Study Objective
The objective of this study is to locate a new Halton Region lake-based reservoir and feedermain to serve Zone 5L. This reservoir will serve approved growth in Milton and Halton Hills 401 Corridor on the existing lake-based water system. The reservoir is needed to store treated water drawn from Lake Ontario. The stored water will be used on a regular basis for residents of Milton and the Halton Hills Highway 401 corridor for fire protection, for balancing water supply during peak hour demand and for emergency supply.

Halton Region proposes to add the following new facilities as a result of this study:
- Reservoir site will be approximately 2.2 hectares in size;
- New underground reservoir for 20,000 cubic metres of storage, to be expanded to 40,000 cubic metres of storage in the future;
- A feedermain within road rights-of-way, in order to connect the reservoir to the existing water supply system;
- The reservoir site will be landscaped and fenced with one small building and a driveway visible.

Project Description
The South Halton Water and Wastewater Master Plan Review (2003) identified the infrastructure required to service planned growth in Halton Region. One of the projects identified in this Master Plan Review was a storage reservoir for Halton Region’s Zone 5L lake-based water system. This was recently confirmed during the ongoing 2007 South Halton Water and Wastewater Master Plan Update. The purpose of this reservoir is to provide water storage for fire protection, balancing water during peak hours, and emergency supply. This reservoir will serve existing and approved growth in the Town of Milton and Town of Halton Hills (401 Corridor) urban areas.

The ultimate reservoir size required is 40,000 cubic metres. The reservoir will be constructed in two stages: 20,000 cubic metres of initial storage (construction to be commenced in 2009) with further expansion to 40,000 cubic metres sometime after 2021.

The Master Plan Review completed portions of Phases 1 and Phase 2 of the Class EA process by identifying the need for and recommending the construction of additional storage capacity in Zone 5L. The impact of alternative solutions on the environment and a specific site for the reservoir are to be determined through this Class EA Study.

Halton Region Staff selected eight possible sites that could accommodate the reservoir. After an evaluation of the criteria, Site B was chosen as the originally recommended site.

After the first Public Open House held on March 29, 2007, Halton Region received numerous comments from agencies and members of the public on Site B. A concern was that the recommended site, next to an existing reservoir on the Niagara Escarpment, was not preferred due to the potential for disruption to the rural character of the escarpment and the potential visual impacts. Others wrote expressing their concerns with the use of prime agricultural lands on other sites for the reservoir.

In order to address the comments, Halton Region undertook a re-evaluation which:
- Re-examined all sites and feedermain routes;
- Added mineral aggregate criteria;
- Re-examined agricultural criteria;
Consulted further with Conservation Halton regarding environmental features;
Examine Provincial, Regional and local land use policies including policies and
criteria of the Niagara Escarpment Plan.

The re-evaluation resulted in the selection of a new site as Halton Region’s preliminary
recommendation, Site C.

**Preliminary Recommended Solution - Site C**

Halton Region’s re-evaluation resulted in a revised preliminary recommended solution. The new
site is located north of the intersection of No. 10 Side Road and Third Line. The proposed
feedermain is expected to be located in the road allowance of Third Line and the future James
Snow Parkway.

In order to present this preliminary preferred solution to members of the public, Halton Region
hosted a Public Meeting on November 13, 2007. In total 55 persons signed in to the meeting.
Halton’s representatives at the meeting included:

- Magda Bielawski, P.Eng, Project Manager (Region)
- Jacqueline Weston, P.Eng, (Halton Region)
- Ron Rae, C.E.T., (Halton Region)
- Vinor Servera, P.Eng, (Halton Region)
- Linda Leeson (Halton Region)
- Norm Miller (Halton Region)
- Mario Parente, P. Eng, CH2M HILL
- Janet Amos, MCIP, RPP, Amos Environment + Planning

**Summary of Comments from Participants**

Halton Region staff and project team members summarized the comments that they heard and
questions discussed with participants at the meeting on November 13, 2007. Written comment
sheets and individual’s letters were reviewed and the comments considered. The issues raised
by study participants are important to Halton Region. Halton Region continues to address these
issues in the Zone 5L Reservoir and Feedermain Class EA Study.

**Additional Study**

As a result of receiving these comments and concerns at the November 13, 2007 Public Open
House, Halton Region is undertaking some additional studies. For a complete summary of next
steps and the additional tasks being undertaken by Halton Region, please see the final section of
this summary (page 15).

**Resources for more information**

For more background materials, please see Halton Region’s website at path:
http://www.halton.ca/PPW/water/ClassEA/default.htm and click the Class EA Project list (left hand
side of page) and select “Zone 5 Lake-Based Reservoir and Feedermain”.

The panels from the Public Open House and four Technical Memos which have been completed
to date are posted on Halton Region’s website. Additional Technical Memos will be posted as
they are finalized.

