing, Sharon and Queensville - Aurora / Newmarket Water Supply.

Capacity is being released to the area municipalities by Pressure District to assist in monitoring the development rate in each distinct district. The total allocation limit is based on a fixed capacity. The values reported by Pressure District are based on projections and are provided merely to assist the Region and the municipalities to track and monitor growth and the resultant impact on supply and infrastructure requirements.

The areas serviced by the Integrated York Water System and Yonge Street Aquifer System are dependent on water supply from two sources, the City of Toronto and Peel Region. Both of these sources are based on external agreements, which specify staged rates of supply that are tied to the Region's planned rate of growth.

Allocation capacity is based on the available supply limits and can be made available for development approval purposes up to two years ahead of infrastructure delivery in accordance with Council policy. The actual supply capacity is intended to service the demands of future growth that has been projected by each of the area municipalities. Surplus water supply capacity has not been incorporated in the water supply agreements with Toronto and Peel. Surplus capacity to York would require a huge increase in the cost of capital infrastructure in York, Toronto and Peel, a cost that would be born solely by York to service demands that are not yet realized.

Table 6 summarizes the allocation capacity for each of the municipalities serviced by the York Water System and Yonge Street Aquifer System and reflects the physical system capacity available.

Table 6
Allocation of Water Capacity in the Integrated York Water System
and Yonge Street Aquifer System

Municipality	2003 Projected Population	Current Assignment of Water Capacity	Proposed 2003 Allocation Capacity	Proposed 2004 Allocation Capacity
Vaughan	219,021	227,800 ¹	241,800	296,100
Richmond Hill	151,346	157,400 ¹	164,100	195,000
Markham	238,024	250,000	258,900	296,100
Aurora	44,590	52,000	52,000	56,100
Newmarket	72,524	80,000	80,000	87,000
Queensville, Sharon, Holland Landing	12,890	15,000	15,000	21,400

¹ Estimated allocation of water capacity based on current total supply capacity.

The allocation capacity for the satellite communities is dependent on the well supplies for each individual community as well as the requirement for system storage. Each community has been assessed separately to determine the infrastructure requirements that

will provide additional servicing and allocation capacity. The allocation capacity for the satellite communities is presented in Table 7.

Table 7
Water Capacity in the Satellite Communities

Municipality	Population (2001)	Current Capacity	New Capacity	Infrastructure Required	Planned Year Capacity Available
Ballantrae	2,750	3,660	6,550	• New wells	
Stouffville	12,000	18,000	21,000	• Elevated Tank	2004
			28,000	• New wells	2007
Schomberg	1,500	2,500	4,300	• New wells	2006
				• Elevated Tank	
King City	4,800	4,800	6,000	• Elevated Tank	2004
			12,500	• New wells	2006
Nobleton	3,200	5,000	8,500	• New wells, Elevated Tank	2011
Kleinburg	3,100	4,000	4,070	• Elevated Tank	2004
			7,000	• New wells	2006
Keswick, Sutton, Lakeshore	21,000 4,400	24,200 5,670	45,000	Georgina Water Treatment Plant	2005
Mount Albert	2,800	2,800	5,100	• Elevated Tank	2004
			5,700	• New wells	2011

Allocation of water capacity is based on available supply limits and can be made available for development approval purposes up to two years ahead of infrastructure delivery subject to certain conditions as outlined in the Region's proposed "Framework for the Allocation of Water and Wastewater Servicing Capacity". The draft conditions set out in the Framework for Allocation will assist in the planning approval process and link the development areas to the timing of the required infrastructure. The timing for completion of a number of priority projects is critical in achieving these allocation limits.

5.4.2 Tracking and Monitoring of Capacity and Allocation

Tracking and monitoring of water capacity and allocation to developments at the Draft Plan stage requires a co-ordinated effort between each of the nine area municipalities and staff at the Region to achieve the following objectives:

- Carefully manage allocation to maintain generally a three-year supply of serviced land.
- Avoid tying up allocation for large blocks for long periods of time.
- Marry allocation requirements of local municipalities with Regional servicing strategy.

- Carefully track and manage allocation capacity by the Region and local municipalities.

Although allocation capacity will be made available for development approval purposes pursuant to the capacity of the related water servicing infrastructure, annual targets have been established for each local municipality and/or water service area to aid in overall monitoring and management. The local municipalities will continue to manage and grant allocation capacity to local developments and the Region will monitor growth and allocation capacity to ensure the regional infrastructure program is keeping pace. Additionally, the development of strict phasing controls for new draft plans of subdivision and preparation of municipal-wide development phasing plans by each local municipality will help to balance delivery of water servicing infrastructure with the allocation requirements for growth in the Region.