The following summarizes all the comments that were received and the responses from Halton
Regional project team.
1. Where will the water come from? Will it be drawn from groundwater wells on the site?

The reservoir will not draw water from the local groundwater or an area aquifer. The purpose of this proposed reservoir is to provide storage of water that is drawn from Lake Ontario, treated in Oakville and Burlington then pumped north to Milton. The stored water is for firefighting demand, water to augment supply during peak hour demands and emergency supply to meet the planned need of the residents in south Milton and Halton Hills Highway 401 Corridor during periods of peak demand.

In order to maintain a specific range of pressure in the water distribution system (Pressure Zone 5L of the existing urban area of the Town of Milton and the Halton Hills 401 Corridor), the reservoir must be located at a precise elevation above sea level (the top of the reservoir level is set at 267 meters above sea level). Through the Class EA, Halton Region reviewed eight candidate reservoir sites that met these criteria.

2. Groundwater and Potential for Well Impacts

Many comments were received about groundwater and the potential for the loss of groundwater or impact to individual’s wells that may occur as a result of the construction of the reservoir and the feedermain. As a result of receiving these comments and concerns, Halton Region is undertaking some additional studies. For a complete summary of next steps and the additional tasks being undertaken by Halton Region, please see the final section of this summary (page 15).

Halton Region’s Response Re: Groundwater

In response to the many comments and questions raised about the potential for groundwater effects, Halton Region commits to carrying out additional study to determine potential groundwater flow and recovery rates for areas which could be impacted by the construction. This study will involve contacting homeowners to seek permission to take field measurements of water levels in nearby domestic water wells to determine wells potentially impacted by the construction activities. Halton Region will develop site specific construction mitigation measures to mitigate negative impacts on local water wells. Such measures will be identified to address issues when or if they arise in the field.

Mitigation measures may include providing water supplies to landowners in the event they experience a temporary loss of water supply during construction.

The sections (a) to (h) below provide more details on the comments received and Halton Region’s responses.

a. Residents’ wells are already sensitive in this area;

Halton Region understands and recognizes that all private groundwater supplies are valuable and that wells in this area are known to be sensitive.

b. Wells are located close to the road;

It is appreciated that resident’s wells are located near to Third Line. This will be considered in the design of the watermain and the mitigation of any possible construction impacts.

c. Residents wanted to know how Halton Region could determine which wells are potentially affected;
For this study, the potential impacts to wells in the area of the new Zone 5L Reservoir and Feedermain were evaluated by a groundwater specialist (i.e. hydrogeologist) hired by Halton Region. The potential for impact due to construction activity was determined based on proximity of the well to the construction zone; existing water level of the well and stratigraphy in the construction areas in relation to the water levels. Ontario Ministry of the Environment water well records were used in conjunction with topographic information to identify possible impacts of reservoir and feedermain construction on nearby domestic wells.

As a result of the preliminary analysis, it is the hydrogeologist’s opinion that there is very low potential to impact wells located in the vicinity of the proposed reservoir site. With respect to the feedermain alignment, domestic wells which are located in the vicinity of the creek crossings have a potential to be impacted during feedermain construction. This is due to deeper tunnelling that would be required for those creek crossings.

Halton Region's goal is to ensure that groundwater and people's wells are safeguarded. Prior to construction Halton Region will conduct a well inventory survey along Third Line and in the vicinity of the proposed reservoir site. Information collected during this well inventory survey will be used to develop a comprehensive well monitoring program that will be conducted before, during and after construction. This well monitoring program will assist in evaluating the existing conditions and measuring well water recovery rates.

If it is found that construction activities have impacted local private wells, then Halton Region will ensure that water will be supplied until the groundwater supply is restored.

As a result of the comments received, Halton Region’s hydrogeologist will look into this matter in more detail and additional information will be collected by Halton Region prior to detailed design in order to ensure that groundwater wells are safeguarded. For a complete summary of next steps and the additional tasks being undertaken by Halton Region, please see the final section of this summary (page 15).

d. Concerns about depth of construction of the reservoir;

In order to assess groundwater in this area for this study, the groundwater specialist hired by Halton Region (i.e. hydrogeologist) reviewed Ministry of the Environment water well records for an area within 200 meter radius of the proposed reservoir site. The data for those wells was reviewed and compared to the ground elevation at the reservoir site.

The bottom of the reservoir’s concrete tank, which is used to store the Lake water, will be at an elevation of approximately 260 meters. The groundwater levels in the vicinity of the proposed reservoir range between 238 to 249 meters in elevation. This means that the existing groundwater is 11 to 22 meters below the bottom of the proposed excavation, thus there is low potential need for dewatering of the reservoir construction site and little or no impact is anticipated.

e. Concerns about depth of construction of the feedermain (including the knoll located on Third Line);

In order to assess groundwater in this area for this study, the groundwater specialist hired by Halton Region (i.e. hydrogeologist) used Ministry of the Environment water well records for an area within 100 meter of the feedermain alignment.

For most of the construction of the feedermain, dewatering will not be necessary, and potential impacts to domestic water wells will be low. This is due to the fact that the depth of most of the construction trench will be two to three meters below ground.
To safeguard the environmental features associated with the four creeks crossing Third Line, Halton Region will use tunnelling techniques to convey the feedermain under the creeks. The deepest part of the feedermain construction will be at the tunnels to be built under the watercourses. Preliminary assessment indicated that the tunnelling depths may be very close to the water depths in some of the domestic wells located within the 100 meter radius of the creek crossings along Third Line.

Halton Region will undertake additional studies during the detailed design to identify impacts and mitigation measures. In the event, that there is a change to a resident’s water supply, Halton Region will ensure that water will be supplied until the groundwater supply is restored.

In response to residents' requests for assurances that private well supplies will not be compromised, Halton Region commits to complete the feedermain construction as quickly as possible to reduce the time period during which the excavation site will be open. This will reduce the potential for dewatering of area groundwater supplies that normally feed domestic water wells.

The creek crossings will be done in consultation with Conservation Halton and only at the dates, durations and in the locations as set out in their approvals.

For a complete summary of next steps and the additional tasks being undertaken by Halton Region, please see the final section of this summary (page 15).

f. More information about hydrogeological issues requested;

A preliminary groundwater investigation was completed to determine potential impacts. During the design stage a more detailed hydrogeological investigation will be carried out to identify potential groundwater flow within the construction areas and identify mitigating measures if required.

Private wells within 100m of the feedermain alignment and within 200 m of the proposed reservoir site will be monitored before, during, and after construction. Any impacts on private wells due to construction will be identified immediately and mitigated on an individual basis. Halton Region will ensure that each of the potentially affected private home owners will maintain the same water supply as they presently have, both during and after construction.

g. Residents referred to the Halton Hills Pumping Station #2 construction project on Steeles Avenue near Hornby and the impact of that construction on Hornby residents’ wells and their own hydrogeological concerns with this proposed project;

With reference to the Halton Hills Pumping Station #2 construction project, Halton Region staff memoranda dated June 26, 2007 and November 5, 2007 and a staff report dated December 18, 2007, are included on the project website at: www.halton.ca/PPW/water/ClassEA/default.htm.

These reports outline the project undertaken, the problems encountered and Halton Region’s ongoing actions to resolve the problems. It should be noted that this construction for Pumping Station #2 was located much deeper below ground level and is significantly different from the proposed Zone 5L feedermain. The likely cause of the excess groundwater entering the work area on the Pumping Station was the failure of a plug used to cap a borehole. Halton Regional contractor’s swift actions ensured that residents were not without drinking water for long. Halton Region is continuing to monitor the situation and individuals' wells are being restored and returned to use as soon as is safe and practical.
h. Well impacts and potential property value reductions;

Halton Region's intention is to protect private water wells. The Ontario Water Resources Act regulates every person who takes a large volume of water from underground by requiring that they first obtain an approval from the Ministry of the Environment. Once that permit is issued, the holder is responsible “to prevent the water taking under the permit from causing interference with other water takings and to remedy any interference with other water takings that is caused by the water taking under the permit”. (see Ontario Water Resources Act, Section 34.1 (9)(j) )

Where it can be shown that a project caused a reduction in quality or quantity of drinking water, Halton Region is responsible to replace that drinking water. Like other municipalities conducting works in and around private wells, Halton Region considers the following methods to restore drinking water: clean and restore well, replace pumps, replace well or supply drinking water for household needs.

Some residents indicated that property values are scrutinized based on the ability to find a good source of water on site. Rural residents continue to be responsible for obtaining their own private water sources. Halton Region is not involved in the provision of water private supplies to rural residents. More information on well water safety is available through Halton Region's Health Department. However, Halton Region has responsibility to make amends should there be impacts to private well water supplies caused by a project under the Region’s control.

3. Concerns regarding individual trees and the woodlots along Third Line that may be destroyed. How can trees be avoided during construction?

In its evaluation of the potential impacts to trees in this study, Halton Region considered both individual trees, hedgerows and the woodlots located adjacent to the roads (Third Line).

Halton Region’s first goal is to avoid trees by locating the feedermain within road allowances.

Halton Region will protect trees by including an environmental inspector in the detailed design and construction process to provide guidance on tree saving techniques. Tree saving techniques include preparatory measures so that the trees are not subject to construction related stress by using, protective fencing, restricting work areas, placement of materials away from sensitive root zones, enhancing tree growth through fertilization or pruning, maintaining a buffer zone away from trees if possible, and post construction monitoring and mitigation measures (e.g., continued fertilization, watering, pruning).