5.4.3 Management of Allocation Capacity

The management of water allocation capacity is subject to further discussions with the local municipalities based on planning initiatives being introduced in a report to the Planning Committee on June 18, 2003, entitled "Management of Servicing Capacity Allocation".

The purpose of the Planning report is to establish:

- Mechanisms to efficiently manage assignment and allocation of water and sewer system capacity.
- Best practise policies to be included in secondary plans that phase development so that it is consistent with the timing of the delivery of Regional servicing infrastructure.
- Standard condition(s) of draft plan approval that implement the phasing requirements set out secondary plans, block plans or tertiary plans that link the registration of phases of subdivision development with the availability of servicing capacity.

Meetings with each of the local municipalities attended by local engineering and planning staff were held in May 2003 to individually review water allocation issues, including capacity limits, annual targets, and overall management as well as the Region's proposed approach to tracking and monitoring of allocation.

6. FINANCIAL IMPLICATIONS

The Joint Optimization Study has identified a significant infrastructure program for both York and Toronto, at a total cost of \$1,167 million. A substantial part of the program needs to be implemented by 2011 at a total cost of \$771 million. York's share of the Toronto works will be determined through future negotiations with the City of Toronto, based on the results of JOS. At that time, the Region may, subject to Council approval, enter into negotiations with the City of Toronto for an amended water supply agreement.

Table 8 below summarizes the main capital expenditures required for the integrated Toronto/York system over the next ten years, as well as up to 2031, based on final results from the Joint Optimization Study. A portion of the works within Toronto will be cost shared with York..

Table 8
Toronto/York Integrated System
Capital Expenditures (\$million)

Location of Works	2003-2011	2012-2031	Total
JOS Results			
York	\$223	\$187	\$410
Toronto ⁽¹⁾	\$352	\$128	\$480
Peel Cost Shared	\$196	\$81	\$277
Total Cost	\$771	\$396	\$1,167

⁽¹⁾ a portion of the works within Toronto will be cost shared with York

The Master Plan Update has further refined these costs to reflect the detailed long-term and short-term servicing and operational needs of York Region. The capital expenditures identified in the Master Plan Update are presented in Table 9.

Table 9
Capital Expenditures (\$million)

	2006	2011	2016	2026	2036	Totals
Master Plan Results						
York Water System						
Watermains	117.0	91.6	46.3	8.1		263.0
Pumping Stations	16.2	18.0	9.8			44.0
Storage	16.3	7.7	5.9	7.6	2.0	39.5
Supply and Treatment	9.6	2.4	7.9	6.1		26.0
Decommissioning	0.2	0.3	0.3	0.2		1.0
Satellite Communities	38.2	21.3	8.9		12.0	80.4
Peel Cost Shared	120.7	75.0	57.0	24.3		277.0
Total Cost	318.2	216.3	136.1	46.3	14.0	730.9

Generally, funding for the infrastructure projects will be from Development Charges (80%) and Rate Reserves (20%).

All of the short-term and long-term works within York have been incorporated in the DC By-law Update. Most of the works were incorporated in the 2003 capital plan with the exception of newly identified projects which will be incorporated in the 2004 Capital Plan.

7. LOCAL MUNICIPAL IMPACT

York Region is committed to providing water supply to meet the local municipalities' demands for both short term and long term growth.

A number of Priority Projects have been defined in each of the municipalities. The following is a partial list of the Priority Projects that have been implemented within the last year.

- **Vaughan** – Peel Feedermain
- **Richmond Hill** – Elgin Mills Road watermain.
- **Markham** – Reservoir and watermain.
- **Aurora and Newmarket** – Aurora / Newmarket Water Supply.
- **East Gwillimbury** – Mount Albert elevated tank.
- **Whitchurch – Stouffville** – Stouffville elevated tank and watermain.
- **King** – New well supplies.
- **Georgina** – Metro Road watermain.

8. CONCLUSION

Final documentation of the Master Plan Update will be completed in June 2003. A Public Information Centre will be held following the presentation of this report to Regional Council.

Final documentation of the Joint Optimization Study will be available in summer 2003.

The work completed on the Joint Optimization Study and Water Master Plan Update has provided the Region with the information required ensuring that the short and medium term demands for water will be met. The assignment of water capacity provided to the local municipalities will continue to be reviewed and updated based on the most current population projections in order to address the actual capacity of the Regional supply and infrastructure. Discussions will continue with the local municipalities to further define and work towards implementation of a clear method of monitoring and tracking allocation capacity.

Staff will report back to Council in spring 2004 with the principles of an amended agreement for water supply and infrastructure cost sharing with the City of Toronto.

The Senior Management Group has reviewed this report.

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