4. Possible aboriginal burial ground south of 10 Side Road

The project team for Halton Region included an archaeological firm with specialists in identifying sites of possible archaeological significance so that they may be avoided or impacts mitigated during project construction.

The archaeologists reviewed each of the eight sites considered for the Zone 5L Reservoir and Feedermain. The study noted that there is “significant potential for the location and recovery of additional Aboriginal archaeological resources in undisturbed locations”. The close proximity of historic structures to the feedermain routes also indicates a high potential for encountering significant historical remains. The study recommended that a Stage 2 archaeological assessment be undertaken in all undisturbed locations for the preferred site. This recommendation was the same for each of the eight alternative sites. This recommendation will be incorporated into the final report and implemented on the selected reservoir site.
5. Reservoir site has sandy soils

Residents noted that the presence of sandy soils on the proposed reservoir site may be problematic for construction of a large in-ground facility.

In response to this comment about the potential for poor soils, Halton Region commits to carrying out additional study to determine soil conditions in the vicinity of the proposed reservoir construction. This study will involve contacting the landowner to seek permission to take soil samples to determine if there is a concern with regard to the construction activities. The soil analysis will determine the method of construction to use at this site to ensure a safe footing for the reservoir.

For a complete summary of next steps and the additional tasks being undertaken by Halton Region, please see the final section of this summary (page 15).

6. Location of the reservoir (can it be relocated to northwest corner of intersection and its orientation be adjusted 90 degrees to reduce visibility?)

The proposed land parcel required to accommodate the ultimate reservoir size will be 2.2 hectares (5.4 acres). The dimensions for the ultimate reservoir size are shown on the site plan on the project website at www.halton.ca/PPW/water/ClassEA/default.htm. For the first phase the reservoir dimensions would be approximately 71.5 meters (78.2 yards) x 47.25 meters (51.7 yards). The height of the reservoir would be 6 meters, about 20 feet high. Approximately half of the reservoir would be underground, so the excavation depth would be 3 meter or 10 feet deep, so approximately 10 feet, equivalent to a single storey building, would be above ground. The excavated soils from the site would be used to cover the structure above ground.

A photo of the existing Halton Region reservoir in Acton which resembles this proposal is posted on the project website with the panels from Public Open House #2.

7. Residents are concerned with possible traffic impacts during construction, specifically at these locations:

- eastbound traffic crossing Third Line on No 10 Side Road will speed over the hill just west of No 10 Side Road and will cause accidents during construction;
- On No 10 Side Road just west of Hume Court, there is an elevation in the road. Visibility is obstructed for left turns onto No 10 Side Road from Hume Court;
- the entrance to Hume Court from No 10 Side Road is tight and due to the way the road is constructed it could be problematic with traffic exiting and entering Hume Court;
- Third Line residents are concerned that Halton Region will be resurfacing the roadway to construct the feedermain (the road was recently resurfaced);
- Residents along Third Line are concerned with accessibility to their properties during construction.

During construction, the contractor must comply with a Regionally-approved plan for traffic control and safety measures. Each traffic control plan is specifically designed to take into account local features such as sight lines, road speeds and traffic levels during all times of day.

With respect to road repairs, it is Halton Region's practice to restore any construction area to pre-construction conditions or better. Halton Region will make all efforts to maintain access to all roads. There may be short periods of time (1 to 2 hours) that one lane over a portion of the road may be shut due to construction procedures. Halton Region will have a better understanding of
possible shutdowns as detail design progresses. Affected residents will be advised and consulted on an ongoing basis as construction progresses.

8. **Residents expressed concern about the appearance of the reservoir; what material will be used to line the reservoir; site may look like a wall; disruption if security light at reservoir site is left on all night; withstanding earthquakes;**

The material to be used in the construction of the reservoir is mainly reinforced concrete. The structure will consist of a large concrete tank which will be buried in soil. The outside appearance/landscaping of the facility is subject to review at detailed design (at the November 13, 2007 Public Open House a photo of the Acton facility was displayed which is similar to what is proposed here).

The proposed reservoir facility is subject to Site Plan Approval by the Town of Halton Hills. Through detailed design and Site Plan Approval, Halton Region and the Town will review grading, drainage, landscaping, lighting and security measures. Fencing and outdoor lighting are likely security measures; however, the lighting should be shielded and directed to illuminate key areas, and not affect nearby residents. Affected area residents will be advised and consulted on an ongoing basis as detailed design progresses.

Halton Region advises that the design is not required to meet earthquake conditions. The risk of failure in such a way is relatively low for a reservoir since there is minimal pressure on the structure walls which will be half buried. The primary design concern is ground water getting in, not treated water getting out. The design of the reservoir will however account for the slosh pressure differential due to the water movement within the reservoir during an earthquake for the wall sections above the ground elevation. The structure is designed, constructed and maintained to be water tight such that no groundwater gets into or stored water leaks out of the reservoir.

9. **Residents concerned with loss of agricultural land**

Halton's Official Plan objectives include preservation of prime agricultural lands. All of the eight alternative sites are on prime agricultural land; however utilities are permitted on prime agricultural land including water supply infrastructure. Preserving as much agricultural capability was considered and discussed with the owners of the candidate sites. The proposed site is 2.2 hectares (5.4 acres). We understand that the remaining lands of Site C will continue to be a viable farm for the landowner.

10. **Numerous comments were received about the selection of sites other than Site C.**

   a. **If Site B on the Niagara Escarpment was unacceptable due to visual impacts, why is this one acceptable? Niagara Escarpment Commission has no right to object to a project for the public good with the lowest cost; a lot of scepticism about the Niagara Escarpment Commission; it was noted that NEC approves projects with more negative impact uses such as quarries and then won't allow a very low impact reservoir; continue to explore a site on Niagara Escarpment.**

   The grading and visual impacts associated with the candidate sites on the Niagara Escarpment (Sites A and B) are subject to specific policies and criteria under the Niagara Escarpment Plan. There were concerns raised by the Commission staff that even after the completion of the construction of a reservoir on Site B, the grade changes and the control building would be visible on Site B and not be in keeping with the existing natural and altered character of the escarpment landscape. Site B is located in a highly visible section of the escarpment.
It should be noted that the existing Regional reservoir, located on a lot adjacent to Site B, predates the Niagara Escarpment Plan. This existing reservoir is well-screened by trees; this would not be the case for Site B.

Halton Region applied for a Development Permit to consider construction of a reservoir at Site B but withdrew the application based on concerns of the Niagara Escarpment Commission in order to re-evaluate all candidate sites.

b. Site C looks fine – better than Site B

Comment noted.

c. Site F is preferable because it:
   • could potentially mitigate or resolve the Hornby issue
   • could have fewer impacts
   • could have lower costs in the longer term
   • could avoid a Part II Order request to the Minister of the Environment to require Halton Region to carry out an individual EA
   • could address the longer term servicing needs in Georgetown (beyond 2021) and include potential for future development
   • could affect fewer environmental features
   • Site C is too far from the users

Many of the possible reservoir sites for Zone 5L (and other water zones in Halton Region) are located at some distance from the users of the water. Selecting sites on a suitably higher elevation means that the facility can supply the stored water to the system via gravity flow of water from the reservoir to users. It provides the most reliable and cost effective alternative during an emergency and saves energy. The eight alternative sites all represent parcels where the elevation of land is the desired 260 meters (around 850 feet) above sea level.

Site F was thoroughly considered as an alternative for this project. When comparing Site C and Site F Halton Region considered how each would address the needs of the Zone 5L, the lake based water supply zone in south Milton, as required in the 2003 Halton Water and Wastewater Master Plan.

Site C was considered preferable because it addressed the specific problem of providing for Zone 5L water storage needs with lower natural environmental impacts and lower cost than Site F. At no time in this study was the selection of a reservoir site considered to solve water supply problems in Georgetown or future unspecified growth in Georgetown. Future growth options for Halton Region from 2021 to 2031 are under consideration in the Sustainable Halton study and its associated Water and Wastewater Master Plan Review, now ongoing.

Two Georgetown developers’ group also expressed this concern. Please see items #4 and 5 under Other Comments, below.

d. Region should change its plans by switching its water zones, building water towers in Milton, along the Highway 401 corridor or stop development;

Residents asked if Halton Region could switch the water zones so that a reservoir is not needed at this location and/or elevation. Halton Region follows internationally accepted engineering standards to devise 100 foot zones for water pressure consistently across Halton Region. In order to store water for each Zone, Halton Region may build in-ground reservoirs or water towers depending on the required storage volume required. Where an in-ground facility is not at the correct elevation for a given water pressure zone, additional controls such as pumps, backup
power, larger transmission mains, pressure control valves, etc. must be used to supply the emergency water from the reservoir to the users. These additional requirements will require additional capital, maintenance and operation costs at greater expense.

Halton Region’s project team rejected water towers as a viable long term solution in Zone 5L for two main reasons: size and ongoing maintenance. A total of six additional water towers would be required to store the same amount as the ultimate sized in-ground reservoir for Zone 5L. The cost and resources required for construction, ongoing maintenance and replacement of water towers is excessive when compared with that of an in-ground facility.

The development in Zone 5L is already planned and approved to proceed based on the comprehensive Official Plan and the Water and Wastewater Master Plan. The selection of reservoir site at the correct elevation for Zone 5L has been identified as a capital project in Halton Region’s plans for over 10 years.

e. Region should consider using a quarry site:
   - Jannock Quarry (Tremaine Rd. north of Steeles Ave);
   - Kelso Quarry (Steeles Ave and Tremaine Rd.);
   - Dufferin Milton Quarry

Halton Regional project team assessed two former quarries (the Jannock Quarry and the Kelso Quarry) for their possible re-use as reservoir sites. Unfortunately, they did not meet the elevation requirements and the fill or excavation required to make them suitable for such use negated any advantages.

These sites had been dismissed because the elevations were not correct. Many other sites were considered but only those that met specific criteria were given full review.

The Dufferin Milton Quarry located north of Milton has not been considered as a viable reservoir in this study since it is an active quarry with ongoing blasting operations and some ongoing rehabilitation.

f. Site C negative to growth in Halton Hills

Halton Region carries out comprehensive Water and Wastewater Master Plans for each serviced community at regular intervals; these are carried out in response to comprehensive Official Plan policies which direct and limit growth. As growth areas for urban servicing are designated by Halton Region Council, servicing projects are systematically identified for future construction. The Zone 5L reservoir was identified originally in the 1995 HUSP Master Plan and continues to be listed as a needed project in the current Halton Water and Wastewater Master Plan Review. Halton Region plans its growth by working closely with the Provincial Government and local municipalities, and considers all environmental, social and financial factors.

The next Official Plan review, called Sustainable Halton, is underway and it will consider growth in Halton Region, as required by the Provincial Places to Grow Plan. This review will examine where Halton Region will grow to address the Provincial Plan requirements beyond 2021. Through the Sustainable Halton planning exercise, the possible expansion of Georgetown or growth into rural Halton Hills will be considered, as well all servicing facilities to serve such growth. The location of the Zone 5L reservoir to serve approved developments in Milton and Halton Hills 401 Corridor will not influence or prejudice that review.
11. Concerns about costs and how this facility would be paid for;

In conducting a Class EA study, Halton Region considers the construction and operations costs of each alternative amongst many other criteria. Environmental or social factors are also considered in the decision-making process by Halton Region, rarely is cost the sole determining factor in the selection of a project.

The costs for the feedermain and reservoir at all eight candidate sites were established using best engineering estimates. The cost of the construction of the reservoir was similar for each of the sites. The major variances in cost are due to the distance of feedermain.

Residents in rural areas who do not receive water service from the proposed Zone 5L lake water facility would have no tax increases as a result of this project. This water reservoir, like all other components of the water system, is paid for by users. Through Halton Regional Development Charges By law developers will pay the maximum amount which may be attributed to growth as set out in the provincial Development Charges Act.

12. Why can’t residents hook up to this water since they are disrupted by it?

The reservoir is designed to serve the urban area of Milton and the trunk water main is the connection to the urban area. The water main to the reservoir is a high pressure main and there will be no individual property connections to it at any point along the route. If individual properties were to be serviced, that service must be via a local water main connecting off the high pressure main. This practice is to ensure that connections do not undermine the pressure of the watermain in the delivery system and helps us ensure we are achieving the water pressures we need to deliver the stored water to the reservoir's service area.

Direction on servicing is provided within Halton Regional Official Plan. The policies of the plan specifically prohibit private connections to trunk water mains. Connections via a local service main are not permitted outside the urban areas of the plan unless specifically exempted in the Plan. The route for this main does not meet the exemption policies. Therefore, it is staff's opinion that direct connection to the water main and a local service connection off the trunk main outside the urban area (where the properties in question are located) cannot be provided on the basis of both engineering and Regional Official Plan policies/practice.

On the other hand, some residents expressed the concern that with the introduction of a reservoir, development of area is not far behind and they want to keep the area rural. As noted above, the reservoir is not available for landowners in the immediate area; however, it is a vital component of the pressure Zone 5L within Milton and the Halton Hills Highway 401 corridor.

13. At least two residents expressed concern that were not informed of the Public Open House

The notices were mailed to residents in the Third Line area on October 29, 2007 and a newspaper advertisements appeared in local newspapers including North Halton Compass on November 1 to 8, 2007, and Milton Champion on November 2 and 9, 2007. We note that an article was published in the Tuesday Nov. 13, 2007 issue of the Canadian Champion.

All participants on the mailing list will be advised of any upcoming meetings or major decisions on this project.
14. A homeowner in the area of Site B asked if Halton Region will fix up the fence and landscaping at the existing groundwater reservoir.

There are on-going concerns about the site being an “eyesore” due to poor maintenance, tree and brush cutting is needed and the fence is rusting. Staff at Halton Region have been advised of the problem and have consulted with the neighbour. Plans are underway to make improvements in 2008. For further information, contact: Gord Devine, Manager of Water Plant Operations, Halton Region, 905-825-6000, ext. 7737.

15. What is the Greenbelt policy – does it permit utilities to cross the area per Site C?

Of the sites considered for the reservoir, Sites A and B are within the Greenbelt Plan (since the Niagara Escarpment is within the Greenbelt Plan) and Site D is partially within the Greenbelt Plan. All of the feedermain alignments considered for the study would cross the Greenbelt Plan.

Municipal infrastructure facilities such as a reservoir or feedermain are permitted in the Greenbelt Plan as long as the Class EA demonstrates it is the preferred compared to other alternatives.

16. Is Site C confirmed as the final location?

None of the eight possible sites have been confirmed as the location for reservoir. The Class EA Study is a multi-step process in accordance with the Environmental Assessment Act. Following the Public Open House, Halton Region will review the comments received and put forward a recommendation for a reservoir site and feedermain route which will be communicated to the public and agencies. Then a report summarizing all the information obtained during the study will be released for public review. The thirty day public review period will be advertised.

If there are concerns which cannot be resolved in consultation with Halton Region, then any party may request that the Minister of the Environment issue a Part II order. Such an order may require Halton Region to undertake an individual Environmental Assessment.

Other Comments

In addition to the comments at the public meeting and those received in the comment sheets, a number of stakeholders and agencies provided written comments to Halton Region. The following summarizes the comments received and Halton Region’s response.

1. Niagara Escarpment Commission (NEC) – November 5, 2007

NEC is supportive of the preferred Site C and acknowledges Region of Halton efforts in re-examining the proposed location of the reservoir

Halton Region’s Response:
Comment noted.

2. Halton Environmental and Ecological Advisory Committee (EEAC) – December 12, 2007

Halton Region staff made a presentation to EEAC in November 2007.

As a follow up to that presentation, the committee asked the following:
• More information on rationale for choosing a reservoir at a higher elevation than Zone 5L residents who will be served
Halton Region Zone 5L Reservoir & Feedermain Class EA Study
PIC #2 - November 13, 2007
Summary of Comments

- What technical options were considered to address the towers versus reservoir?
- Were any land-requirement comparisons undertaken?
- What were cost comparisons of the preferred site versus the others?
- Was a "hybrid" option considered such as an in-ground reservoir in Milton with a water tower and a pumping station beside it?

Halton Region's Response:
Halton's rationale for building a single in-ground structure at a specific elevation is addressed earlier in this summary and in Technical Memos on Halton Region's website at www.halton.ca/PPW/water/ClassEA/default.htm. Halton Region's response is that it would be significantly wasteful to build two structures (an in-ground reservoir and a water tower). Technical Memos #7 and 8 address the cost differences. Technical Memo #1 looks at various storage methods and evaluates them for this study.

The costs of the various sites are listed in the evaluation chart on the website as presented at the Public Open House on November 13, 2007. Costs are addressed in item #11 of this summary. All sites need the same land requirements for an in-ground reservoir (i.e., about 2.5 ha).

3. Halton Agricultural Advisory Committee (HAAC) – November 6, 2007

Halton Region staff made presentations to HAAC in October and November 2007. Comments from HAAC were received on October 19 November 13, 2007.

Comments from HAAC were as follows:
- Support for candidate sites 1 and 2 (now A and B on the Niagara Escarpment);
- Asked Halton Region to consider using a quarry site; and,
- Asked why the reservoir would be partially above ground.

Halton Region's Response:
Halton Region noted the comments in support of the two Niagara Escarpment sites.

Two quarries were considered in the Class EA evaluation because of the opportunity to remediate and restore these properties to a more natural state. Further investigation showed that these quarry sites posed construction difficulties and very high costs due to their existing ground elevations. The quarry sites considered include the Jannock Quarry – west side of Tremaine Road, north of Steeles Avenue and the Former Milton Limestone Quarry (Kelso Quarry) - north west corner of Steeles Avenue and Tremaine Road. This matter is addressed more fully in Technical Memo #3. (see www.halton.ca/PPW/water/ClassEA/default.htm)

With regard to the proposed reservoir being partially above grade, the critical requirement of a reservoir is the operating elevation range required to service the intended pressure zone. In this case the reservoir operating range is elevation 261 to 267m. To balance cost, water reservoirs are built approximately half below grade and half above so that the excavated soil can be used to cover the reservoir structure. This practice also minimizes the amount of fill required and associated truck traffic.

4. Tribute Communities – December 10, 2007

On behalf of the South Georgetown Landowners Group, Tribute requested that Halton Region consider Site F as the recommended Zone 5L reservoir site due to its proximity to South Georgetown Landowners Group lands. They believe that although the Zone 5L reservoir is sized and designed to serve Milton, selecting Site F could enable the new reservoir to also serve South Georgetown Landowners Group should Halton Region’s ongoing Sustainable Halton Region
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Summary of Comments

project result in a decision to service Georgetown. The South Georgetown Landowners Group supports the Town of Halton Hills staff report which states a preference for Site F (see below).

Halton Region Response:
See below.


On behalf of the Southwest Georgetown Landowners Group, Sernas Associates requested that Halton Region consider Site F as the recommended Zone 5L reservoir site due to its proximity to Southwest Georgetown Landowners Group lands. The landowners consider that Site F could enable the new reservoir to also serve South Georgetown Landowners Group should Halton Region’s ongoing Sustainable Halton project result in a decision to service Georgetown. The South Georgetown Landowners Group supports the Town of Halton Hills staff report which states a preference for Site F (see below).

The landowners reasons are that the preliminary preferred Site C would have greater impacts, costs to construct and less potential for phasing in. They noted that proximity to Georgetown should have been a criterion in the selection process.

Halton Region Response:
Halton Region is committed to the provision of urban services in a cost effective and efficient manner for lands which have been designated for urban uses via Halton Region’s comprehensive urban structure review process. The South and Southwest Georgetown lands are not designated for urban uses. These lands are the subject of the comprehensive urban structure review called, “Sustainable Halton”. This study will determine where Halton Region will grow beyond 2021 and how those urban lands will be serviced.

6. Town of Halton Hills – November 16, 2007 Staff Report

The Town of Halton Hills has expressed a preference for Site F over Site C. The Town’s recommendation that Halton Region select Site F is based on the following reasons:

- Less intrusive into agricultural lands;
- Better suited to character of area;
- Differing natural impacts;
- Possibly co-locate the next (Zone 4) reservoir;
- Provides future back-up to address water shortfalls in Georgetown;
- Benefits of future long term servicing.

Halton Region Response:
Halton Region’s remains committed to safely and continuously delivering water supply to urban serviced communities within Milton and the Halton Hills 401 Corridor. In order to do this in a timely fashion, Halton Region staff will continue the Zone 5L Reservoir and Feedermain Class EA Study. A report with a formal response to the Town of Halton Hills will be considered by Halton Regional Planning and Public Works Committee on April 30, 2008 and by Regional Council on May 7, 2008. A copy of the staff report dealing with this matter will be posted at the Class EA study website, www.halton.ca/PPW/water/ClassEA/default.htm, after April 25, 2008.
**Next Steps**

As a result of the public, agency and stakeholder comments received on this project, Halton Region is committed to the following additional steps to ensure that the Zone 5 Reservoir and Feedermain Class EA study is complete prior to publishing the final study document.

Next activities for the Zone 5L Reservoir and Feedermain project team are expected to be as follows:

a. Initiate additional geotechnical (e.g., soils) investigations at the proposed reservoir location of Site C to confirm conditions for facility footings and refine cost estimates for the construction of the reservoir;

b. Halton Region Planning and Public Works Committee and Council to consider their response to the Town of Halton Hills comments (to be considered by Committee on April 30 and Council on May 7, 2008);

c. Host a Third Line residents stakeholders’ meeting (with Halton Region, Milton and Halton Hills staff) to discuss how Halton Region will design and construct this water project;

d. Host a developers stakeholders’ meeting (with Halton Region, Milton and Halton Hills staff invited) to review the items raised by the developers’ groups;

e. Follow up meetings with stakeholders as needed.

By the fall 2008, the Halton Region Project team will prepare a Study Report which will document each step in the study and will describe how residents, Town, agencies and developers’ concerns were addressed. In the Study Report, Halton Region will outline all of its commitments made during the course of the study. For example, in response to residents’ requests for assurances that private well supplies will not be compromised, Halton Region has committed to complete the feedermain construction as quickly as possible to reduce the time period during which the excavation site will be open. This will reduce the potential for dewatering of area groundwater supplies that normally feed domestic water wells. In addition, Halton Region commits that the creek crossings will be done in consultation with Conservation Halton and only at the dates, durations and in the locations as set out in their approvals.

Once the Study Report is completed, Halton Region will publish a Notice of Completion of the Class EA Study in local newspapers and a notice will be sent directly to all on the mailing list. Participants will have at least 30 days to review the document and provide any feedback to Halton Regional Project team.

If, during the 30 days after the Notice of Completion is issued, concerns regarding the proposed Zone 5L Reservoir and Feedermain cannot be resolved in discussions with Halton Region, an objector may request that the Minister of the Environment consider issuing a Part II Order. A Part II Order could require Halton Region to undertake an individual Environmental Assessment study of the project.

Members of the public are responsible for bringing any concerns to the attention of Halton Region early in the planning process. If in the opinion of the Minister of the Environment, a request is made with the intent of delaying the planning or implementation of a project, or which does not contain a reasonable amount of supporting information, that request may be denied by the Minister on the basis of being unsubstantiated.

For more information, please contact:

Comments continue to be welcome and will be included in the Study Report. Comments or questions should be submitted to: