Regional Municipality of Waterloo

Planning and Works Committee

Agenda

Tuesday, March 22, 2016

9:00 a.m.

Regional Council Chambers

150 Frederick Street, Kitchener

1. Declarations of Pecuniary Interest under the Municipal Conflict Of Interest Act

2. Delegations

Consent Agenda Items

Items on the Consent Agenda can be approved in one motion of Committee to save time. Prior to the motion being voted on, any member of Committee may request that one or more of the items be removed from the Consent Agenda and voted on separately.

3. Request to Remove Items from Consent Agenda

4. Motion to Approve Items or Receive for Information

4.1 PDL-16-03, Regional Planning Commissioners of Ontario: Special Study on Ontario Municipal Board Reform (Information)

4.2 PDL-CPL-16-17, Monthly Report of Development Activity for February 2016

Recommendation:

4.3 **PDL-CPL-16-18**, Year-End 2015 Population and Household Estimates for Waterloo Region (Information) 15

4.4 **PDL-CPL-16-19**, 2015 Building Activity and Growth Monitoring (Information) 23

4.5 **TES-TRS-16-08**, New Cambridge Centre Transit Facility and Planned Transit Facilities (Information) 38

4.6 **TES-TRP-16-07**, Left-turn Restriction at the Dundas Street (Regional Road 8) and Wellington Street Intersection, City of Cambridge 47

**Recommendation:**

That the Regional Municipality of Waterloo amend Traffic and Parking By-law 06-072, as amended, to add to Schedule 15, Prohibited Movements, Westbound Left-turn, 3:00 p.m. to 6:00 p.m. Monday to Friday at the intersection of Dundas Street (Regional Road 8) and Wellington Street in the City of Cambridge, as outlined in Report TES-TRP-16-07, dated March 22, 2016.

4.7 **TES-WMS-16-04**, Waterloo Landfill Update – Environmental Monitoring and Controls (Information) 53

5. **Reports – Planning, Development and Legislative Services**

5.1 **PDL-CPL-16-20**, Proposed 2016 Implementation Plan for the Regional Transit Supportive Strategy for the City of Cambridge 65

**Recommendation:**

That the Regional Municipality of Waterloo approve the 2016 Implementation Plan for the Transit Supportive Strategy, as described in Report No. PDL-CPL-16-20, dated March 22, 2016.

5.2 **TES-16-01/PDL-16-02**, 2016 Planning and Works Project Team Membership 79
Recommendation:

That the Regional Municipality of Waterloo appoint Regional Councillors to the project and study teams as noted in Appendix A to Report TES-16-01/PDL-16-02, dated March 22, 2016;

And that the Regional Municipality of Waterloo forward the requests for area Councillor representatives on project and study teams to the Area Municipalities.

5.3 PDL-CPL-16-21/COR-TRY-16-22, Brownfields Financial Incentives Program - Assignment and Amendment of Tax Increment Grant Agreement by Riverbank Lofts GP Inc. (HIP Developments) - 19 Guelph Avenue, Cambridge

Recommendation: 94-95

Reports - Transportation and Environmental Services

Design and Construction

5.4 PDL-LEG-16-22, Authorization to Expropriate Lands (2nd Report) for improvements to Ira Needles Blvd (Regional Road 70) at Erb Street West, City of Waterloo

Recommendation: 105-106

5.5 TES-DCS-16-04, C2015-28 Consultant Selection – Detailed Design and Services during Construction for the Water Transmission Main from Conestogo Plains to West Montrose, Township of Woolwich

Recommendation:

That the Regional Municipality of Waterloo enter into an Agreement for Professional Consulting Services with GM BluePlan Engineering Ltd. to provide engineering services for detailed design and services during construction for the Water Transmission Main from Conestogo Plains to West Montrose, at an upset fee limit of $479,396 plus applicable taxes.

5.6 TES-DCS-16-07, Consultant Selection – Preliminary Design, Detailed Design, Construction Administration and Inspection Services for Bleams Road/Ottawa Street Reconstruction, from West of Trussler Road (Knechtel Court) to East of Fischer-Hallman Road (Nine Pines Road) in the Township of Wilmot and the City of Kitchener

Recommendation:
That the Regional Municipality of Waterloo enter into a Consultant Services Agreement with MTE Consultants Inc. of Kitchener, Ontario to provide consulting engineering services for preliminary design, detailed design, contract administration and construction inspection for Bleams Road/Ottawa Street Reconstruction from west of Trussler Road (Knechtel Court) to east of Fischer-Hallman Road (Nine Pines Road) in the Township of Wilmot and the City of Kitchener at an upset limit of $474,279.00 plus applicable taxes for the preliminary design and detailed design phases, with contract administration and construction inspection to be paid on a time basis in an estimated amount of $360,000.00 as described in Report TES-DCS-16-07 dated March 22, 2016.

**Rapid Transit**

5.7 **PDL-LEG-16-08**, Authorization to Expropriate Land (1st Report) for Grand River Transit Facilities – 296 Fairway Rd S., Kitchener and 300 Fairway Road S., Kitchener

**Recommendation:** 137-138

**Transit Services**

5.8 **TES-TRS-16-07**, Passenger Information Display Sign Acquisition – Grand River Transit

**Recommendation:**

That the Regional Municipality of Waterloo approve the acquisition of 55 real-time passenger information display signs from INIT Innovations in Transportation, Inc. at a total cost of $454,896.72 plus applicable taxes, as described in Report No. TES-TRS-16-07, dated March 22, 2016.

**Transportation**

5.9 **TES-TRP-16-08**, Consultant Selection - Transportation Master Plan Update (Presentation)

**Recommendation:**

That the Regional Municipality of Waterloo enter into a Consulting Services Agreement with IBI Group to provide planning and engineering services for preparation of the Transportation Master Plan Update, at an upset fee limit of $700,000, plus applicable taxes.
Water Services

5.10 TES-WAS-16-05.1, Business Certification Program – Water Efficiency

**Recommendation:**

That the Regional Municipality of Waterloo approve the expansion of the Water Efficient Restaurant Certification Program to include all commercial, industrial, and institutional (CII) customers, as detailed in Report TES-WAS-16-05.1 dated March 22, 2016.

5.11 TES-WAS-16-07, Consultant Selection – Design of Cogeneration Facilities for the Kitchener, Waterloo and Galt Wastewater Treatment Plants

**Recommendation:**

That the Regional Municipality of Waterloo enter into a Consulting Services Agreement with CH2M HILL Canada Limited of Kitchener, Ontario, to provide consulting engineering services for undertaking the Renewable Energy Approval and Detailed Conceptual Design (Phase 1) for the Cogeneration Facilities at the Kitchener, Waterloo and Galt Wastewater Treatment Plants, at an upset limit of $403,056 plus applicable taxes.

5.12 TES-WAS-16-08, Biosolids Strategy – Project Charter (Information)

5.13 TES-WAS-16-09, Source Protection Plan Implementation and Committee Membership

**Recommendation:**

That The Regional Municipality of Waterloo receive the summary of initiatives being undertaken in preparation for implementation of the Grand River Source Protection Plan; nominate the Manager of Hydrogeology and Source Water as the municipal representative for Waterloo Region to the Lake Erie Source Protection Committee, and forward this recommendation to the Grand River Source Protection Authority for formal appointment to the Lake Erie Source Protection Committee, as outlined in report TES-WAS-16-09.

Recommendation:

That the Regional Municipality of Waterloo receive the 2015 Summary Report, as required by Ontario Regulation 170/03, the minutes from the annual Management Review of the Drinking Water Quality Management System (DWQMS) and maintenance plan update as outlined in report TES-WAS-16-10 dated March 22, 2016.

5.15 TES-WAS-16-11, Hauled Wastewater Management Site Selection and Financial Analysis

Recommendation:

That the Regional Municipality of Waterloo approve the following:

a) Adopt the proposed new hauled wastewater management strategy, to construct a new receiving station at the Region’s Wastewater Residuals Management Facility, 440 Manitou Drive, Kitchener, and subsequently cease receiving hauled wastewater at the New Hamburg Wastewater Treatment Plant;

b) Direct staff to proceed with detailed design of this facility; and

c) Direct staff to develop a disposal fee structure that achieves full cost recovery of the capital, operating and maintenance costs associated with providing this service and report back to Council before proceeding with tendering of the construction.

6. Information/Correspondence

6.1. Correspondence from the Township of Woolwich re: Elmira Waste Transfer Station 234

6.2. Correspondence from the Township of North Dumfries re: Ontario Municipal Board Reform 235

6.3. Correspondence from the City of Kitchener re: Ontario Municipal Board Reform 237

6.4. Correspondence from the City of Cambridge re: Ontario Municipal Board Reform 238

6.5. Council Enquiries and Requests for Information 242

7. Other Business

8. Next Meeting – April 12, 2016
9. **Adjourn**

## Next Meetings

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<th>Time</th>
<th>Description</th>
<th>Location</th>
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<tbody>
<tr>
<td>April 12, 2016</td>
<td>9:00 A.M.</td>
<td>Planning and Works Committee</td>
<td>Council Chamber 2(^{nd}) Floor, Regional Administration Building</td>
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<td>150 Frederick Street, Kitchener, Ontario</td>
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<tr>
<td>May 3, 2016</td>
<td>9:00 A.M.</td>
<td>Planning and Works Committee</td>
<td>Council Chamber 2(^{nd}) Floor, Regional Administration Building</td>
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### Transportation and Environmental Services

### Planning, Development and Legislative Services
Region of Waterloo
Planning, Development and Legislative Services
Commissioner’s Office

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016  File Code: A02-40

Subject: Regional Planning Commissioners of Ontario: Special Study on Ontario Municipal Board Reform

Recommendation:
For information.

Summary:
The Regional Planning Commissioners of Ontario (RPCO) is embarking on a special initiative to assist in the Province’s forthcoming review of the Ontario Municipal Board (OMB). The Region of Waterloo’s Planning Commissioner is the Chair of RPCO, whose members plan for over 80% of Ontario’s population. The review will be comprehensive, and Provincial staff will be involved as part of the process. The final report is expected to be completed in mid-2016. Many other individuals and groups across Ontario also continue to advocate for OMB reform, focusing on a variety of issues and proposals.

Report:
In September of 2014, the Premier directed the Provincial Minister of Municipal Affairs and Housing in:

“Leading a review of the scope and effectiveness of the Ontario Municipal Board (OMB). Working with the Attorney General and key stakeholders, you will recommend possible reforms that would improve the OMB’s role within the broader land use planning system.”

The recommendations of the Advisory Panel on the Co-ordinated Review of key Provincial Policy (the Crombie Panel) also identified the need for OMB Reform.
It is the contention of RPCO that the existing system is not acceptable to anyone in terms of cost, time required and the uncertainty of outcomes. This has a direct bearing on investment decisions and community vitality, and as such, should be viewed as a matter significantly influencing the economic prosperity of communities across Ontario. By extension, this makes OMB reform a priority to a wide spectrum of stakeholders.

This RPCO initiative is being co-led by Joe Berridge of Urban Strategies (the Lead Investigator) and by Ian Lord (the Expert Solicitor). Both are well known and respected practitioners, and RPCO is very pleased that they have agreed to lead this work and to provide their expertise.

This work is focused on recommending constructive improvements. The Province will also have opportunity to have input, recognizing that the work (including findings and recommendations) will ultimately constitute the position of RPCO. The study is expected to be complete in mid-2016, and RPCO is making best efforts to coordinate its timing with the Province’s review process.

The complete study will be provided to Regional Council as well. It should be noted that many other individuals and groups across Ontario also continue to advocate for OMB reform, focusing on a variety of issues and proposals.

**Area Municipal Consultation/Coordination**

All Area Municipalities have been advised and will continue to be kept informed of this initiative.

**Corporate Strategic Plan:**

This initiative supports many elements of the Corporate Strategic Plan, particularly in the Focus Areas of Thriving Economy and Environmental and Sustainable Growth.

**Financial Implications:**

This study is being funded with contributions received from municipalities represented on the Regional Planning Commissioners of Ontario.

**Other Department Consultations/Concurrence:**

Nil.

**Attachments:**

Nil.

**Prepared By and Approved By:** Rob Horne, Commissioner, Planning Development and Legislative Services
Region of Waterloo
Planning, Development and Legislative Services
Community Planning

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: March 22, 2016		File Code: D18-01

Recommendation:


Summary:

In accordance with the Regional By-law 01-028, as amended, the Commissioner of Planning, Development and Legislative Services has:

- Accepted the following plans of condominium;
- Draft approved the following plans of condominium;
- Released for registration the following plans of condominium; and
- Approved the following official plan amendments.

Report:

City of Cambridge
Plan of Condominium Application 30CDM-16101

Date Accepted: February 4, 2016
Applicant: Haastown Holdings (Cambridge 2012) Inc.
Location: 150 Water Street North
Proposal: To permit the development of 109 residential apartment condominium units, 121 parking units, 108 locker units, 2
Plan of Condominium Application 30CDM-16101

- roof top units, 1 telecommunication unit and an easement over the shared visitor parking units.

Regional Processing Fee: Paid January 26, 2016

Draft Approved Plan of Condominium 30CDM-15101

Applicant: 2385187 Ontario Ltd.
Location: 26 Water Street North
Proposal: To permit the development of 4 residential apartment condominium units and 2 commercial units.

Regional Processing Fee: Paid January 28, 2016
Commissioner’s Release: February 18, 2016
Came Into Effect: March 10, 2016

Official Plan Amendment Number 12

Applicant: Hunt Club Valley Inc. and Arriscraft International Inc.
Location: 1134 Hunt Club Road and 875/1065 Speedsville Road
Proposal: To re-designate the Hunt Club and Arriscraft lands from Future Urban Reserve, Low/Medium Density Residential, Business Industrial and Natural Open Space System (land use designations that were proposed for these lands in the City Official Plan but were deferred) to Low/Medium Density Residential, High Density Residential, Business Industrial, Prestige Industrial and Natural Open Space System and to designate the majority of these lands as Site Specific Policy Area 65.

Regional Processing Fee: Paid December 31, 2015
Commissioner’s Approval: February 12, 2016
Came Into Effect: March 4, 2016

City of Kitchener

Registration of Draft Plan of Condominium 30CDM-15201

Draft Approval Date: May 8, 2015
Phase: Phase 2
Applicant: 2280644 Ontario Inc.
Location: 70 Willowrun Drive
Registration of Draft Plan of Condominium 30CDM-15201
Proposal: To permit the development of 14 residential apartment condominium units.
Regional Processing Fee: Paid February 4, 2016
Commissioner’s Release: February 16, 2016

Registration of Draft Plan of Condominium 30CDM-15206
Draft Approval Date: October 28, 2015
Phase: Stage 1
Applicant: Reid’s Heritage Homes
Location: 155 Commonwealth Street
Proposal: To permit the development of 46 residential condominium apartment units, and 1 non-residential roof unit.
Regional Processing Fee: Paid January 28, 2016

City of Waterloo

Plan of Condominium Application 30CDM-16402
Date Accepted: 30CDM-16402
Applicant: Quiet Place Holdings Inc.
Location: 507, 508, 509, 511 and 513 Quiet Place
Proposal: To permit the conversion of 26 existing residential apartment units from rental tenure to condominium ownership and create 26 parking units.
Regional Processing Fee: Paid February 5, 2016

Plan of Condominium Application 30CDM-16403
Applicant: 250 Lester Street Inc.
Location: 250 Lester Street
Proposal: To permit the development of 44 residential condominium apartment units, 1 laundry unit, 1 commercial/office unit and 17 parking units.
Regional Processing Fee: Paid September 2, 2015
Registration of Draft Plan of Condominium 30CDM-15404

Draft Approval Date: October 2, 2015  
Phase: Phase 1  
Applicant: Silver Lake Developments Inc.  
Location: 110 Erb Street West  
Proposal: To permit the creation of 610 parking units  
Regional Processing Fee: Paid December 3, 2015  

Draft Approval of Plan of Condominium 30CDM-15402

Applicant: Fir Village Inc.  
Location: 201 Lester Street  
Proposal: To permit the conversion of an existing twelve-storey apartment building containing 68 residential units from rental to condominium tenure. The plan also includes 9 laundry units, 69 parking units with common elements consisting of main-floor office and lobby.  
Regional Processing Fee: Paid December 2, 2015  
Commissioner’s Approval: February 9, 2016  
Come Into Effect: March 1, 2016

Township of North Dumfries

Registration of Draft Plan of Condominium 30CDM-14301

Draft Approval Date: June 25, 2015  
Phase: Phase 1  
Applicant: Gautam Growth Properties  
Location: 1126 Swan Street, Ayr  
Proposal: To permit the development of 11 residential townhouse condominium units.  
Regional Processing Fee: Paid January 25, 2016  
Official Plan Amendment Number 30

Applicant: Will-O Homes
Location: 50 Bute Street
Proposal: To change the designation of approximately 1.6 hectares from “Open Space” to “Urban Residential and Ancillary”.

Regional Processing Fee: Paid January 7, 2016
Commissioner’s Approval: February 2, 2016
Came Into Effect: February 23, 2016

Township of Wilmot

Registration of Draft Plan of Condominium 30CDM-15601

Draft Approval Date: August 27, 2015
Phase: Entire Plan
Applicant: Bill and Freda Klassen
Location: 51 Greenwood Drive, New Hamburg
Proposal: To permit the development of 3 residential townhouse condominium units.

Regional Processing Fee: Paid January 25, 2016
Commissioner’s Release: February 9, 2016

Area Municipal Consultation/Coordination

These planning approvals and releases, including consultations with Area Municipalities, have been completed in accordance with the Planning Act. All approvals included in this report were supported by the Area Municipal Councils and/or staff.

Corporate Strategic Plan:

This report reflects actions taken by the Commissioner in accordance with the Delegation By-law adopted by Council. Strategic Objective: Improve environmental sustainability and livability intensifying urban and rural settlement areas.

Financial Implications: Nil.

Other Department Consultations/Concurrence: Nil.

Attachments: Nil.

Prepared By: Andrea Banks, Program Assistant

Approved By: Rob Horne, Commissioner, Planning, Development and Legislative Services

2087364
Region of Waterloo
Planning, Development and Legislative Services
Community Planning

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016 File Code: D15-60 (A)

Subject: Year-End 2015 Population and Household Estimates for Waterloo Region

Recommendation:
For Information.

Summary:

Each year, an estimate of the year-end population and households is produced for the Region and each Area Municipality by Regional staff. The Waterloo Region population as of year-end 2015 is estimated at 575,000 people, including university and college students temporarily residing in the Region.

This report highlights key aspects of Waterloo Region’s growth, specifically how it relates to the recent activity in the student-oriented housing market (including an updated estimate of post-secondary students) and how recent growth compares to long term trends.

The Region continues to grow at a steady pace, reflecting the diversity of the local economy and the community’s desirability as a place to live. The annual population growth rate of 1.25 per cent was higher than the previous year, but remaining below the 15 year average of 1.58 per cent. The estimated number of households is 207,000, representing a growth rate of 1.60%.

Population estimates are used by many Regional and Area Municipal departments, agencies, boards and community groups to understand land use, plan infrastructure and service programs, calculate service costs per resident, assess housing needs and track health-related trends. The tables in this report are to be included in a Planning Information Bulletin to be distributed to Area Municipalities and other parties, as well as
being posted on the Region’s website for broader community access.

Report:

Population and Household Estimates

The Waterloo Region population estimate for year-end 2015 is 575,000 people. This estimate includes university and college students temporarily residing in the Region as well as an undercoverage factor which represents those missed in the Census. This estimate shows an increase of 7,100 people or 1.25% over 2014. Of the Area Municipalities, Kitchener experienced the highest growth rate at 1.48%, representing an additional 3,500 people. Table 1 provides the year-end 2015 population and household estimates for all Area Municipalities, along with 2014 comparators.

Table 1 - Year-end 2015 Population and Household Estimates for Waterloo Region

<table>
<thead>
<tr>
<th>Region of Waterloo**</th>
<th>Cambridge</th>
<th>Kitchener</th>
<th>North Dumfries</th>
<th>Waterloo</th>
<th>Wellesley</th>
<th>Wilmot</th>
<th>Woolwich</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population Year-end 2015*</td>
<td>575,000</td>
<td>134,900</td>
<td>239,900</td>
<td>9,820</td>
<td>133,700</td>
<td>11,070</td>
<td>20,780</td>
</tr>
<tr>
<td>Population in Regular Households</td>
<td>557,200</td>
<td>133,000</td>
<td>236,200</td>
<td>9,790</td>
<td>122,400</td>
<td>11,070</td>
<td>20,520</td>
</tr>
<tr>
<td>Population in Collective Dwellings***</td>
<td>17,850</td>
<td>1,930</td>
<td>3,770</td>
<td>30</td>
<td>11,240</td>
<td>-</td>
<td>260</td>
</tr>
<tr>
<td>Total Population Year-end 2014*</td>
<td>567,900</td>
<td>133,800</td>
<td>236,400</td>
<td>9,730</td>
<td>131,800</td>
<td>11,010</td>
<td>20,530</td>
</tr>
<tr>
<td>Additional Population</td>
<td>7,100</td>
<td>1,100</td>
<td>3,500</td>
<td>90</td>
<td>1,900</td>
<td>60</td>
<td>250</td>
</tr>
<tr>
<td>Population Change 2014-2015 (%)</td>
<td>1.25</td>
<td>0.82</td>
<td>1.48</td>
<td>0.92</td>
<td>1.44</td>
<td>0.54</td>
<td>1.22</td>
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<table>
<thead>
<tr>
<th>Region of Waterloo**</th>
<th>Cambridge</th>
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<th>Wellesley</th>
<th>Wilmot</th>
<th>Woolwich</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households Year-end 2015*</td>
<td>207,000</td>
<td>48,820</td>
<td>92,050</td>
<td>3,370</td>
<td>43,580</td>
<td>3,270</td>
<td>7,460</td>
</tr>
<tr>
<td>Households Year-end 2014*</td>
<td>203,740</td>
<td>48,280</td>
<td>90,560</td>
<td>3,340</td>
<td>42,590</td>
<td>3,250</td>
<td>7,350</td>
</tr>
<tr>
<td>Additional Households</td>
<td>3,260</td>
<td>540</td>
<td>1,490</td>
<td>30</td>
<td>990</td>
<td>20</td>
<td>110</td>
</tr>
<tr>
<td>Household Change 2014-2015 (%)</td>
<td>1.60</td>
<td>1.12</td>
<td>1.65</td>
<td>0.90</td>
<td>2.32</td>
<td>0.62</td>
<td>1.50</td>
</tr>
<tr>
<td>Persons per Unit+</td>
<td>2.69</td>
<td>2.72</td>
<td>2.57</td>
<td>2.91</td>
<td>2.81</td>
<td>3.38</td>
<td>2.75</td>
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</table>

<table>
<thead>
<tr>
<th>Temporary Student Population (included above)</th>
<th>22,370</th>
<th>(1,120)</th>
<th>(1,060)</th>
<th>(110)</th>
<th>25,060</th>
<th>(50)</th>
<th>(190)</th>
<th>(160)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Arriving</td>
<td>30,160</td>
<td>700</td>
<td>2,760</td>
<td>30</td>
<td>26,480</td>
<td>40</td>
<td>60</td>
<td>90</td>
</tr>
<tr>
<td>Living in Student Residences</td>
<td>9,850</td>
<td>-</td>
<td>530</td>
<td>-</td>
<td>9,320</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Living in Other Accommodations</td>
<td>20,310</td>
<td>700</td>
<td>2,230</td>
<td>30</td>
<td>17,160</td>
<td>40</td>
<td>60</td>
<td>90</td>
</tr>
<tr>
<td>Students Leaving++</td>
<td>(7,780)</td>
<td>(1,820)</td>
<td>(3,820)</td>
<td>(140)</td>
<td>(1,420)</td>
<td>(90)</td>
<td>(250)</td>
<td>(250)</td>
</tr>
</tbody>
</table>

* Although based on the Census of 2011, this number includes adjustments for students and other foreign/temporary residents, net Census undercoverage, and vacancy rates. Due to various corrections and adjustments, direct comparisons to last year’s estimates may not be valid.

** Municipal Totals may not add due to independent rounding.

*** Collective Dwellings include student residences, nursing homes, group homes, hospitals, larger lodging houses, etc.

+ ‘Persons per Unit’ (PPU) calculation is based on the ‘Population in Regular Households’, not on ‘Total Population’.

++ These are students who leave home to attend school. They represent the reverse flow of the temporary students arriving here from elsewhere.

The estimated number of households in the Region is 207,000. Growth in households from 2014 was 3,260 (1.6%). The higher growth rate for households than population reflects the increasing proportion of apartments being created.

Population growth estimates are typically correlated with residential building activity, however, considerable growth has been identified in student-oriented units at a time when university and college enrolment is relatively constant. This strong construction activity may result in a surplus of student bedrooms in the City of Waterloo. Therefore,
the 2016 population forecast as shown in Table 1 may require some revision in next year’s report, when results of the 2016 Census are available.

The calculated Persons Per Unit (PPU) for year-end 2015 remains nearly unchanged at 2.69, representing the estimated Regional population in regular households. This PPU value includes the students who are resident in the Region, as well as the under-coverage rate applied to Regional population estimates. A slight decrease in the overall PPU is consistent with a longstanding trend. Census data indicate that the trend is likely the result of smaller and fewer families, increased economic well-being and independence, and an aging population.

Although the population and household estimates in this report are intended to provide a standard reference, there are requirements for variations on the definitions used in this report. These differences may relate to the point of time of the estimates (for example, mid-year rather than year-end), the area (such as a service area rather than a municipality), or the population components (for example, students). These special considerations apply in uses such as road signs, water and wastewater monitoring, and development charge studies. Therefore, values cited in some uses may appear to differ from this report, when in fact they are consistent after allowance is made for the kinds of differences noted above.

A more detailed description of the methodology used to create the year-end population and household estimates is contained in Attachment 1 to this report.

**Estimates of Post-Secondary Students**

The temporary student population contributes a substantial component to the total population. Reviews of the post-secondary student population and housing requirements are on-going and undertaken in conjunction with projects such as Waterloo’s Town & Gown Committee, and based on recent data from the University of Waterloo, Wilfrid Laurier University and Conestoga College.

As of November 2015 there were 59,200 post-secondary students enrolled in full-time programs of Conestoga College, the University of Waterloo, and Wilfrid Laurier University, on the campuses that are located in Waterloo Region (Table 2). The student population appears to remain fairly stable. Not included in these figures are the students at smaller schools such as business and technical training colleges, as well as thousands of students with part-time enrolments at our local schools. Typically these students already live in the Region or commute in for these programs, and therefore are not considered to be adding to the local population.

Of the 59,200 estimated full-time students on local campuses, there are about 10,480 who live outside the Region and either commute in for school, are on co-op work terms, or have other arrangements. However, approximately 48,700 full-time students do
reside in Waterloo Region. About 30,200 of these students are only temporarily living in the Region, with their primary place of residence remaining elsewhere, typically at the home of their parents. It is estimated there are approximately 9,850 students living in university or college residences, and 20,300 living elsewhere in the community.

Table 2 - University and College Enrolment by Institution (Fall 2015)

<table>
<thead>
<tr>
<th></th>
<th>Conestoga</th>
<th>Waterloo</th>
<th>Laurier</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full-time Enrolment</strong></td>
<td>11,960</td>
<td>34,030</td>
<td>13,229</td>
<td>59,219</td>
</tr>
<tr>
<td>Commuters, co-op work term, etc.</td>
<td>3,712</td>
<td>6,194</td>
<td>575</td>
<td>10,481</td>
</tr>
<tr>
<td>Resident in Region</td>
<td>8,248</td>
<td>27,836</td>
<td>12,654</td>
<td>48,738</td>
</tr>
<tr>
<td>Temporary Residents</td>
<td>1,131</td>
<td>19,159</td>
<td>9,866</td>
<td>30,156</td>
</tr>
</tbody>
</table>

Conversely, there are students whose home is within the Region, but who reside elsewhere during the school year. After considering the flows of students, both into and out of the Region, the net effect of post-secondary students on the year-end population of Waterloo Region is 22,310 additional people.

Population and Household Trends

The 15 year period from 2001 to 2015 approximates one typical cycle in the housing market, during which the Region’s population grew by an average of 8,013 per annum, or 1.58%. The most recent five year period, from 2011 to 2015, has been characterized by more moderate growth, with annual average of 6,200 people (1.11%) and 2,742 households per year (1.38%) in Waterloo Region.

Population and household estimates for the past 24 years are provided in Table 3, together with a preliminary forecast for year-end 2016 based on recent building activity. It is anticipated that the 2016 population growth will exceed 2015, due to a number of apartment units that will become available for occupancy.

The Provincial Growth Plan for the Greater Golden Horseshoe (the Growth Plan) included population forecasts for the Region of Waterloo to 2031, and the Amended Growth Plan included (slightly higher) population forecasts to 2041. The Growth Plan uses slightly different methodology for estimating population than this report, so the figures in this report need to be adjusted to compare with the Growth Plan forecasts (e.g. excluding students etc.) After making these adjustments, the Region’s 2011 actual population was very close to the original growth plan population projection (527,400 vs 528,000). Given the more moderate growth over the last 5 years, it is estimated that the 2016 population of 558,000 will lag behind the original growth plan forecast by 12,400 people, and the amended growth plan forecast by 15,000 people (a lag of 2.0 to 2.6%). Staff will continue to monitor and report on actual population growth relative to the growth plan projections.
Table 3 – Long-term Trends in Population and Households: Waterloo Region

<table>
<thead>
<tr>
<th>Year-end</th>
<th>Population</th>
<th>Change (%)</th>
<th>Households</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>399,400</td>
<td>-</td>
<td>137,140</td>
<td>-</td>
</tr>
<tr>
<td>1992</td>
<td>406,600</td>
<td>1.80</td>
<td>140,260</td>
<td>2.28</td>
</tr>
<tr>
<td>1993</td>
<td>411,900</td>
<td>1.30</td>
<td>143,090</td>
<td>2.02</td>
</tr>
<tr>
<td>1994</td>
<td>418,000</td>
<td>1.49</td>
<td>146,280</td>
<td>2.23</td>
</tr>
<tr>
<td>1995</td>
<td>421,100</td>
<td>0.73</td>
<td>148,080</td>
<td>1.23</td>
</tr>
<tr>
<td>1996</td>
<td>424,000</td>
<td>0.70</td>
<td>149,640</td>
<td>1.05</td>
</tr>
<tr>
<td>1997</td>
<td>430,200</td>
<td>1.46</td>
<td>152,010</td>
<td>1.58</td>
</tr>
<tr>
<td>1998</td>
<td>437,600</td>
<td>1.72</td>
<td>154,950</td>
<td>1.93</td>
</tr>
<tr>
<td>1999</td>
<td>446,200</td>
<td>1.96</td>
<td>158,270</td>
<td>2.14</td>
</tr>
<tr>
<td>2000</td>
<td>454,800</td>
<td>1.94</td>
<td>161,590</td>
<td>2.10</td>
</tr>
<tr>
<td>2001</td>
<td>465,100</td>
<td>2.25</td>
<td>164,620</td>
<td>1.88</td>
</tr>
<tr>
<td>2002</td>
<td>474,500</td>
<td>2.03</td>
<td>167,540</td>
<td>1.77</td>
</tr>
<tr>
<td>2003</td>
<td>485,200</td>
<td>2.25</td>
<td>170,830</td>
<td>1.96</td>
</tr>
<tr>
<td>2004</td>
<td>497,600</td>
<td>2.55</td>
<td>175,080</td>
<td>2.49</td>
</tr>
<tr>
<td>2005</td>
<td>507,900</td>
<td>2.06</td>
<td>178,800</td>
<td>2.12</td>
</tr>
<tr>
<td>2006</td>
<td>517,400</td>
<td>1.88</td>
<td>182,230</td>
<td>1.92</td>
</tr>
<tr>
<td>2007</td>
<td>523,200</td>
<td>1.11</td>
<td>185,160</td>
<td>1.61</td>
</tr>
<tr>
<td>2008</td>
<td>532,100</td>
<td>1.72</td>
<td>188,830</td>
<td>1.98</td>
</tr>
<tr>
<td>2009</td>
<td>535,300</td>
<td>0.59</td>
<td>189,860</td>
<td>0.55</td>
</tr>
<tr>
<td>2010</td>
<td>544,000</td>
<td>1.64</td>
<td>193,290</td>
<td>1.81</td>
</tr>
<tr>
<td>2011</td>
<td>551,500</td>
<td>1.36</td>
<td>196,520</td>
<td>1.67</td>
</tr>
<tr>
<td>2012</td>
<td>556,200</td>
<td>0.85</td>
<td>198,420</td>
<td>0.97</td>
</tr>
<tr>
<td>2013</td>
<td>561,800</td>
<td>1.02</td>
<td>200,730</td>
<td>1.16</td>
</tr>
<tr>
<td>2014</td>
<td>567,900</td>
<td>1.09</td>
<td>203,740</td>
<td>1.50</td>
</tr>
<tr>
<td><strong>2015</strong></td>
<td><strong>575,000</strong></td>
<td><strong>1.25</strong></td>
<td><strong>207,000</strong></td>
<td><strong>1.60</strong></td>
</tr>
<tr>
<td><strong>2016(f)</strong></td>
<td><strong>586,300</strong></td>
<td><strong>1.96</strong></td>
<td><strong>212,330</strong></td>
<td><strong>2.57</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year-end</th>
<th>Population</th>
<th>Change (%)</th>
<th>Households</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>6,200</td>
<td>2,742</td>
<td>1.38</td>
</tr>
<tr>
<td><strong>5-yr average:</strong></td>
<td><strong>8,013</strong></td>
<td><strong>1.58</strong></td>
<td><strong>3,027</strong></td>
<td><strong>1.67</strong></td>
</tr>
<tr>
<td><strong>15-yr average:</strong></td>
<td><strong>12,703</strong></td>
<td><strong>1.69</strong></td>
<td><strong>5,080</strong></td>
<td><strong>1.74</strong></td>
</tr>
</tbody>
</table>

Area Municipal Consultation/Coordination

This report has been circulated to all Area Municipalities. Staff from the City of Waterloo was also consulted in the detailed analysis of the city’s population estimates. Coordination is ongoing with respect to analysis of the student accommodation and occupancy trends.

Corporate Strategic Plan:

Many of the objectives and actions contained in the Corporate Strategic Plan rely on estimates of population and households, including Strategic Objectives 2.2 “Develop, optimize and maintain infrastructure to meet current and projected needs”, and 5.3 “Ensure Regional programs and services are efficient and effective and demonstrate
accountability to the public”.

Financial Implications:

Nil.

Other Department Consultations/Concurrence:

Nil.

Attachments:

Attachment 1 - Methodology for Estimation of Regional Year-end Population

Prepared By:  Virgil Martin, Planning Information Specialist
             Margaret Parkin, Manager, Planning Research and Analytics

Approved By:  Rob Horne, Commissioner, Planning, Development and Legislative Services
Attachment 1

Methodology for Estimation of Regional Year-end Population

An estimate of the current population and households in the Region is prepared by Planning, Development and Legislative Services staff each year. The estimate is primarily based on the most recent Census of Canada, which was May 2011. The Census data provides a 2011 count of 507,096 population and 191,595 occupied dwellings, and is further described in a series of Census Bulletins for Waterloo Region prepared by Regional staff and available on the Region’s website. Additional demographic and dwelling characteristics data, which shed further light on students and other aspects of population and dwellings, became available through the National Household Survey in 2013. The Census estimate of undercoverage for the 2011 Census is 2.8%. Given the very high degree of uncertainty around the specific estimate of net undercoverage, together with the disruptive effect of making historical changes, it has been decided to continue with the current practice of using a 4% addition to Census values to estimate the actual population. Retaining the 4% undercoverage rate also effectively maintains consistency with the assumptions used in the Places to Grow forecasts.

While the Region’s population and household estimates are anchored to 2011 Census estimates, in the subsequent inter-censal years (2012 – 2015), the households and their related populations are extrapolated from building activity. Building permits are received from the Area Municipalities, and an estimated occupancy date is assigned to each permit. The estimated lag between building permit issuance and occupancy varies by dwelling type. These sources are supplemented by data from the Municipal Property Assessment Corporation (MPAC), correlated with a visual inspection of recent aerial photography, and data such as vacancy rates published by Canada Mortgage and Housing Corporation (CMHC). As a result, the growth in households cannot be directly compared to building activity in each year.

Although the Census population and household counts provide the foundational data, the estimate of population contained in this report differs from the population reported by the Census in several important ways. To best reflect the total number of people consuming services at year-end within the Region, adjustments are made to include:

- the Census net undercoverage (those people who were missed or double counted by the Census);
- temporary residents in the Region, most notably students who study at our post-secondary institutions, as well as those who leave to study elsewhere;
- growth during the time period from mid-May to year-end; and
- adjustments for long-term trends in ‘Persons Per Unit’ by type of dwelling, as reflected in changing household sizes.

The household estimates contained in this report differ from the number of dwellings
occupied by usual residents reported in the Census, due to the following adjustments:

- vacancy rates in rental accommodations, which have edged up slightly, from 2.3 to 2.4% as reported by Canada Mortgage and Housing Corporation;
- some student households, unlike the Census which does not include dwellings solely occupied by foreign and temporary residents; and
- growth during the time period from mid-May to year-end.

In May 2016, the Census of Population will be undertaken by Statistics Canada, and will provide a new estimate of population. This data is scheduled for release in February 2017, and will be incorporated into next year’s population report. The new 2016 data will also necessitate adjustment of population estimates from 2011 to 2016.
Report: PDL-CPL-16-19

Region of Waterloo
Planning, Development and Legislative Services
Community Planning

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: March 22, 2016  File Code: D07-40(A)
Subject: 2015 Building Activity and Growth Monitoring

Recommendation:
For Information.

Summary:

This report provides a summary of building permit activity across Waterloo Region in 2015, along with comparisons to previous years. It reflects data related to new construction, according to information contained on building permits issued by the Area Municipalities. Building permit activity is one indicator of the strength of the local economy, as well as a predictor of population growth.

Non-residential building permits were issued for 1.7 million square feet of floor space in 2015, with a total value of $328 million. In year-over-year square footage comparison, commercial square footage increased while the industrial and institutional declined.

Residential activity tapered a little but remained strong in 2015, with building permits being issued for 3,553 units, approximately 11 per cent higher than the 10-year average of 3,199. The value of these permits was $713.2 million. There continued to be a high level of activity in the student-oriented market in 2015. The largest component of residential building activity was apartments, with 1,723 units, and representing more than half of new units.

Reurbanization levels are monitored using building permit data. Building permits indicate that 49% of new residential units in 2015 were within the built-up areas of the Region. This is the sixth consecutive year that the Places to Grow target of 40% (which came into effect in 2015) and the Regional Official Plan target of 45% have been
exceeded. In addition, 74% of new non-residential floor space was constructed inside the built-up areas.

The total value of building permits issued for new construction in Waterloo Region was $1.04 billion in 2015, a decrease of 18% over 2014 values. Despite this decrease, the total value remains higher than the 10-year average ($1.01 billion).

Report:

Building permit activity is one indicator of the strength of the local economy, as well as a predictor of the population growth. This report summarizes building activity in both the residential and non-residential sectors in Waterloo Region for 2015. Building activity data for previous years is provided for comparison purposes. These figures are compiled annually by Regional staff based on data supplied by the Area Municipalities, and are summarized in Figure 1.

**Figure 1 - Summary of Building Permit Activity Change (2014-2015)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Total Change from 2014</th>
<th>Percent Change from 2014</th>
<th>2015 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>↓ $-111.5 million</td>
<td>-14%</td>
<td>$713.2 million</td>
</tr>
<tr>
<td></td>
<td>↓ -246 units</td>
<td>-6%</td>
<td>3,553 units</td>
</tr>
<tr>
<td>Industrial</td>
<td>↓ $-41.5 million</td>
<td>-45%</td>
<td>$49.8 million</td>
</tr>
<tr>
<td></td>
<td>↓ -519,000 sq.ft.</td>
<td>-52%</td>
<td>484,000 sq.ft.</td>
</tr>
<tr>
<td>Commercial</td>
<td>↑ $17.5 million</td>
<td>17%</td>
<td>$122.9 million</td>
</tr>
<tr>
<td></td>
<td>↑ 131,000 sq.ft.</td>
<td>20%</td>
<td>781,000 sq.ft.</td>
</tr>
<tr>
<td>Institutional</td>
<td>↓ $-91.7 million</td>
<td>-37%</td>
<td>$154.9 million</td>
</tr>
<tr>
<td></td>
<td>↓ -23,000 sq.ft.</td>
<td>-5%</td>
<td>467,000 sq.ft.</td>
</tr>
</tbody>
</table>

**Total Value of New Construction**

The total value of new residential and non-residential buildings for which building permits were issued in 2015 was $1.04 billion, a decrease of 18% from 2014 values, and 2% higher than the 10 year average value of $1.01 billion in Waterloo Region. This was comprised of $713 million in the residential sector, and $328 million in the industrial, commercial and institutional sectors (Figure 2).
Building Activity in the Non-Residential Sector

The value of non-residential permits issued in 2015 was $327 million, a decrease of 26% from the value in 2014. There was an increase of $17.5 million in permit values of commercial sector, whereas the industrial and institutional sectors declined $41.5 million, and $91.7 million respectively (Figure 3).

Figure 3 - Total New Non-Residential Construction Value by Type (2006-2015)
The highest values for individual 2015 non-residential building permits, by type, were:

- Institutional: $24 million for the construction of a new tertiary filtration building at the Kitchener Wastewater Treatment Plant located at 368 Mill Park Drive in Kitchener.
- Industrial: $5.4 million for the construction of a new FedEx building located at 80 Goddard Crescent in Cambridge.
- Commercial: $13.4 million for a new 11-theatre Cineplex with retail located at 225 Fairway Road South in Kitchener.

Of the 25 permits valued over $3 million, Waterloo issued nine permits at $75.7 million, Kitchener issued eight at $82.5 million, Cambridge issued five permits worth a total of $35.4 million, Woolwich issued two at $18.8 million, and North Dumfries issued one permit valued at $3.8 million. Attachment 1 lists the top 25 permits by construction value.

Non-residential building permit values fluctuate from year to year by sector and by municipality (Figures 4 and 5). In 2015, the value of non-residential construction in the cities was $290 million, lower than the 2014 value of $389 million. Kitchener had the highest non-residential construction value at $137 million, followed by Waterloo ($101 million) and Cambridge ($53 million). All townships also saw a decrease in new non-residential construction value relative to 2014. Woolwich led non-residential construction values ($27 million), followed by North Dumfries ($7 million), Wilmot ($2 million), and Wellesley ($1 million).

Figure 4 - Total New Non-Residential Construction Value by City (2006-2015)
Over 1.7 million square feet of new non-residential floor space is to be created through these building permits, a decrease of 19% compared to permits issued in 2014. This year’s commercial, industrial and institutional permits were mostly for new floor space associated with new construction, in contrast to recent years when additions to existing structures accounted for the majority of square footage added. About one-third of new floor space in 2015 was in additions to existing buildings, while two-thirds was in new building construction. Commercial square footage increased 20% to over 780,636 new square feet, consisting of a mix of office, recreational, and retail uses. The institutional square footage decreased by 5 per cent to 466,555. The industrial sector exhibited less square footage, with the 483,857 square feet of new space being 52% less than 2014. Figure 6 illustrates the ten-year historical variation in non-residential floor space.
New non-residential floor space among the cities was highest in Waterloo in 2015 (Figure 7). The amount of new square footage in Waterloo (599,000) and Kitchener (529,000) increased considerably from 2014, while Cambridge (313,000) showed less growth than last year. The townships contributed 17% of the new floor space in the Region, with Woolwich at 170,000 square feet, North Dumfries at 82,000, Wellesley at 26,000, and Wilmot at 15,000 (Figure 8).
Building Activity in the Residential Sector

The number of new residential units created through building permits issued in 2015 tapered somewhat from 2014. Building permits were issued for 3,553 units, representing 246 less units, or 6 per cent less than last year. The total value of these permits decreased 14 per cent to $713.2 million from $824.7 million in 2014. There were increases in the number of single-detached (16%) and townhouses (2%), and decreases in semi-detached (33%) and apartments (18%).

The largest component of residential building activity was apartments (49%), with 1,723 units representing close to half of new units (Figure 9). Single-detached dwellings (31%) represented close to one-third of building activity with 1,097 units. Townhouses (19%) and semi-detached (1%) dwelling types made up the remaining shares, at 688 and 45 units respectively. Over the longer term, the percentage of single detached units constructed per year has fallen from a peak of 78% in 1998 to a low of 25% in 2014, with a corresponding shift to higher-density housing types.
The number of new residential units varied by type of building and municipality (Figure 10). Single-detached units increased by 16 per cent over 2014, while semi-detached and apartments decreased by 33 per cent and 18 per cent respectively. Waterloo saw a growth of 15 per cent in total residential units, while Kitchener and Cambridge declined 14% and 15% respectively. All townships decreased, with North Dumfries at 21%, Wellesley at 34%, Wilmot at 39%, and Woolwich at 53%.

The location of all residential building permits issued for new construction in 2015 is shown on Map 1 (Attachment 2). Each circle is representative of the number of units to be constructed through each building permit. Waterloo Region continues to see construction of apartments concentrated near the universities in Waterloo.

**Figure 10 - Total New Residential Units by Type and Municipality (2014-2015)**

<table>
<thead>
<tr>
<th></th>
<th>Single detached</th>
<th>Semi-detached</th>
<th>Townhouse</th>
<th>Apartment</th>
<th>Total</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambridge</td>
<td>104</td>
<td>136</td>
<td>1</td>
<td>2</td>
<td>153</td>
<td>87</td>
</tr>
<tr>
<td>Kitchener</td>
<td>503</td>
<td>616</td>
<td>35</td>
<td>20</td>
<td>463</td>
<td>517</td>
</tr>
<tr>
<td>Waterloo</td>
<td>184</td>
<td>226</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>North Dumfries</td>
<td>38</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>Wellesley</td>
<td>26</td>
<td>17</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wilmot</td>
<td>61</td>
<td>62</td>
<td>4</td>
<td>2</td>
<td>29</td>
<td>0</td>
</tr>
<tr>
<td>Woolwich</td>
<td>33</td>
<td>29</td>
<td>16</td>
<td>8</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Region</td>
<td>949</td>
<td>1,097</td>
<td>67</td>
<td>45</td>
<td>675</td>
<td>688</td>
</tr>
<tr>
<td>% Change</td>
<td>16%</td>
<td>-33%</td>
<td>2%</td>
<td>-18%</td>
<td>-6%</td>
<td></td>
</tr>
</tbody>
</table>

**Long-Term Trends in Residential Building Activity**

At 3,553 new units, the residential building permit activity in 2015 was 5% higher than
the long term average of 3,390 residential units over the 30-year period (Figure 11). The graph shows the cyclical nature of residential building activity, which reflects many factors including demand, housing prices and mortgage rates.

**Figure 11 - Historic Residential Building Activity (1985-2015)**

![Graph showing historic residential building activity (1985-2015)](image)

**Students and Seniors**

There continued to be a high level of activity in the student-oriented market in 2015. Residential building permits were issued for six student-oriented apartment buildings in 2015, as opposed to 14 in 2014. Although there were fewer permits issued, the number of units increased to almost 1,000 from 940 units in 2014. This number includes a new student residence at the University of Waterloo with 539 beds. While some student-oriented permits were identified as such on the permit itself, Regional staff identified additional student-oriented permits by their location and built form.

The Westhill is the only senior-oriented project of 2015, with a new 11-storey commercial/residential apartment building that links to an existing retirement home, located at 7 Westhill Drive, Waterloo.

**Comparisons with CMHC Housing Starts**

Canada Mortgage and Housing Corporation (CMHC) reported 3,212 housing units were started in 2015 in the Kitchener-Cambridge-Waterloo Census Metropolitan Area (CMA), which covers Kitchener, Waterloo, Cambridge, Woolwich and North Dumfries. Starts are counted at the beginning of construction work on a building, usually when concrete has been poured for the footing. This figure has fallen 27.8% from the 4,450 starts reported by CMHC in 2014. Overall, housing starts in the province of Ontario increased 21.6%, according to CMHC.
Monitoring Growth

On June 16, 2006, the Province brought into force the Places to Grow: Growth Plan for the Greater Golden Horseshoe (Growth Plan), which included an objective to accommodate more growth through re-urbanization. The Growth Plan set a minimum target of 40% of new residential units to be constructed within the Built Up Area (BUA), based on areas already developed in 2006.

Building permits indicate that in 2015, 49% of all new residential units were within the BUA of the Region, exceeding the Places to Grow target of 40% and the Regional Official Plan target of 45%. This is the sixth consecutive year that these targets have been exceeded (Figures 12 and 13). The recent five year annual average (2010 to 2015) is 54%.

Figure 12 - Units Constructed Inside the Built Up Area (BUA)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Units in Region of Waterloo</th>
<th>Units Inside the Built Up Area</th>
<th>Percent of Units Inside the Built Up Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006*</td>
<td>1,391</td>
<td>597</td>
<td>43%</td>
</tr>
<tr>
<td>2007</td>
<td>3,113</td>
<td>1,430</td>
<td>46%</td>
</tr>
<tr>
<td>2008</td>
<td>2,968</td>
<td>974</td>
<td>33%</td>
</tr>
<tr>
<td>2009</td>
<td>2,779</td>
<td>1,032</td>
<td>37%</td>
</tr>
<tr>
<td>2010</td>
<td>4,007</td>
<td>2,240</td>
<td>56%</td>
</tr>
<tr>
<td>2011</td>
<td>3,588</td>
<td>1,952</td>
<td>54%</td>
</tr>
<tr>
<td>2012</td>
<td>2,405</td>
<td>1,161</td>
<td>48%</td>
</tr>
<tr>
<td>2013</td>
<td>2,563</td>
<td>1,412</td>
<td>55%</td>
</tr>
<tr>
<td>2014</td>
<td>3,799</td>
<td>2,359</td>
<td>62%</td>
</tr>
<tr>
<td>2015</td>
<td>3,553</td>
<td>1,742</td>
<td>49%</td>
</tr>
</tbody>
</table>

* Since effective date of Places to Grow, June 16, 2006.
While there is no policy target for the amount of non-residential activity within the BUA, Figures 14 and 15 show industrial, commercial and institutional building activity both inside the BUA and for the Region as a whole, measured both in size of new construction, as well as building value. In 2015, permits for 74% of non-residential floor space were issued inside the BUA, and on average, since June 16, 2006, 65% of non-residential floor space was inside the BUA.

Figure 14 - Non-Residential Floor Area Constructed within the Built Up Area (BUA)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Floor Area in Region of Waterloo (Sq Ft)</th>
<th>Total Floor Area Inside the BUA (Sq Ft)</th>
<th>Percent of Floor Area Inside the BUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006*</td>
<td>1,637,159</td>
<td>1,089,946</td>
<td>67%</td>
</tr>
<tr>
<td>2007</td>
<td>2,740,493</td>
<td>1,803,326</td>
<td>66%</td>
</tr>
<tr>
<td>2008</td>
<td>3,282,088</td>
<td>2,245,127</td>
<td>68%</td>
</tr>
<tr>
<td>2009</td>
<td>2,304,329</td>
<td>1,318,802</td>
<td>57%</td>
</tr>
<tr>
<td>2010</td>
<td>3,566,063</td>
<td>1,940,050</td>
<td>54%</td>
</tr>
<tr>
<td>2011</td>
<td>1,505,985</td>
<td>986,533</td>
<td>66%</td>
</tr>
<tr>
<td>2012</td>
<td>1,890,146</td>
<td>1,443,908</td>
<td>76%</td>
</tr>
<tr>
<td>2013</td>
<td>1,299,227</td>
<td>708,593</td>
<td>55%</td>
</tr>
<tr>
<td>2014</td>
<td>2,141,583</td>
<td>1,398,733</td>
<td>65%</td>
</tr>
<tr>
<td>2015</td>
<td>1,727,538</td>
<td>1,283,331</td>
<td>74%</td>
</tr>
</tbody>
</table>

* Since effective date of Places to Grow, June 16, 2006.
Figure 15 - Percent of Non-Residential Floor Area in the Region inside the Places to Grow Built Up Area (2006-2015)

In 2015, 30% of residential units and 42% of the non-residential floor space were located within 800 meters of the planned Rapid Transit stations in Cambridge, Kitchener and Waterloo, as detailed in Figure 16.

Figure 16 - Percent within 800m of the Rapid Transit Station Area

<table>
<thead>
<tr>
<th>Year</th>
<th>Residential Units</th>
<th>Non-Residential Floor Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Units in Region of Waterloo</td>
<td>Units Within 800m of Rapid Transit Stations</td>
</tr>
<tr>
<td>2006</td>
<td>3,217</td>
<td>508</td>
</tr>
<tr>
<td>2007</td>
<td>3,113</td>
<td>578</td>
</tr>
<tr>
<td>2008</td>
<td>2,968</td>
<td>321</td>
</tr>
<tr>
<td>2009</td>
<td>2,779</td>
<td>390</td>
</tr>
<tr>
<td>2010</td>
<td>4,007</td>
<td>1,032</td>
</tr>
<tr>
<td>2011</td>
<td>3,588</td>
<td>1,013</td>
</tr>
<tr>
<td>2012</td>
<td>2,405</td>
<td>517</td>
</tr>
<tr>
<td>2013</td>
<td>2,563</td>
<td>575</td>
</tr>
<tr>
<td>2014</td>
<td>3,799</td>
<td>1,087</td>
</tr>
<tr>
<td>2015</td>
<td>3,553</td>
<td>1,073</td>
</tr>
</tbody>
</table>

* Since effective date of Places to Grow, June 16, 2006.
Area Municipal Consultation/Coordination

Building permit data is collected by the Area Municipalities and submitted to the Region. This data is compiled for use in Regional development charge calculations, development tracking, forecasts, growth monitoring and reporting. Municipal staff is consulted to verify and provide insight into the data. Ongoing corrections and building permit cancellations must be taken into consideration when comparing the data in this report to previous building activity reports. Copies of this report have been circulated to Area Municipalities.

Corporate Strategic Plan:

Tracking and reporting building permit activity contributes to Strategic Focus Area 2: Manage Growth to Foster Thriving and Productive Urban and Rural Communities

Financial Implications:

Nil.

Other Department Consultations/Concurrence:

Nil.

Attachments:

Attachment 1 – Top 25 Non-Residential permits by Construction Value
Attachment 2 – Map 1 - 2015 Residential Building Activity

Prepared By: Rehan Waheed, Planning Technician

Approved By: Rob Horne, Commissioner, Planning, Development and Legislative Services
## Attachment 1 - Top 25 Non-Residential Permits by Construction Value in 2014 - Region of Waterloo

<table>
<thead>
<tr>
<th>Address</th>
<th>Municipality</th>
<th>Structure Type</th>
<th>Floor Area</th>
<th>Construction Value</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>368 Mill Park Dr</td>
<td>Kitchener</td>
<td>Institutional</td>
<td>12,206</td>
<td>$24,000,000</td>
<td>New tertiary filtration building at the Kitchener Wastewater Treatment Plant</td>
</tr>
<tr>
<td>200 University Ave W</td>
<td>Waterloo</td>
<td>Institutional</td>
<td>67,027</td>
<td>$16,000,000</td>
<td>Addition to B.C. Matthews Hall - Applied Health Science Building at University of Waterloo</td>
</tr>
<tr>
<td>51 Breithaupt St</td>
<td>Kitchener</td>
<td>Commercial</td>
<td>-</td>
<td>$15,000,000</td>
<td>Interior finish for new tenant Google, in addition $15,000,000 conversion permit in 2014</td>
</tr>
<tr>
<td>250 William St</td>
<td>Woolwich</td>
<td>Institutional</td>
<td>80,410</td>
<td>$14,500,000</td>
<td>New Riverside Elementy School and Children’s Centre</td>
</tr>
<tr>
<td>225 Fairway Rd S</td>
<td>Kitchener</td>
<td>Commercial</td>
<td>109,168</td>
<td>$13,400,000</td>
<td>New 11-theatre Cineplex with retail on Fairway Road</td>
</tr>
<tr>
<td>85 Willis Way</td>
<td>Waterloo</td>
<td>Commercial</td>
<td>86,176</td>
<td>$12,400,000</td>
<td>A multi-use retail, restaurant and underground parking</td>
</tr>
<tr>
<td>314 Sweet Gale St</td>
<td>Waterloo</td>
<td>Institutional</td>
<td>70,191</td>
<td>$11,000,000</td>
<td>New 3-storey Vista Hills Elementary School</td>
</tr>
<tr>
<td>1/2-12 Water St S</td>
<td>Cambridge</td>
<td>Institutional</td>
<td>7,996</td>
<td>$10,000,000</td>
<td>Renovation and addition to old Galt Post Office for a restaurant and library</td>
</tr>
<tr>
<td>45 Commerce Crt</td>
<td>Cambridge</td>
<td>Institutional</td>
<td>43,290</td>
<td>$10,000,000</td>
<td>New 2-storey training facility for Christian Labour Association of Canada</td>
</tr>
<tr>
<td>368 Mill Park Dr</td>
<td>Kitchener</td>
<td>Institutional</td>
<td>20,631</td>
<td>$9,500,000</td>
<td>New Headworks Building at the Kitchener Wastewater Treatment Plan</td>
</tr>
<tr>
<td>290 Westmount Rd N</td>
<td>Waterloo</td>
<td>Institutional</td>
<td>22,465</td>
<td>$8,500,000</td>
<td>New academic building at St Jerome’s University</td>
</tr>
<tr>
<td>451 Phillip St</td>
<td>Waterloo</td>
<td>Commercial</td>
<td>1,615</td>
<td>$8,000,000</td>
<td>Addition and interior renovations of former Blackberry building</td>
</tr>
<tr>
<td>200 University Ave W</td>
<td>Waterloo</td>
<td>Institutional</td>
<td>15,877</td>
<td>$7,000,000</td>
<td>Addition to Hagey Hall at University of Waterloo</td>
</tr>
<tr>
<td>45 High Ridge Crt</td>
<td>Cambridge</td>
<td>Commercial</td>
<td>38,922</td>
<td>$6,500,000</td>
<td>New repair garage facility for transport trucks</td>
</tr>
<tr>
<td>1415 Huron Rd</td>
<td>Kitchener</td>
<td>Commercial</td>
<td>74,288</td>
<td>$5,600,000</td>
<td>Balance of construction for Teppermans Furniture Store</td>
</tr>
<tr>
<td>640 New Dundee Rd</td>
<td>Cambridge</td>
<td>Institutional</td>
<td>2,282</td>
<td>$5,500,000</td>
<td>New sewage pumping station</td>
</tr>
<tr>
<td>80 Goddard Cres</td>
<td>Cambridge</td>
<td>Industrial</td>
<td>54,817</td>
<td>$5,400,000</td>
<td>New FedEx building</td>
</tr>
<tr>
<td>640 Parkside Dr</td>
<td>Waterloo</td>
<td>Commercial</td>
<td>53,937</td>
<td>$5,000,000</td>
<td>New Sobey’s Grocery Store</td>
</tr>
<tr>
<td>368 Mill Park Dr</td>
<td>Kitchener</td>
<td>Institutional</td>
<td>12,998</td>
<td>$5,000,000</td>
<td>New Plant 3 And Plant 4 pumping station at the Kitchener Wastewater Treatment Plant</td>
</tr>
<tr>
<td>388 Ottawa St S</td>
<td>Kitchener</td>
<td>Institutional</td>
<td>39,956</td>
<td>$4,500,000</td>
<td>Addition to an existing church</td>
</tr>
<tr>
<td>518 Dutton Dr</td>
<td>Waterloo</td>
<td>Industrial</td>
<td>86,716</td>
<td>$4,288,346</td>
<td>Maintenance and repair shop for ION</td>
</tr>
<tr>
<td>2201 Shantz Station Rd</td>
<td>Woolwich</td>
<td>Institutional</td>
<td>17,760</td>
<td>$4,273,000</td>
<td>Dinning hall and Learning Commons building for St. John’s –Kilmarnock School (SJK)</td>
</tr>
<tr>
<td>105 Earl Thompson Rd</td>
<td>North Dumfries</td>
<td>Commercial</td>
<td>26,038</td>
<td>$3,800,000</td>
<td>New 2-storey office building for Farrow Realty Inc.</td>
</tr>
<tr>
<td>200 University Ave W</td>
<td>Waterloo</td>
<td>Institutional</td>
<td>113</td>
<td>$3,500,000</td>
<td>Addition to the Engineering 3 Building (Vehicle &amp; Engine Testing Lab) at University of Waterloo</td>
</tr>
<tr>
<td>127 Elgin St N</td>
<td>Cambridge</td>
<td>Institutional</td>
<td>11,776</td>
<td>$3,500,000</td>
<td>Interior renovations and addition to St. Anne Catholic Elementary School</td>
</tr>
</tbody>
</table>
Attachment 2
Region of Waterloo
Transportation and Environmental Services
Transit Services

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: March 22, 2016        File Code: D10-20
Subject: New Cambridge Centre Transit Facility and Planned Transit Facilities

Recommendation: For information.

Summary:
This report provides an update on the proposed new transit passenger facility at the Cambridge Centre mall. The new transit passenger facility would be located on-site in front of the mall adjacent to Hespeler Road where local routes would converge and provide convenient transfers with ION BRT. The existing transit passenger facility adjacent to the south side of the mall on Dunbar Road would be converted to mall parking.

Two other key locations for new and upgraded transit passenger facilities include the University of Waterloo, where staff have been working with the university administration on a plan for a new road between Ring Road and Philip Street that would integrate GRT bus platforms with the ION LRT station, as well as Fairview Park Mall, where an integrated transit passenger facility is planned to be constructed adjacent to the ION LRT station.

Report:

Background

In anticipation of ION LRT and ION BRT, staff have undertaken a comprehensive redesign of the transit network to ensure full integration of conventional and rapid transit services. A key element of integration is the provision of passenger facilities to accommodate convenient transfers at strategic locations where routes converge.
The need for a new passenger facility at the Cambridge Centre Mall was identified through the network redesign process and included in the approved GRT Business Plan. The proposed alignment of the ION BRT along Hespeler Road prompted the need to relocate the transit passenger facility from the side of the mall adjacent to Dunbar Road to the front of the mall adjacent to Hespeler Road.

As shown in Attachment 1, in the interim until the new passenger facility is constructed, ION BRT serves the existing passenger facility at the side of the mall and circulates around the mall. With the new passenger facility at the front of the mall, the northbound ION BRT stop will be on Hespeler Road and the southbound ION BRT will use a platform at the passenger facility.

**Proposed New Cambridge Centre Passenger Facility**

The new passenger facility provides 10 bus platforms, shelters, benches, covered bike parking, real-time LED passenger information displays, surveillance cameras, landscaping, public art, and a driver facility for lunch breaks and shift changes. As shown in Attachment 2, an existing sidewalk between the passenger facility and the mall will be widened to accommodate the increase in pedestrian movements.

The new passenger facility allows ION BRT to follow a more direct alignment staying on Hespeler Road in the northbound direction and accessing the southbound platform within the new facility off of Hespeler Road, whereas today the route circulates around the mall in both directions. Local routes would use Hespeler Road, Dunbar Road and Bishop Street to access the new passenger facility. A three dimensional rendering of the proposed facility is provided in Attachment 3.

**Next Steps**

Site plan approval has been received from the City of Cambridge in principle pending completion of minor design changes, and a license agreement between the Region and mall ownership is being finalized. The term of the agreement is for 15 years with an option to renew for an additional 5 years. The license fee is $100 per year. The Region will be responsible for snow clearing, garbage pick-up, general cleaning and repairs associated with the new passenger facility. Asphalt repairs on internal access roads used by buses would be cost-shared equally between the Region and mall ownership.

The construction tender was issued March 3, is expected to close March 24, and Council approval would be requested at the April 20, 2016 meeting. The project schedule envisions the new passenger facility to be operational in November 2016.

**Other Planned Passenger Facilities**

Two other key locations for planned new and upgraded transit passenger facilities include the University of Waterloo and Fairview Park Mall.
At the University of Waterloo, staff have been working with the university administration on a plan that includes a Transit Plaza Road (between east campus Ring Road and Philip Street) that accommodates curb-side bus platforms for 8 GRT buses, 3 GO buses and 2 intercity buses, as is shown in Attachment 4. Customer amenities would include shelters, benches, bike parking and real-time LED displays. Sidewalks and cycling facilities would also be provided continuously along the Transit Plaza Road between Philip Street and the Ring Road.

The proposed Transit Plaza Road passenger facility is adjacent to the ION LRT station and will be well integrated to facilitate convenient pedestrian access between buses, LRT, the campus and adjoining neighbourhoods. The planned schedule is to complete detailed design in 2016, begin construction in 2017 and have the Transit Plaza Road operational by Fall 2017 in anticipation of the start of ION LRT revenue service.

At Fairview Park Mall, a new transit passenger facility is planned to be constructed adjacent to the LRT station, as shown in Attachment 5. The new facility would provide platforms for 8 buses and would include a driver facility for lunch and shift changes, as well as a customer park and ride facility. Customer amenities in the transit facility would include shelters, benches, bike parking and real-time LED displays. Space for an additional 4-5 bus bays will be provided adjacent to the north side of the LRT platform, for a total of 12-13 bus bays at the integrated transit facility.

The existing transit passenger facility adjacent to The Bay would be decommissioned and the site would be restored to surface parking. The planned schedule is to complete the detailed design in 2016, begin construction in 2017 and have the new facility operational by Fall 2017 in anticipation of the start of ION LRT revenue service.

**Corporate Strategic Plan:**

The new Cambridge Centre transit facility supports the Focus Area of "Sustainable Transportation" through Corporate Strategic Objective 2.1: “Create a public transportation network that is integrated, accessible, affordable and sustainable.”

**Financial Implications:**

The Region’s approved 2016 to 2025 capital program includes $5 million for the construction of the Cambridge Centre transit facility in 2016 comprised of $4 million for construction in the 2016 GRT capital budget (Project 66088), to be funded from debentures ($3,272,000; 81.8%) and development charges ($728,000; 18.2%), and $1 million for the construction of aBRT platforms in the 2016 Rapid Transit project budget.

**Other Department Consultations/Concurrence:**

Staff from Corporate Services (Facilities Management, Finance), Transportation & Environmental Services (Rapid Transit, Design & Construction), as well as Planning,
Development and Legislative Services (Community Planning, Legal Services) have reviewed this report or collaborated on the development of detailed designs, site plan submissions, or the licence agreement with mall ownership.

**Attachments**

Attachment 1: Location of new Cambridge Centre transit facility
Attachment 2: Layout of proposed new Cambridge Centre transit facility
Attachment 3: Three dimensional rendering of new Cambridge Centre transit facility
Attachment 4: Layout of proposed University of Waterloo Transit Plaza Road
Attachment 5: Layout of proposed new Fairview Park Mall transit facility

**Prepared By:** Reid Fulton, Principal Planner (Transit)

**Approved By:** Thomas Schmidt, Commissioner, transportation and Environmental Services
Attachment 1: Location of new Cambridge Centre transit facility
Attachment 2: Layout of proposed new Cambridge Centre transit facility
Attachment 3: Three dimensional rendering of new Cambridge Centre transit facility
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Attachment 5: Layout of proposed new Fairview Park Mall transit facility
Region of Waterloo
Transportation and Environmental Services
Transportation

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: March 22, 2016  File Code: T01-20/8
Subject: Left-turn Restriction at the Dundas Street (Regional Road 8) and Wellington Street Intersection, City of Cambridge

Recommendation:
That the Regional Municipality of Waterloo amend Traffic and Parking By-law 06-072, as amended, to add to Schedule 15, Prohibited Movements, Westbound Left-turn, 3:00 p.m. to 6:00 p.m. Monday to Friday at the intersection of Dundas Street (Regional Road 8) and Wellington Street in the City of Cambridge, as outlined in Report TES-TRP-16-07, dated March 22, 2016.

Summary:
Regional staff recently reviewed the intersection of Dundas Street (Regional Road 8) and Wellington Street to determine if the intersection should be considered for safety improvements.

The five-year collision history (2010 to 2014) indicates that there have been a total of 50 collisions, and of the 50 collisions, 25 involved motorists turning left from Dundas Street onto Wellington Street. The majority of turning movement collisions involving motorists turning from Dundas Street onto Wellington Street are occurring between the hours of 3:00 p.m. and 6:00 p.m. Monday to Friday. It is therefore being proposed to restrict westbound left-turns from Dundas Street between 3:00 p.m. and 6:00 p.m. Monday to Friday.

It is anticipated that restricting left-turns during this period will significantly reduce those collisions involving a motorist turning left from Dundas Street onto Wellington Street.
1.0 Background

The intersection of Dundas Street and Wellington Street, in the City of Cambridge, ranks #1 for experiencing the most collisions at a 3-leg unsignalized intersection in the Region of Waterloo. The Dundas Street/Wellington Street intersection also ranks 36th among all 3504 locations (Intersection and road sections) within the Region of Waterloo based on collision experience.

The five-year collision history (2010 to 2014) indicates that there have been a total of 50 collisions and of the 50 collisions, 25 involved motorists turning left from Dundas Street onto Wellington Street. The remaining collisions include 3 sideswipe, 2 angle, 12 rear-end and 8 collisions involving motorists attempting a turn from Wellington Street onto Dundas Street. The left-turn collision from Dundas Street to Wellington Street has been identified as the most dominant and over-represented collision type needing attention.

The majority of turning movement collisions involving motorists turning from Dundas Street onto Wellington Street are occurring between the hours of 3:00 p.m. and 6:00 p.m. Monday to Friday.

2.0 Existing Conditions

Dundas Street runs in the east/west direction and has a 4-lane cross section with a posted speed limit of 50 km/h. Dundas Street has Average Annual Daily Traffic Volume of 18,112 vehicles.

Wellington Street, under the jurisdiction of the City of Cambridge, runs north/south and has a 2-lane cross section with a posted speed of 50 km/h. Wellington Street meets Dundas Street creating a “T” intersection with stop control on Wellington Street.

Currently, the Dundas Street/Beverly Street intersection experiences excessive eastbound queuing; it’s evident through field reviews and internal reviews that the passing lane (left lane) on Dundas Street has frequent queues that extend through and beyond the Wellington Street intersection. This queuing is a contributing factor to the higher than expected turning movement collisions occurring at the Dundas Street/Wellington Street intersection.

It’s important to note that, the Dundas Street eastbound curb lane (right lane) does not queue from Beverly Street to Wellington Street. This lane generally does not queue back due to this lane ending shortly beyond the intersection. The majority of motorists are using the left lane as a result of this curb lane ending. As such, motorists attempting a left-turn from Dundas Street onto Wellington Street are often turning through vehicular queues during the p.m. peak period and are being struck by
eastbound motorists travelling eastbound in the under-utilized curb lane. Figure 1 shows both Dundas Street and Wellington Street, and the general area.

Figure 1 – Dundas Street at Wellington Street

3.0 Proposed Collision Countermeasure

As previously noted, the eastbound passing lane on Dundas Street has frequent queues that extend through and beyond the Wellington Street intersection and the eastbound curb lane generally does not experience queuing to Wellington Street. As such, motorists attempting a left-turn from Dundas Street onto Wellington Street are turning through the vehicular queues and are being struck by eastbound motorists approaching the intersection in the under-utilized eastbound curb lane.

The majority of the turning movement collisions are occurring between the hours of 3:00 p.m. and 6:00 p.m. Monday to Friday. It is therefore being proposed to prohibit westbound left-turn movements from Dundas Street between 3:00 p.m. and 6:00 p.m. Monday to Friday by installing a left-turn prohibition sign.

It is anticipated that this countermeasure will reduce overall collisions by 68% and left-turn collisions by 50%. Figure 2 highlights the vehicular queuing along Dundas Street within the eastbound passing lane and the proposed left-turn restriction.
4.0 Public and Area Municipality Consultation

Information signs were installed on Dundas Street and on Wellington Street approaching the intersection for two weeks starting February 18, 2016 requesting comments from residents through the Region’s website or via telephone. An Internet questionnaire was also setup to receive comments and a phone number was provided. As a follow-up to the web survey, questionnaires were also mailed to residents and businesses in the vicinity of the intersection (approximately a 400 m radius) requesting comments on the proposed changes.

The questionnaire asked interested parties whether they were in support of, or in opposition to, prohibiting westbound left-turning vehicles from Dundas Street onto Wellington Street between the hours of 3:00 p.m. and 6:00 p.m. Monday to Friday.

A total of 65 responses were received and of those responses, 46 support the left-turn restriction from Dundas Street onto Wellington Street and 19 oppose the proposed prohibition. Those that oppose the restriction cite the following:

- Traffic volume will increase along Cambridge Street; and
- The collisions will move to the Dundas Street/Cambridge Street intersection.

Staff anticipates that there may be an increase in traffic volume using Cambridge Street as a result of the left-turn restriction at Wellington Street. However, the restriction will only affect those residents along Cambridge Street between 3:00 p.m. and 6:00 p.m.
Monday to Friday. It’s also important to note that Beverly Street is a potential route that motorists may travel to get to their destination. Staff anticipates an increase of approximately 423 vehicles during this period should no motorists utilize Beverley Street as an option. Cambridge Street currently has an Average Annual Daily Traffic (AADT) volume of 3,823.

Based on current operations along Dundas Street, staff do not anticipate an increase in collisions at the Dundas Street/Cambridge Street intersection as left-turning motorist will not have to negotiate through opposing stopped traffic. Currently, staff are not witnessing any queueing that reaches Cambridge Street. Although staff anticipate a nominal increase in traffic volume utilizing the intersection, staff do not anticipate that this increase will create a significant increase in collisions at the Dundas Street/Cambridge Street intersection.

City of Cambridge staff have some concerns with a potential increase in traffic volume on Cambridge Street; however, City staff support the proposed left-turn prohibition.

Those wishing to be advised of when this matter will be dealt with by Regional Planning and Works Committee have been notified.

5.0 Recommendation

It was identified that the intersection of Dundas Street and Wellington Street ranks #1 for experiencing the most collisions at a 3-leg unsignalized intersection in the Region of Waterloo. The Dundas Street/Wellington Street intersection also ranks 36th among all 3504 locations (Intersection and road sections) within the Region of Waterloo based on collision experience.

It was further identified that the majority of collisions at the Dundas Street/Wellington Street intersection were turning movement collisions involving motorists turning left from Dundas Street onto Wellington Street. The majority of these collisions involve motorists turning from Dundas Street onto Wellington Street and occur between the hours of 3:00 p.m. and 6:00 p.m. Monday to Friday. It is therefore being proposed to prohibit northbound left-turn movements from Dundas Street between 3:00 p.m. and 6:00 p.m. Monday to Friday by installing a left-turn prohibition sign.

The proposed left-turn restriction at the Dundas Street and Wellington Street intersection is being proposed in advance of more significant overall improvements in 2018 and 2019. The proposed improvements in 2018 and 2019 will include complete reconstruction of Dundas Street from Hespeler Road to Elgin Street. These improvements include underground infrastructure replacements, sidewalk and road improvements, new cycling lanes and bridge rehabilitation. It is anticipated that Public Consultations with plans for the proposed 2018 and 2019 improvements will commence in the fall of 2016 or the spring of 2017. Advisory
letters and notifications will be sent out to communicate timing.

In this regard, the proposed left-turn restriction may be an interim measure until such time that a permanent solution can be implemented as part of the Dundas Street Improvement Project tentatively scheduled for construction in 2018 and 2019.

**Corporate Strategic Plan:**

This report addresses the Region’s goal to optimize road capacity to safely manage traffic and congestion (Strategic Objective 2.4).

**Financial Implications:**

The cost to install a sign prohibiting the northbound left-turn movement is approximately $300 and is included in the Transportation Operations Maintenance budget.

**Other Department Consultations/Concurrence:**

The Council and Administrative Services Division will be required to prepare the amending By-law.

**Attachments**

Nil

**Prepared By:** Patricia Heft, Engineering Technologist (Traffic)

**Approved By:** Thomas Schmidt, Commissioner, Transportation and Environmental Services
Region of Waterloo
Transportation & Environmental Services
Waste Management

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016    File Code: E20-40

Subject: Waterloo Landfill Update – Environmental Monitoring and Controls

Recommendation: For Information

Summary:

The Waterloo Landfill Site (as shown in Figure 1 in Attachment 1) is licensed to receive solid non-hazardous Industrial, Commercial and Institutional and residential waste for disposal. Ownership and operation of the Site was assumed by the Region in 1973, and continues to the present day. The original portion of the landfill began operation prior to the introduction of current environmental design and monitoring practices. Additionally, landfilling practices in the 1970’s were not as rigorously regulated as they are today. As such, the variety of materials disposed of at the Site in the 1970’s would not be permitted for landfill disposal today. At current fill rates, the expected remaining lifespan of the landfill is approximately 15-20 years.

The Region performs a significant amount of environmental monitoring and operates numerous environmental controls at the Site in accordance with Ministry of Environment and Climate Change (MOECC) requirements. The environmental control systems protect the environment around the Site and mitigate the impacts of historical landfilling operations and current waste management operations. Environmental control systems include groundwater extraction and monitoring wells, leachate collection and monitoring, surface water management, odour control systems, and landfill gas collection and utilization.

Water quality data is collected from a network of over 220 groundwater, leachate, private, and municipal wells as well as surface water monitoring locations in and around the Site. The Region has successfully intercepted pockets of impacted groundwater through the operation and continued expansion of remedial groundwater extraction systems along the property boundaries as described in previous reports to Planning and...
Works Committee (E-09-113 and E-14-057). Although the operation of the groundwater extraction systems has generally been successful, mildly impacted groundwater has migrated off-site through a gap in the chain of extraction wells along the south property boundary. The Region has been working closely with the MOECC, the Waterloo Region Landfill Liaison Committee (WRLLC), and the Region’s Water Services group to develop a plan to regain compliance at the southern property boundary, as well as to delineate the extent of the impacted groundwater that has migrated off site. In 2015, the Region installed the third of three groundwater extraction wells at the south property boundary strategically located to “close the gap.” Based on operational and monitoring data to date, it is expected that full containment of the impacted groundwater has now been achieved.

Landfill gas (LFG) management at the Site is prescribed in a comprehensive Landfill Gas Action Plan. The major objectives of the plan are to minimize LFG emissions to the atmosphere, subsurface migration of LFG, and off-site odours due to LFG. The plan continues to be followed and consists of a phased strategy to implement long-term gas management at the Site that includes monitoring, collection and utilization of LFG.

Capital improvements to expand, upgrade and replace environmental control systems and monitoring infrastructure are continually being undertaken at the Site. Current projects include improvements to groundwater monitoring and remediation infrastructure, leachate and LFG collection infrastructure, and cell closure activities including final capping.

**Report:**

**Background**

The Waterloo Landfill Site (Site), located at 925 Erb.St. W. in Waterloo, is the Region’s only active landfill and serves the waste disposal needs of the Region’s homeowners in addition to a portion of the Industrial, Commercial and Institutional (IC&I) community Site (refer to Figure 1 in Attachment 1). The Site is operated under an Environmental Compliance Approval (ECA) issued by the Ministry of the Environment and Climate Change (MOECC). The landfill is licensed to receive solid non-hazardous IC&I and residential waste for disposal. Additional operations at the Site include a small vehicle waste transfer area, a household hazardous waste facility, a waste diversion area, an organics transfer area, a materials recycling centre, an administrative building, and an equipment maintenance and storage facility.

The landfill commenced operation in 1972. Ownership and operation was assumed by the Region upon its formation in 1973, and continues to the present day. The Site is nearly 2 km in length and spans an area that includes land in both the cities of Waterloo and Kitchener as well as the Township of Wilmot. The Site covers an area of approximately 127 hectares (ha) of which 71 ha is approved for landfilling. The amount of waste disposed of at the Waterloo Landfill since its inception is estimated at
8,700,000 m$^3$, a volume equivalent to approximately 3,500 Olympic swimming pools. Approximately 2/3rds of approved landfill capacity has been utilized to-date with a volume remaining to be filled of approximately 4,000,000 m$^3$. The expected remaining lifespan of the landfill is approximately 15-20 years at current fill rates of approximately 170,000 tonnes/year.

The original portion of the landfill, referred to as the Original Landfill Area (OLA), located roughly in the centre of the Site, began operation prior to the introduction of current environmental design and monitoring practices. The OLA was constructed to the environmental standards in place nearly 45 years ago, which did not include the degree of engineered environmental controls typical of the past 25 years. Additionally, landfilling practices in the 1970’s were not as rigorously regulated as they are today. As such, a variety of materials and chemicals disposed of at the Site in the 1970’s would not be permitted for landfill disposal today.

In 1991, approval was granted by the MOECC to expand landfilling operations into an area to the north of the OLA, referred to as the North Expansion Area (NEA) and an area to the south of the OLA, referred to as the South Expansion Area (SEA). The NEA is comprised of 4 landfill cells, and the SEA is comprised of 7 landfill cells. Typically only one landfill cell is operated at a time. New landfill cells are constructed and readied for filling to align with completion of filling in an active cell to interim or final volumes. All new landfill cells in the NEA and SEA are designed, constructed and operated to the stringent environmental standards that are in place today. Landfilling operations in the fourth and final cell in the NEA was completed in February 2016. Landfilling operations have now transitioned to the remaining cells in the SEA (currently filling in cell 4 of 7), where they will remain until the Site is at capacity.

As part of the approval for the 1991 expansion of the Site, a liaison committee (Waterloo Region Landfill Liaison Committee (WRLLC)) was formed. The primary function of the liaison committee is to provide for regular and effective communication between the Region, local residents and the MOECC on the operation of the Site. The WRLLC meets on a quarterly basis with additional meetings as necessary. A budget is provided annually by the Region for the WRLLC to retain consultants to provide input and assistance on their behalf. A third party hydrogeologist has been retained for many years by the WRLLC, and provides input related to groundwater and surface water issues. In 2014 the WRLLC retained an independent air quality reviewer to review air quality monitoring and odour management at the Site and make recommendations for changes or additional study.

The Region performs a significant amount of environmental monitoring and operates numerous environmental controls at the Site. Environmental monitoring of groundwater, surface water, air and leachate is completed on a regular and on-going basis to assess the performance of the environmental control systems, ensure compliance with applicable regulatory criteria, and identify the need for additional monitoring, controls
and/or mitigation. The environmental control systems protect the environment around the Site and mitigate the impacts of historical landfilling operations and current waste management operations. Environmental control systems include groundwater extraction and monitoring wells, leachate collection and monitoring, surface water management, odour control systems and landfill gas collection and utilization. The Waste Management Division’s engineering staff are responsible for the operation, maintenance, repair and expansion of the environmental control infrastructure described above. This report provides an update on environmental monitoring and controls as well as on-going environmental investigations.

**Water Monitoring and Groundwater Impact Mitigation**

Leachate is the term used to describe the liquid that is produced when water from rain or snow melt comes in to direct contact with waste. The Site has control systems in place for the collection of leachate from all landfill areas. A perimeter leachate collector system was retrofitted around the OLA in the 1990’s to collect as much leachate as possible from the original landfill cells. Each new landfill cell in the NEA and SEA is built with an engineered clay liner and extensive leachate collection system to protect the underlying groundwater aquifer and collect and transfer leachate off-site. The leachate drains to the bottom of the landfill cell, is collected in perforated pipes which then drain into underground holding chambers. These chambers are continually emptied by a series of pump stations that ultimately convey the leachate to the Waterloo Wastewater Treatment Plant (WWTP) for treatment. Despite the perimeter leachate collection being installed around the OLA in the early 1990’s, and capturing a significant volume of leachate, over time leachate from the OLA has migrated into the groundwater aquifer underlying the Site.

With the knowledge that the historic landfill cell construction standards coupled with historic landfilling practices at the Site would likely result in groundwater impacts from landfill leachate, the Region has been extensively monitoring the leachate, groundwater and surface water in and around the site for over 25 years. Data is collected on a monthly basis from a sampling network of over 200 groundwater, leachate, private, and municipal wells and 22 surface water monitoring locations in and around the Site. A detailed assessment of the data is completed every year, and an extensive annual monitoring report is submitted to the MOECC documenting Site operations, including performance of the environmental control systems. The annual report also includes an interpretive analysis of monitoring data associated with the groundwater and surface water sampling program and recommendations for new investigations, additional monitoring well locations and/or modifications to the Site environmental control systems as required to address potential impacts. In the past 10 years, the monitoring well network has been expanded to include nearly 40 new monitoring locations.

Leachate typically contains a variety of compounds, and a select group are often designated as “critical contaminants” based on how quickly they can migrate in
groundwater and how slowly they degrade. The primary compound of concern at the Site is vinyl chloride (VC), a degradation product of many of the organic chemicals that are typically found in leachate. The Region is held to a provincial groundwater quality standard defined as the Reasonable Use Guideline (RUG). The RUG applies to concentrations at the property boundary and is based on the Ontario Drinking Water Standard (ODWS) for a given compound. The ODWS for VC is 2 parts per billion (ppb), and the RUG is 0.5 ppb. The monitoring program has and continues to identify the location of impacted groundwater beneath the site and its likely direction of travel. The Region has successfully intercepted pockets of impacted groundwater in the northwest, east, southeast, and south areas of the Site. Although the operation and continued expansion of remedial groundwater extraction systems in place since 2000 have generally been successful, (as described in reports E-09-113 and E-14-057), groundwater mildly impacted with VC has migrated off-site at the southern property boundary. Groundwater approximately 400 m from the southern property boundary, has a VC concentration of approximately 1 ppb. Currently seven (7) extraction wells operate along the east boundary of the Site, and three (3) along the south.

In order to address this issue the Region has been working closely with the MOECC, the WRLLC, the Region’s engineering consultant, and the Region’s Water Services group to develop a plan to regain compliance at the southern property boundary, as well as to delineate the extent of the VC impacted groundwater that has migrated off-site. In 2015, the Region installed the third of three groundwater extraction wells at the south property boundary strategically located to “close the gap.” Once the groundwater is pumped to surface, it is discharged to on-site stormwater management ponds (SWMP) so that the VC impacted groundwater is agitated/mixed with surface water to effectively remove the VC to the atmosphere. This process is referred to as air stripping and is undertaken in accordance with MOECC approvals. Based on operational and monitoring data to date, surface water monitoring shows that the SWMPs are in compliance with all quality standards associated with the groundwater extraction system discharge and it is expected that full containment and capture of the VC impacted groundwater has now been achieved. The Region has recently installed additional off-site monitoring wells which will be used to collect additional data to both monitor the performance of the extraction well system and refine the understanding of groundwater flow in this localised area.

Groundwater monitoring and remediation is an iterative science and the Region has undertaken, in consultation with the MOECC and with input from the WRLLC, a phased approach to monitor, locate and intercept impacted groundwater. The Region’s 10 year capital program includes funding to continue with this ever expanding program of monitoring and extraction well installation. The Region works collaboratively with the MOECC, the WRLLC, the Grand River Conservation Authority (GRCA), Union Gas, Hydro One Networks Inc. (HONI), and Infrastructure Ontario (I/O) to secure the approvals necessary to install infrastructure in the vicinity of the southern site boundary,
and at other locations in and around the Site as necessary. Work has proceeded as expeditiously as possible recognizing approvals and procedures must be adhered to and allowing for new information to be incorporated as it becomes available. In 2015, approvals were secured to further advance the work associated with the south boundary issues, including additional monitoring wells to be located both on (at the locations proposed for future contingency extraction wells) and off site.

From time to time, based on new information or practices in other jurisdictions, regulatory bodies make amendments to standards. In December 2015, the MOECC announced that it plans to introduce a new ODWS standard for several compounds, including VC, effective January 1, 2017. The new ODWS for VC will be 1 ppb, with a corresponding decrease in the RUG to 0.25 ppb. The Site environmental monitoring and control program is being reviewed in light of this pending change to determine if additional field investigations, monitoring or control infrastructure installations or operational changes may be necessary as a result.

**Landfill Gas Control and Odour Mitigation**

Landfill gas (LFG) management at the Site is prescribed in a comprehensive management program referred to as the Landfill Gas Action Plan. Developed in 1994, the major objectives of the plan are to minimize LFG emissions to the atmosphere, subsurface migration of LFG, and off site odours due to LFG. The plan is a phased strategy to implement a long-term gas management approach at the Site and includes monitoring, collection and utilization of LFG. In accordance with MOECC air quality regulations, air quality monitoring is conducted at the Site. Testing is conducted five times annually to monitor the ambient air quality at the property line for volatile organic compounds. Samples are taken upwind and downwind from the Site and the results are compared to Ontario Regulation 419/05. To date results have demonstrated compliance with all applicable ambient air quality criteria.

Decomposition of the waste in a landfill produces landfill gas. Decomposition occurs in the absence of oxygen, known as anaerobic conditions. Anaerobic conditions result in the formation of a gas which contains primarily methane and carbon dioxide, with trace amounts of sulfides. Landfills are the third largest producer of methane (a potent greenhouse gas) in North America, accounting for approximately 20% of total emissions. The distinctive odour of landfill gas is due to the presence of sulfides, including hydrogen sulfide and other odourous compounds such as mercaptans. These odourous compounds are collectively present in the gas at extremely small concentrations (significantly lower than thresholds associated with health impacts), but can often be detected by the human nose at levels so low that they are impossible to measure with laboratory analyzers. Organics in the waste stream significantly increase the rate and volume of landfill gas production. Globally, 7% of all greenhouse gas emissions, or 3.3 billion tonnes per year, are due to the decomposition of food waste. Temperature and moisture in the waste (either inherent to the waste such as in food
waste, or as a result of excessively rainy conditions) both cause more landfill gas to be generated. As the gas beneath the landfill cap is generated, pressure builds up.

An integrated system of environmental control infrastructure designed to minimize landfill gas venting and odour generation is located across the Site. The primary control is the LFG collection and utilization system, while the leachate control system and the landfill capping system provide for secondary controls.

The LFG collection system consists of over 120 vertical gas extraction wells and horizontal gas extraction trenches placed in the waste mass. Vertical wells are installed once a landfill cell is completely full and capped, and are considered permanent installations. Horizontal trenches are installed in active cells that have not yet reached final contours, and are considered temporary installations. A vacuum is applied to this network of wells and trenches to collect and convey the LFG to the landfill gas plant. The landfill gas collection system is a highly dynamic system that requires daily balancing by staff to respond to changes in conditions, such as temperature and barometric pressure. On average, the LFG collection system captures around 80% of the LFG produced at the site. By comparison, industry wide average capture rates typically vary from 50% to 80%.

Once collected and conveyed to the landfill gas plant, Toromont Energy, in partnership with the Region since 1998, converts the LFG to approximately 4-5 MW of electricity. The resulting electricity is placed on the grid and is enough to supply up to 5000 homes. The Toromont plant is operational over 95% of the time over the course of a year, with the exception of power interruptions and maintenance shut downs. During times when Toromont is off-line, a backup system of two enclosed flares is utilized for LFG management. A third portable flare is available as a contingency measure to allow for the collection and management of “immature” gas from active landfill cells. Immature gas is generated from recently placed waste and often contains insufficient methane content for utilization by Toromont. In an average year the LFG utilization system generates over $600,000 in revenue and saves approximately 150,000 tonnes CO$_2$ equivalent of greenhouse gas emissions from being emitted to the atmosphere.

In addition to aquifer protection, the leachate collection system serves a dual role to prevent flooding at the bottom of the vertical gas extraction wells. Liquid is a barrier to gas collection and flooded wells cannot collect landfill gas. Additionally, because the leachate collection system is installed in the landfill cells and landfill gas may be present around leachate pipes and pipe bedding, landfill gas can travel in the pipes and bedding and make its way to the atmosphere. Where feasible, a vacuum is applied to the leachate collection system manholes to collect gas that may be travelling in the leachate collection system. This specialised landfill gas management technique is only practised at a handful of modern landfills, including the Waterloo landfill.
As each landfill cell is completed, a cap consisting of 0.9 m of very low permeability clay is installed over each cell. This clay cap serves a dual function to prevent surface water intrusion into the waste mass thereby minimizing the generation of leachate, and to create an air tight seal to suppress passive venting of landfill gas. Currently the capped surface area at the site covers approximately 406,000 m$^2$; an area roughly the equivalent of over 80 football fields. The natural properties of clay cause it to be subject to environmental impacts and degradation over time such as desiccation and erosion. This can lead to fissuring and cracking which impacts the ability of the cap to serve its intended functions as described above.

On-going maintenance of the final cap is a high priority task given the extensive area of cap installed at the Site and its role in mitigating passive venting of gas. Regular field surveys are conducted to identify areas of passive venting for remediation or repair. A variety of repair and mitigation measures are employed including crack sealing, cap repair, use of biofilters (activated carbon or wood chip), a perimeter spray system, odour suppressants and the use of daily cover materials. In addition, off-site “community” surveys are conducted throughout the year to ascertain the presence of odour in the adjacent community, particularly to determine if odour is increased in either intensity or dispersion.

Despite the extensive controls described above, landfill odour does occur from time to time primarily due to passive venting, and is highly dependent on weather conditions such as wind speed, wind direction and barometric pressure. The Site’s Odour Management Plan is updated annually and shared with both the WRLLC and the MOECC. Odour complaints and other communications received by staff are recorded in a database. In the past 5 years, odour complaints have ranged from 37 to 82 per year, with the average being 69 complaints annually. As the Site continues to grow in size as new cells are constructed and full cells are capped, the net result is an ever increasing volume of gas produced. Additionally, the amount of environmental control infrastructure installed at the site and subject to downtime for repair or maintenance also continues to grow with Site expansion. The intensive development in the immediate vicinity of the Site has resulted in a greater challenge to mitigate odour that may occur from time to time as a result of the significant increase in the number of nearby receptors.

### Site Development and Capital Improvements

Capital improvements to expand, upgrade and replace environmental control systems and monitoring infrastructure are continually being undertaken at the Site. The sections below provide a summary of the status of projects underway in this regard.

### Groundwater Monitoring and Remediation

Work to secure approval from HONI to install three (3) additional off-site groundwater monitoring well nests to delineate the extent of the mildly impacted groundwater south of the Site boundary was completed in February of 2016. Based on the information collected from these wells, additional wells will be strategically located and installed in
2016 to continue the work of delineation. Approval from HONI will be required for these additional wells.

Work to install three (3) additional on-site groundwater monitoring wells, within a Union Gas easement, to advance monitoring coverage along the south boundary will also be completed later this year.

Three new groundwater monitoring wells have also been installed in the northwest quadrant of the Site to continue to refine understanding and extent of VC impacted groundwater located adjacent to the OLA in this area.

Pending receipt of approvals from the MOECC, HONI, I/O, and the GRCA, construction of a forcemain and well house to house power supply, instrumentation and controls for the three (3) existing south boundary groundwater extraction wells will commence later this year. Appurtenances for these wells are currently located outside and the new wellhouse and forcemain is designed to accommodate up to seven (7) additional extraction wells, should they be needed in the future.

**Leachate Management**

In 2014, staff re-negotiated a Leachate Discharge Agreement with the City of Waterloo to allow for increased leachate discharge into the City’s sanitary sewer collection system. This improvement allows for more rapid transport of leachate off-site, resulting in a decreased risk of groundwater impacts from the OLA, improved gas collection and improved odour mitigation. Staff also negotiated an agreement with the City of Kitchener to permit discharge of leachate into the City of Kitchener sanitary sewer system for ultimate conveyance of leachate generated primarily in the southern extent of the site to the Kitchener Wastewater Treatment Plant. A second outlet for leachate will further improve leachate removal from the Site and provide operational flexibility. Construction of the new leachate connection to the City of Kitchener, which is sized to convey 100% of future leachate flows from the Site, is scheduled for 2017.

**Gas Collection and Utilization and Odour Abatement**

A field study to measure concentrations of hydrogen sulfide in the gas collection system was completed in 2014 to assess areas of greatest odourous gas generation and inform priority locations for new gas extractions wells. Several new wells were installed in 2015. Design and approvals work is underway for a landfill gas west header pipe. Construction of this pipe, scheduled for 2017, will improve gas collection by creating a “looped” pipe network that encircles the perimeter of the Site.

Work to install horizontal gas collection trenches in the active SE4A landfill cell will commence in 2016 once a minimum depth of waste has been placed in the cell. Subsequent tiers of horizontal trenches will be constructed as filling progresses.
A network of vertical gas collection wells will be installed in 2017 across the entire footprint of the NEA following completion of final capping scheduled for 2016. Vertical wells are permanent installations, with an operating life of approximately 30 years. Completion of the NEA vertical wells will bring the network of active gas collection points on the Site to close to 150.

The frequency of both on-site and off-site community surveys is proposed to be increased in 2016. Staff continue to work with the WRLLC’s air quality specialist to optimise these programs with a view to gathering data to most effectively assist with ongoing odour mitigation activities. Also planned for 2016 is the introduction of an on-line communication form to allow residents to communicate with waste management staff about impacts, including odour, noise, dust, litter etc.

**Final Capping**

Landfilling was completed in the NEA in February 2016. Construction of the final clay cap across the entirety of the NEA will be completed later in the year. Placement of the final cap significantly reduces the amount of leachate generated and provides for improved odour mitigation and gas collection.

**Development of Remaining Landfill Cells**

Staff undertake specialised studies to identify opportunities for operational or engineering changes to improve performance of environmental controls and reduce environmental impacts. A Phasing Study was completed in 2013 to optimise the build out of remaining SEA cells with a view to minimizing impacts such as leachate and odour generation, maximizing gas collection, and reaching final grades more quickly to allow for final capping to occur by constructing smaller cells oriented east to west. The recommendations of this study were implemented in 2014 with the construction of cell SE4A. Based on current fill rates and cell capacity, the remaining four (4) cells in the SEA will be developed at intervals of approximately every 2-4 years over the next 15 to 20 years.

**Corporate Strategic Plan:**

The work described in this report supports the Corporate Strategic Plan objectives of the Environment and Sustainable Growth Focus Area, including 3.2 “Protect the quality and quantity of our water resources” and 3.3 “Enhance efforts to improve air quality”.

**Financial Implications:**

The approved 2016 Waste Management Ten Year Capital Program includes sufficient funding provisions to implement the initiatives described in this report.

**Other Department Consultations/Concurrence:**

Nil
Attachments

Attachment 1 - Figure 1.

Prepared By: Donna Serrati, Manager, Engineering and Programs

Approved By: Thomas Schmidt, Commissioner, Transportation & Environmental Services
Report: PDL-CPL-16-20

Region of Waterloo
Planning, Development and Legislative Services
Community Planning

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016  File Code: D02-20

Subject: Proposed 2016 Implementation Plan for the Regional Transit Supportive Strategy for the City of Cambridge

Recommendation:

That the Regional Municipality of Waterloo approve the 2016 Implementation Plan for the Transit Supportive Strategy, as described in Report No. PDL-CPL-16-20, dated March 22, 2016.

Summary:

As part of the approval for ION implementation in 2011, Regional Council approved an annual allocation of $1,000,000 for a period of ten years to implement a Regional Transit Supportive Strategy (TSS) for Cambridge. The ultimate goal of the TSS is to accelerate the implementation of Stage 2 ION LRT through initiatives that improve transit ridership and/or encourage transit supportive development, specifically within the Central Transit Corridor (CTC) in Cambridge.

The Transit Supportive Strategy Working Group, which consists of City of Cambridge and Regional staff representatives, identifies the initiatives that best meet the program requirements and develops an implementation plan each year. The following Report is the proposed 2016 Transit Supportive Strategy Implementation Plan for Regional Council’s consideration.

Four new initiatives are proposed in the 2016 Implementation Plan, namely:

1. Provision of CarShare Vehicles in Downtown Cambridge;
2. Improvements to Grand River Transit (GRT) Stops on Hespeler Road;
3. Financial Support for a Multi-use Trail on Conestoga Boulevard; and
4. Transit Passes for Special Events.
Two initiatives are proposed for an extension or expanded scope, including:

1. An Eight Month Extension of the Conestoga College Transit Pass Discount Program to August 2016; and
2. The Cambridge Transportation Master Plan.

The proposed initiatives meet the TSS program requirements and support the implementation of the Community Building Strategy and several strategic objectives in the Region of Waterloo 2015-2018 Strategic Plan. The cost of the proposed 2016 Implementation Plan, including three previously approved initiatives (Maple Grove iXpress, Saturday iXpress, and Transportation Demand Management Co-ordinator / Station Area Planner), is $1,410,050. The portion in excess of $1 million would be funded by a carry-over balance accumulated from previous years. A balance of $115,789 remains for future projects. Some of the TSS funded studies, such as the Growth and Intensification Study, are expected to inform future TSS investments.

Report:

On June 15, 2011, Regional Council approved the phased implementation of Light Rail Transit (LRT) to reflect differences in transit ridership, development potential, and capital and operating costs along the ION route. The Region’s ultimate goal is to implement a full LRT system along the Central Transit Corridor (CTC) connecting the Cities of Cambridge, Kitchener and Waterloo.

As part of ION approval, Regional Council initiated an annual allocation of $1,000,000 for ten years to implement transit supportive initiatives in Cambridge to build ridership for Stage 2 LRT (Report E-11-072). A program known as the Transit Supportive Strategy (TSS) was developed (Report P-12-023/E-12-028) to administer this annual allocation by Regional Council, which includes a two-step evaluation process for potential initiatives (please see Attachment 1 - Two-Step Evaluation Process). The TSS Funding Agreement between the City of Cambridge and the Region of Waterloo provides a definition of “eligible expenses,” as well as administration procedures for the project.

The Transit Supportive Strategy Working Group, which consists of City of Cambridge and Regional staff representatives, identifies the initiatives that best meet the program requirements and develops an annual implementation plan for Regional Council’s consideration. This report is the proposed Implementation Plan for 2016 and City of Cambridge staff support its recommendations. The 2016 plan consists of four new projects, two expanded projects, and three previously approved projects that have expenditures in 2016. Attachment 2 provides an update on the previously approved initiatives that took place in 2015, such as the City of Cambridge’s Growth and Intensification Study and the 203 Maple Grove iXpress. Photographs of the pedestrian improvements made at the Ainslie Street Terminal are provided in Attachment 3.
New Initiatives Proposed for the 2016 Implementation Plan

1. Provision of CarShare Vehicles in Downtown Cambridge

The City of Cambridge is considering entering into a CarShare Anywhere Agreement with Community CarShare. Community CarShare is a non-profit cooperative that rents vehicles to its members on a self-serve, pay-per-use basis. Its Corporate Membership Program is designed to encourage employees to use CarShare vehicles for business trips rather than their personal vehicles, thereby allowing participating employees to take transit to work instead of driving. In order to increase transit ridership, the City intends to remove one of the barriers to taking transit to work by combine car sharing with TravelWise services, such as discounted transit passes and emergency ride home. The Region of Waterloo, the City of Kitchener and the City of Waterloo are using the same strategy to grow transit use. In the last five years, Community CarShare membership has grown at an average rate of 40 percent per year.

In a 2014 staff transportation survey conducted by the City of Cambridge, 50 out of 240 respondents stated that business trips are one reason they drive to work alone. There are currently no CarShare vehicles stationed in the City of Cambridge, but a few members access the vehicles stationed at Fairview Park Mall using ION BRT.

Under the proposed agreement, the City would provide two free parking spaces at City Hall to accommodate two CarShare vehicles. In addition, the City would provide CarShare parking spaces throughout the city to support on-demand service. The City would also offer a corporate CarShare membership to any employee willing to use it for business trips. The City is already a corporate member of the Region’s TravelWise Transportation Management Association and CarShare would complement the City’s existing programming. The Region has been supportive of car sharing in Kitchener and Waterloo, and this initiative would extend this support to Cambridge.

The vehicles proposed for Cambridge would be available to all Community CarShare members and promoted throughout the downtown area. CarShare has identified downtown Cambridge as a suitable location for shared vehicles based on its demographics and transit availability, among other criteria. The Region of Waterloo (at 150 Main Street) and City of Cambridge staff would be the first Cambridge based corporate users of these vehicles. A two-car system would support approximately 50 drivers. Once achieved, Community CarShare would be responsible for growing the fleet based on demand. If Cambridge’s growth rates are similar to those in comparably sized cities, such as Guelph and St. Catharines, Cambridge could likely support a fleet of three to six cars after two years.

The TSS Working Group recommends providing this initiative a maximum funding of $20,000 per year for two years ($40,000). If this TSS funding request is approved by Regional Council the City would be able to enter into a CarShare Anywhere Agreement with Community CarShare. The City would be responsible for paying user fees incurred by
its staff. Any CarShare revenue resulting from usage of the two vehicles would be used to offset the TSS contribution. After the first two-year contract ends, there would be no annual fee for either the City or the Region.

2. Improvements to Local Transit Stops on Hespeler Road

In 2013, some of the non-BRT bus stops along Hespeler Road were relocated to accommodate ION BRT. Typically, the replacement shelter pads would be funded through GRT’s annual bus stop improvement program and constructed through the Region’s miscellaneous road work contract. The bus stops on Hespeler Road, however, could not be included in the 2016 program because easements were still required from adjacent property owners. If funding is made available through the TSS, there should be sufficient time to acquire the necessary easements and improve the stops later in 2016. Without funding from the TSS there would be no budget for these improvements until 2017.

Staff recommend that seven shelter pads, estimated to cost $1,150 each ($8,050 in total), be funded by the TSS to expedite their installation. Other associated costs such as the acquisition of easements and shelter installation would be funded through other existing budgets. The installation of shelter pads, which will significantly improve conditions for existing and future riders, is expected to start once the required easements are secured.

3. Financial Support for a Multi-use Trail on Conestoga Boulevard

To address identified traffic safety concerns on Conestoga Boulevard, the City of Cambridge commissioned a study in 2013 to evaluate options that accommodate a multi-use trail between Pinebush Road and Can-Amera Parkway. The preferred cross section would replace the existing discontinuous cycling lanes with a continuous multi-use trail on the west side of the road. Left-turn lanes would also be provided at key locations throughout the corridor.

Walking and cycling connections are an important part of a complete transit network, specifically to the first and last kilometre of a transit trip (i.e. every trip begins with walking or cycling). In Waterloo Region, cyclists have access to bike racks on GRT buses, which allows them to use their bicycle for longer distance connections. The proposed trail on Conestoga Boulevard would provide these cyclists and pedestrians with a safe and continuous cycling and walking route to and from the GRT routes on Hespeler Road. The north-south trail would help to complete the cycling and walking network with existing bike lanes and sidewalks on east-west roads, such as Can-Amera Parkway, Bishop Street, Dunbar Road and Pinebush Road. Using this network, cyclists and pedestrians would have improved access to the Can-America, Cambridge Centre and Pinebush ION BRT stops. The multi-use trail would also provide a direct cycling and walking connection between Cambridge Centre, surrounding neighbourhoods and destinations such as the L.G. Lovell Industrial Park.
Improving access to employment areas is a high priority for the TSS. Based on survey research, GRT has designed transit routes in the area around shift times in the L.G. Lovell Industrial Park. However, there are times of the day and week with limited transit service and 30-minute frequency. Cycling provides a new connection option and additional flexibility for employees using transit for work, particularly between 11 p.m. and 6 a.m. when there is no transit service provided in the area.

The proposed trail has a projected cost of $1 million. In 2015, the City of Cambridge submitted an Expression of Interest (EOI) for a grant of $325,000 under the Ontario Municipal Cycling Infrastructure Program to partially fund this project. As per the requirement of the Grant, the City committed to funding 20 per cent ($200,000) of the project cost in the EOI. While discussions with Regional staff on a potential TSS contribution were underway, the EOI was short-listed and Cambridge Council approved a 2017 capital allocation of $675,000 to meet the funding requirement and deadline of the formal application. Subsequently in March 2016, the City received the grant in full.

Conestoga Boulevard has sufficient right-of-way to accommodate the proposed trail. If the provincial grant application is approved, the multi-use trail would be constructed by March 31, 2018. Although Conestoga Boulevard is not a major transit route, it is within the CTC. Based on the merits of the project and the walking and cycling connections it would establish between ION BRT and important destinations in Cambridge, the TSS Working Group recommends a contribution of up to $225,000 for this project.

4. Transit Tickets for Special Events

To encourage people to try taking transit, it is proposed that free transit tickets be offered to people attending the following three special events:

a) Canada Day Celebration, Riverside Park, July 1;
b) RibFest, Riverside Park, August 5 to 7; and
c) Street Art Festival, Downtown Cambridge, August 13-14 (new event).

Each of these events is estimated to draw between 10,000 and 30,000 participants. This program could directly encourage prospective transit riders to experience taking transit at their leisure, as well as reducing the demand for parking during the events. The new Street Art Festival presents a promotional opportunity that could motivate both event participation and transit use.

The TSS Working Group recommends a TSS funding of $18,000 for this pilot program. This amount would provide 2,000 tickets (at $3 each) for each event. Promotional methods and operational details of this program are under development.

**Two initiatives are proposed for an extension or expanded scope:**

1. An Extension of the Conestoga College Transit Pass Discount Program until August 2016
The Region introduced the Conestoga College Transit Pass Discount in September 2013 as a three-year TSS initiative to build transit ridership until a U-Pass program could be offered to College students. The initiative offers a 15 per cent discount at $227 for a four-month term (price of the January 2016 pass). The discount program has proven effective at building transit ridership among College students. September 2015 saw the highest sales in the history of the pass at 2,629 passes, compared to 1,884 in September 2012 (a 40 per cent increase). Sales in September 2015 exceeded both the increase in student enrollment at the College and the GRT system-wide growth rate over the same period.

The TSS funding for the discount ended at the end of 2015. To maintain the pass sales and loyalty established by the discount program, GRT continued to sell the discounted January passes (for the winter semester) in mid-December 2015, pending the outcome of a student referendum on the U-Pass Program.

The student referendum was held in February 2016. The results indicate that the majority of those who voted (2,139 students or 57.3 per cent of the votes cast) opposed the program. Therefore, the U-Pass program will not proceed at this time and the discount program is scheduled to end.

Starting in September 2016, the price of a semester College Pass will go up to $280, which includes the annual fare increase. Approximately 3000 students regularly take transit to attend the College. To provide these students with a grace period for the termination of the discount, the 2016 Implementation Plan recommends that TSS fund the 15 per cent discount until August 2016. The maximum contribution from the TSS would be $165,500 – approximately $105,000 for the winter semester, and $60,000 for the spring semester. If approved, GRT would be reimbursed the actual revenue reduction associated with the discounted transit passes.

2. Cambridge Transportation Master Plan

In the 2015, Council approved a TSS of $50,000 to support the previously proposed Core Areas Parking Master Plan. Subsequently, the City of Cambridge decided to instead conduct a comprehensive Cambridge Transportation Master Plan to provide a common vision for transportation in Cambridge. In addition to an update of parking policies, the Cambridge Transportation Master Plan would include an assessment of recommendations for a finer block pattern in the Hespeler Corridor, integration of ION BRT, planning for Stage 2 LRT and GO Train, and connections to active transportation facilities.

To support ION ridership, the Community Building Strategy recommends creating a smaller block pattern along Hespeler Road to facilitate the development of transit oriented neighbourhoods. It is expected that new and existing roads will provide sidewalks, a network of cycling facilities, as well as streetscaping to encourage walking and intensification. The Cambridge Transportation Master Plan is an important document for planning and implementing a long-term, sustainable mobility network in Cambridge.
The Working Group recommends that the TSS contribute $75,000 towards the development of a Cambridge Transportation Master Plan. The $75,000 funding would replace the TSS commitment of $50,000 for the Core Areas Parking Master Plan Update approved in 2015. The City of Cambridge would contribute $250,000 towards the Plan.

The City of Cambridge Transportation Master Plan and the Regional Transportation Master Plan Update would be developed concurrently. City and Regional staff are planning to coordinate their efforts throughout the master planning process.

**Area Municipal Consultation and Concurrence**

The proposed 2016 Implementation Plan was collaboratively developed by City of Cambridge and Region of Waterloo staff representatives from various departments. Consensus was achieved on the initiatives proposed in the 2016 Implementation Plan.

**Corporate Strategic Plan**

The TSS aligns with the 2015-2018 Corporate Strategic Plan. TSS initiatives such as CarShare expansion to downtown Cambridge, TravelWise@Work and Individualized Marketing in the Central Transit Corridor improve infrastructure and services to employment areas (Focus Area 1: Thriving Economy). Initiatives such as the 203 iXpress service and Conestoga College U Pass discount improve the accessibility and affordability of the transportation network, and the GO Train Feasibility Study supports inter-city rail services (Focus Area 2: Sustainable Transportation). The various studies funded by the TSS such as the Growth and Intensification Study would support sustainable growth of Cambridge (Focus Area 3: Environment and Sustainable Growth). The majority of the proposed initiatives in this 2016 Implementation Plan would contribute to multiple strategic objectives.

In addition, the TSS supports several key objectives of the Community Building Strategy, a detailed study developed to guide the planning and development of the CTC.

**Financial Implications:**

The Transit Supportive Strategy for Cambridge was approved as part of the Preferred Rapid Transit System Implementation Option and Staging Plan approved June 15, 2011. This approval included an annual allocation of $1,000,000 for a ten-year period, subject to budget approval (Report E-11-072). A financial update is provided in each year’s annual TSS staff report. As authorized by Regional Council as part of the 2012 Implementation Plan, unspent funds shall remain in a capital fund and be used for future initiatives. The annual expenditure of $1 million is included in the Region’s 2016 to 2025 capital program and is funded from the Regional Transportation Master Plan Reserve through property tax increases from 2012 to 2019.

The proposed 2016 Implementation Plan consists of four new initiatives with a total cost of
$271,050, two expanded initiatives with a total cost of $190,000 (additional to previously approved amounts), and three previously approved projects with a total expenditure of $949,000 in 2016. The three previously approved projects are Maple Grove iXpress weekday service ($715,000), Saturday iXpress service ($144,000), and funding for the position of Transportation Demand Management / Station Area Planner ($90,000). The total cost of the 2016 Implementation Plan is estimated to be $1,410,050. If approved by Regional Council, the carry-over balance of the TSS capital budget is anticipated to be $115,789. These funds would be used to support future initiatives in the Central Transit Corridor. It is anticipated that new qualifying projects will be identified through the Growth and Intensification Study underway. Table 1 below is a summary of the TSS fund, including completed, on-going, and newly proposed projects.

Table 1 - Cambridge Transit Supportive Strategy Fund Summary

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<td>Ainslie Terminal Improvement Study</td>
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<tr>
<td>Ainslie Terminal, Phase 1 Design</td>
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<td>Ainslie Terminal Streetscape and Pedestrian Improvements Phase 1</td>
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<td>GO Transit Study, Phase 2 (2015)</td>
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<td>Lovell Industrial Park TravelWise Survey</td>
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<td>TravelWise @ Work Pilot</td>
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<td>Growth &amp; Intensification Study</td>
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<td>Groff Mill Creek Plan</td>
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<td>Neighbourhood Marketing Plan</td>
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<td>Cambridge Commercial Review</td>
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<td>Saturday iXpress Service</td>
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<td>TDM Co-ordinator / Station Area Planner</td>
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### Initiative: City of Cambridge Transportation Master Plan (Expanded scope)
- **2012 - 2015 (Actuals):** 50
- **2012 - 2015 (Committed):** 25
- **Proposed 2016 Plan:** 25
- **Total:** 75

### Initiative: Conestoga College Transit Pass Discount (Extension)
- **2012 - 2015 (Actuals):** 548
- **2012 - 2015 (Committed):** 165
- **Proposed 2016 Plan:** 165
- **Total:** 713

### New Projects (2016)

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<td>Improvements to Local Stops in Hespeler Corridor</td>
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<td>Multi-use Trail on Conestoga Blvd</td>
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<td>Transit Tickets for Special Events</td>
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<td><strong>Total</strong></td>
<td><strong>$2,897</strong></td>
<td><strong>$578</strong></td>
<td><strong>$1,410</strong></td>
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### Other Department Consultations/Concurrence:

Staff from Planning, Development and Legislative Services, Transportation and environmental Services, Finance, Grand River Transit and Rapid Transit continue to be involved with the development, implementation and monitoring of the Transit Supportive Strategy for Cambridge.

### Attachments:

- Attachment 1 - Two-Step Evaluation Process
- Attachment 2 - Updates on Previous Approved Projects
- Attachment 3 - Photographs of Ainslie Terminal, Before and After Improvements

### Prepared By: Catherine Heal, Principal Planner

John Hill, Manager of Development, Reurbanization

### Approved By: Rob Horne, Commissioner, Planning, Development and Legislative Services
Attachment 1 - Two-Step Evaluation Process

Step 1 - Pass/Fail Screening

**Strategic Alignment**: Is this action item consistent with the goal of the Cambridge Transit Supportive Strategy to expedite the development of LRT in the City of Cambridge by enhancing transit ridership and/or encouraging transit supportive development, specifically within the Central Transit Corridor?

- Yes
- No → Not Eligible

**Budgetary Considerations**: Can this action item be funded in the short-term (1 to 2 years) through another, more appropriate, budgetary source?

- No
- Yes → Not Eligible

**Rapid Transit Infrastructure**: Is this action item part of the infrastructure improvements required as part of the rapid transit project (i.e. design, utility/infrasctructure relocations, or construction of the physical RT corridor/stations)?

- No
- Yes → Not Eligible

**Eligible**

Step 2 - Ranking of Potential Action Items

Projects are ranked by their relative potential to meet the following three criteria:

- Transportation (transit ridership, transportation connectivity)
- Land use (reurbanization, employment)
- Implementation (feasibility and reproducibility)
## Attachment 2 - Updates on Previously Approved Projects

<table>
<thead>
<tr>
<th>Initiatives</th>
<th>Year Approved</th>
<th>Descriptions</th>
<th>Status and Outcome</th>
</tr>
</thead>
</table>
| Growth and Intensification Study                | 2015          | **Purpose**: To develop secondary plans for the City’s Community Core, Nodes and Reurbanization Corridors, comparable to the station area planning taking place in Kitchener and Waterloo  
**Study areas**: Galt City Centre, Hespeler Village and Community Node, Preston Town Centre, Hespeler Road, Coronation Boulevard, and the Main/Dundas Node | **Status**: Commenced in August 2015, on schedule and expected to be completed mid-2017  
**Outcome**: Phase One Report and Main and Dundas Secondary Plan drafted |
| Commercial Review Implementation Study          | 2015          | **Purpose**: To propose Official Plan amendments regarding commercial policies; Zoning By-law amendments; and Guidelines for Site Specific Market Impact Assessments | **Status**: Official Plan amendments drafted, and other deliverables are on schedule. |
| GO Train Feasibility Study (2015) - “Cambridge on the GO: A Business Case for the Extension of GO Train from Cambridge to Milton.” | 2015          | **Purpose**: Study outlines the social, economic, environmental and strategic benefits, as well as recommendations for extending GO Train service to Cambridge (Please see Report TES-TRS-15-13, dated August 11, 2015). Both the 2014 and 2015 studies were funded by the TSS. | **Status**: Complete  
The 2015 study was approved as a TSS initiative in 2015 with a budget of $50,000. However, scope changes and extensions resulted in actual costs of $81,373.17.  
<table>
<thead>
<tr>
<th>Initiatives</th>
<th>Year Approved</th>
<th>Descriptions</th>
<th>Status and Outcome</th>
</tr>
</thead>
</table>
| Transit Route Enhancements 203 iXpress (Maple Grove, weekday and weekend) | 2014 - Weekday 2015 - Weekend | **Purpose:** To introduce the 203 iXpress three years before it's planned launch to build transit ridership | **Status:** Weekday service launched April 2014 and weekend service launched on Labour Day 2015  
**Outcome:** Weekday boarding higher than projected; Weekend boarding had a good start of 297 (Saturday) and 144 (Sunday) |
| Groff Mill Two Zone Flood Plain Study | 2014 | **Purpose:** To update the floodplain mapping for Groff Mill Creek and potentially increase developable land in the Hespeler corridor | **Status:** The study is on schedule and the consultant report is expected early 2016. |
| Ainslie Street Terminal Improvements | 2014 | **Purpose:** To construct pedestrian enhancements at the Ainslie Street Terminal to better serve transit riders and to integrate the Terminal with downtown Cambridge and the rapid transit system | **Status:** Completed September 2015  
**Outcome:** Terminal is noticeably more user-friendly, green and attractive (See Attachment 3 for photographs of the terminal before and after the improvements). Due to competitive pressure among the bidders, the actual cost of this project was $288,000, much lower than the $979,405 budgeted. |
<table>
<thead>
<tr>
<th>Initiatives</th>
<th>Year Approved</th>
<th>Descriptions</th>
<th>Status and Outcome</th>
</tr>
</thead>
</table>
| Individualized Marketing Implementation for ION BRT  | 2014          | **Purpose:** Develop and implement a Segmented Marketing Plan to raise awareness of transit, encourage people to take transit and to establish customer loyalty | **Status:** Segmented Marketing Plan developed  
Phase I: Awareness Campaign implemented in 2015  
Phase II: Three themes developed, including “Make a New Connection;” “Choose a New Destination;” and “Go in a New Direction.” Tailored messaging and distribution to be implemented in 2016. |
| TravelWise Drive for New Membership in Cambridge      | 2014          | **Purpose:** To offer Cambridge businesses a free, two-year trial TravelWise membership. Services include discounted transit passes and other transit supportive services such as a transit route planning tool | **Status:** Marketing of the membership drive will be done in 2016. A three-year (2016-18) business plan drafted with enhanced service delivery and targeted promotion, for example, by targeting the 70+ businesses with over 50 employees located in ION BRT corridor |
| Transportation Demand Management Coordinator         | 2013          | **Purpose:** To fund a position dedicated to further develop, implement, monitor and report on the Transit Supportive Strategy in coordination with Regional Staff | **Status:** Position filled in 2014 and ongoing |

Attachment 3 - Photographs of Ainslie Terminal Before and After Improvements

Before

After
Region of Waterloo  
Transportation and Environmental Services  
Planning, Development and Legislative Services  
Commissioner's Office

To: Chair Tom Galloway and Members of the Planning and Works Committee  
Date: March 22, 2016  
File Code: C04-30/PWC/CORR  
Subject: 2016 Planning and Works Project Team Membership

Recommendation:

That the Regional Municipality of Waterloo appoint Regional Councillors to the project and study teams as noted in Appendix A to Report TES-16-01/PDL-16-02, dated March 22, 2016;

And that the Regional Municipality of Waterloo forward the requests for area Councillor representatives on project and study teams to the Area Municipalities.

Summary: Nil.

Report:

Major Planning and Transportation and Environmental Services projects or studies have been directed, for many years, by multi-disciplinary project teams which have usually included one or more Regional or Area Municipal Councillors. The involvement of elected officials has always made a significant, positive impact on the successful completion of these projects. These committees and project teams are distinct from formal sub-committees of Council (e.g. Water Efficiency Advisory Committee), whose Council members have already been appointed.

A list of ongoing Steering Committees and major projects and studies to be undertaken in 2016, including the current political or stakeholder representatives on each group, is provided in Appendix A. The project timelines noted are based on the 2016 Capital Programs.

Those projects and studies which do not already have and would most benefit from political representative(s) are noted in the table below. These are typically projects which may have high public interest and/or significant implications for the Region.
addition to the projects listed below, participation by Councillors on any of the project teams noted in Appendix A is welcomed. After appointing appropriate Regional Councillors to these teams, it is recommended that this list be forwarded to the appropriate Area Municipalities to provide them an opportunity to appoint their Councillors to some of the project teams.

<table>
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<tr>
<th>No.</th>
<th>Description</th>
<th>Area Municipality</th>
<th>Suggested Council Representative</th>
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<tbody>
<tr>
<td>3.</td>
<td>GRT Business Plan 2015-2018</td>
<td>Region</td>
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<td>50.</td>
<td>Fischer-Hallman Road Widening EA Columbia Street to Westmount Road</td>
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<td>Class EA and Design 2016 - 2019</td>
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<td>Construction 2020</td>
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<td>51.</td>
<td>Bleams Road Widening, Strasburg Road to Fischer-Hallman Road</td>
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<td>Class EA and Design 2016 – 2019</td>
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<td>Construction 2020</td>
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<tr>
<td>52.</td>
<td>Victoria Street Reconstruction, Frederick Street to Bruce Street</td>
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<tr>
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<td>Design 2016 – 2019</td>
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<td>53.</td>
<td>Lancaster Street Reconstruction, Victoria Street to Bridgeport Road</td>
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<tr>
<td></td>
<td>Design 2016 – 2019</td>
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<td>54.</td>
<td>Benton Street – Charles Street to Courtland Avenue</td>
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<td>University Avenue - King Street to Weber Street - Bike lanes Design 2016 – 2020 Construction 2021</td>
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<td>Cambridge East Environmental Assessment</td>
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<td>Biosolids Master Plan Update</td>
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<td></td>
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**Corporate Strategic Plan:**

The involvement of Regional Councillors on Transportation and Environmental Services and Planning, Development and Legislative Services Project Teams is consistent with the Strategic Focus Area Five: Responsive and Engaging Government Services which ensures that the Region’s programs and services foster a culture of citizen/customer service that is responsive to community needs.

**Financial Implications**

The costs for the various projects outlined in Appendix A to Report TES-16-01/PDL-16-02 are included in each Division budget.

**Other Department Consultations/Concurrence:** Nil

**Attachments:** Appendix A – Planning and Works – Project Teams - 2016

**Prepared and Approved By:**

**Thomas Schmidt**, Commissioner, Transportation and Environmental Services

**Rob Horne**, Commissioner, Planning, Development and Legislative Services
### Appendix A

**Planning And Works – Project Teams – 2016**

<table>
<thead>
<tr>
<th>No.</th>
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<td>4.</td>
<td>Regional Transportation Master Plan</td>
<td>Region</td>
<td>Tom Galloway</td>
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<td></td>
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<td></td>
<td>Elizabeth Clarke</td>
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<tr>
<td></td>
<td><strong>Airport</strong></td>
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<td>5.</td>
<td>Airport Master Plan</td>
<td></td>
<td>Sean Strickland</td>
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<td></td>
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<td>Geoff Lorentz</td>
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<td>6.</td>
<td>South Boundary Road, Water Street to Franklin Boulevard</td>
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<td>7.</td>
<td>Ottawa Street Improvements Alpine Road to Homer Watson Boulevard</td>
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<td>8.</td>
<td>Franklin Boulevard Widening – Pinebush Road to Myers Road</td>
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<td>9.</td>
<td>Homer Watson Boulevard Improvements, Doon South Drive to Conestoga College Boulevard</td>
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<td>Elizabeth Clarke</td>
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<td>Yvonne Fernandes</td>
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<td>10.</td>
<td>Victoria Street, Edna Street to Bruce Street</td>
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<td></td>
<td>Construction in 2017-2018 in conjunction with MTO work on Hwy 7/8.</td>
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<td>11.</td>
<td>Fischer-Hallman Road Widening, Bleams Road to Ottawa Street</td>
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<td>Improvements at Crosshill Curve</td>
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<td>13.</td>
<td>Swan Street Improvements, Hilltop Drive to Stanley Street and Northumberland</td>
<td>North Dumfries</td>
<td>Sue Foxton</td>
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<td>Street /Stanley Street, Swan Street to Rail Tracks</td>
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<td>Rod Rolleman</td>
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<td>River Road Extension, King Street to Manitou Drive</td>
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<td>15.</td>
<td>Weber Street Improvements, Benjamin Road to King Street</td>
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<td>Mark Bauman</td>
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<td>Design in 2018-2021</td>
<td></td>
<td>Jeff Henry</td>
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<td>Construction in 2022</td>
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<td>Weber Street Improvements</td>
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<td>Forwell Creek Road to Milford Avenue</td>
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<td>Construction in 2017</td>
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<td>17.</td>
<td>Sawmill Road, Conestoga Bridge to Musselman and Northfield Drive, Country</td>
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<td></td>
<td>Spring Walk to South Village Line</td>
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## Planning And Works – Project Teams – 2016

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<tr>
<td>18.</td>
<td>Northfield Drive Widening, Davenport Road to Bridge Street</td>
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<td>19.</td>
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<td>Frank Etherington</td>
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<td>20.</td>
<td>Snyders Road and Notre Dame Drive Improvements, Petersburg</td>
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<td>21.</td>
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<td>22.</td>
<td>Bridge Street Improvements, Woolwich Street to University Avenue</td>
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<td>23.</td>
<td>Church Street Improvements, Arthur Street to Spruce Lane, Elmira</td>
<td>Woolwich</td>
<td>Scott Hahn</td>
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<td>Construction in 2019</td>
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<td>24.</td>
<td>Manitou Drive Reconstruction, Homer Watson Boulevard to Bleams Road</td>
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## Planning And Works – Project Teams – 2016

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<th>No.</th>
<th>Description</th>
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</table>
| 25. | Ainslie Street Reconstruction, Walnut Street to Dickson Street  
Design in 2017-2019  
Construction in 2020                                                                                                                                   | Cambridge         | Jan Liggett                          |
| 26. | East Boundary Road Corridor Planning Study  
Environmental Assessment in 2015-2016                                                                                                                | Cambridge         | Sue Foxton Karl Kiefer Frank Monteiro Neil Ritchie |
| 27. | Cedar Street Reconstruction, Osborne Street to Cambridge Boundary and St. Andrews Street  
Improvements Cambridge Boundary to Grand Avenue  
Construction 2016 - 2017                                                                                                                                  | Cambridge         | None Required at this time           |
| 28. | Kressler Road, Lobsinger Line to Apollo Drive and Lobsinger Line, Anita Street to 0.8km West of Hergott Road  
Design 2016-2018  
Construction 2019                                                                                                                                         | Wellesley Woolwich | Mark Bauman                          |
| 29. | Dundas Street Improvements, Elgin Street to Hespeler Road, Cambridge  
Design 2016 - 2017  
Construction 2018 - 2019                                                                                                                                     | Cambridge         | Jan Liggett                          |
| 30. | Ottawa Street Improvements, Highway 7 to Lackner Blvd.  
Construction 2016-2017                                                                                                                                                                         | Kitchener         | Scott Davey                          |
| 31. | Sawmill Road Improvements, King Street to Waterloo / St Jacobs Tracks  
Design 2016-2017  
Construction 2018                                                                                                                                                 | Woolwich          | Mark Bauman                          |
### Planning And Works – Project Teams – 2016

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<thead>
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<tr>
<td>32.</td>
<td>Highland Road Improvements, Highland Hills Mall Entrance to Trussler Road</td>
<td>Kitchener</td>
<td>Geoff Lorentz, Bil Ioannidis</td>
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<td></td>
<td>Construction 2018</td>
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<tr>
<td>33.</td>
<td>University Avenue Improvements, Keats Way to Erb Street</td>
<td>Waterloo</td>
<td>Jane Mitchell, Jeff Henry</td>
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<tr>
<td></td>
<td>Design 2016-2017</td>
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<td></td>
<td>Construction 2018</td>
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<td>34.</td>
<td>King Street Reconstruction, Bishop Street to Eagle Street</td>
<td>Cambridge</td>
<td>Karl Kiefer</td>
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<td>Design 2016 - 2018</td>
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<td>35.</td>
<td>Ottawa Street Reconstruction, Alpine Road to Westmount Road</td>
<td>Kitchener</td>
<td>Paul Singh</td>
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<td>36.</td>
<td>Fountain Street Widening, Maple Grove Rd to Kossuth Rd</td>
<td>Cambridge</td>
<td>Karl Kiefer, Donna Reid (alt. M. Mann)</td>
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<td>Design 2016-2017</td>
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<td>37.</td>
<td>Myers Road Reconstruction Branchton to Water Street</td>
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<td>Frank Monteiro</td>
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<td>38.</td>
<td>Bridgeport Road/Caroline Street, King Street to Erb Street, and Erb Street</td>
<td>Waterloo</td>
<td>Melissa Durrell</td>
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<tr>
<td></td>
<td>from King to Caroline Street</td>
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<td>39.</td>
<td>Victoria Street Reconstruction, Lawrence Avenue to Fischer Hallman Road and Westmount Road, Victoria Street to Glasgow Street Design 2016-2019 Construction 2020-2021</td>
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<td>Zyg Janecki</td>
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<td>40.</td>
<td>Fischer Hallman Road Widening, Plains Road to Bleams Road Design 2016-2018 Construction 2019-2020</td>
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<td>Tom Galloway, Kelly Galloway-Sealock</td>
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<td>42.</td>
<td>Weber Street Reconstruction, Borden Avenue to Queen Street Design 2016-2017 Construction 2018-2019</td>
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<td>43.</td>
<td>Snyder’s Road, Foundry Street to Gingerich Road Design 2016-2017 Construction 2018</td>
<td>Wilmot</td>
<td>Barry Fisher</td>
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<td>44.</td>
<td>Ottawa Street Reconstruction, Highway 7 to West of Charles Street Design 2016-2017 Construction 2018</td>
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<td>Sarah Marsh, Frank Etherington</td>
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<td>45.</td>
<td>King Street Improvements, South of Erb Street to University Avenue Design 2016 Construction 2017-2019</td>
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<td>Melissa Durrell</td>
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<td>46.</td>
<td>Weber Street Reconstruction, Albert Street to Northfield Drive</td>
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<td>Angela Vieth</td>
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<td>47.</td>
<td>King Street Improvements, Eagle Street to Fountain Street and Fountain Street Improvements, King Street to Shantz Hill Road</td>
<td>Cambridge</td>
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<td>48.</td>
<td>Fountain Street North Improvements, King Street to Cherry Blossom Road</td>
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<td>49.</td>
<td>Bishop Street Reconstruction, Concession Street to Conestoga Boulevard</td>
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<td>Fischer-Hallman Road Widening EA – Columbia Street to Westmount Road</td>
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<td>51.</td>
<td>Bleams Road Widening, Strasburg Road to Fischer-Hallman Road</td>
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<td>52.</td>
<td>Victoria Street Reconstruction, Frederick Street to Bruce Street</td>
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<th>Political/Stakeholder Representative</th>
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<td>53.</td>
<td>Lancaster Street Reconstruction, Victoria Street to Bridgeport Road</td>
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<td>Benton Street – Charles Street to Courtland Avenue</td>
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<td>55.</td>
<td>University Avenue - King Street to Weber Street- Bike lanes</td>
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### Water Services

#### Advisory Committees

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<tr>
<td>56.</td>
<td>Source Water Protection Liaison Committee</td>
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<td>Jane Mitchell</td>
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<td>Elizabeth Clarke</td>
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#### Water Supply – Studies and Pre-Design

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<td>57.</td>
<td>Wilmot Centre Monitoring Program and Public Liaison Committee</td>
<td>Wilmot</td>
<td>Les Armstrong</td>
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<td>58.</td>
<td>William Street and Strange Street Water Supply Upgrades Class EA</td>
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<td>Jane Mitchell</td>
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<td>Melissa Durrell</td>
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<td>Frank Etherington</td>
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<td>59.</td>
<td>Waterloo North Upgrades – Class EA Amendment and Preliminary design</td>
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<td>60.</td>
<td>Cambridge East Environmental Assessment</td>
<td>Region</td>
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<td>61.</td>
<td>Cambridge Zone 3 Water Supply Class EA</td>
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<td>1 Cambridge Councillor</td>
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<td>62.</td>
<td>Cambridge New Zone 1W Water Supply Class EA</td>
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### Water Supply – Design and Construction

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<th>Description</th>
<th>Area Municipality</th>
<th>Political/Stakeholder Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>63.</td>
<td>Zone 4 Trunk Watermain Design 2016 Construction 2017-2018</td>
<td>Kitchener</td>
<td>None Required at this time</td>
</tr>
<tr>
<td>64.</td>
<td>Ayr Steel Tanks Recoating Design and Construction 2016-2017</td>
<td>Kitchener</td>
<td>None Required at this time</td>
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<tr>
<td>65.</td>
<td>Water Transmission Main from Conestogo Plains to West Montrose Design and Construction 2016-2017</td>
<td>Woolwich</td>
<td>None Required at this time</td>
</tr>
<tr>
<td>66.</td>
<td>William Street Tank Decommissioning Design and Construction 2016-2017</td>
<td>Waterloo</td>
<td>None Required at this time</td>
</tr>
<tr>
<td>67.</td>
<td>Weber Street Watermain (Union to Erb) Design 2016 Construction 2017</td>
<td>Waterloo</td>
<td>None Required at this time</td>
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### Wastewater – Studies and Pre-Design

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Area Municipality</th>
<th>Political/Stakeholder Representative</th>
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</thead>
<tbody>
<tr>
<td>68.</td>
<td>Biosolids Master Plan Update</td>
<td>Kitchener</td>
<td>1 Regional councillor (Waterloo)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tom Galloway</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Helen Jowett</td>
</tr>
<tr>
<td>69.</td>
<td>Wastewater Treatment Master Plan Update</td>
<td>Kitchener</td>
<td>Dave Jaworsky</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Karl Kiefer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Elizabeth Clarke</td>
</tr>
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</table>
### Planning And Works – Project Teams – 2016

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Area Municipality</th>
<th>Political/Stakeholder Representative</th>
</tr>
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<tbody>
<tr>
<td>70</td>
<td>East Side Pump Station and Forcemain – Class EA and Pre-design</td>
<td>Cambridge Woolwich</td>
<td>Murray Martin Donna Reid</td>
</tr>
<tr>
<td>71</td>
<td>Galt Process Upgrades</td>
<td>Cambridge</td>
<td>None Required at this time</td>
</tr>
<tr>
<td>72</td>
<td>Galt, Kitchener and Waterloo WWTPs Co-Generation</td>
<td>Cambridge</td>
<td>None Required at this time</td>
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#### Wastewater – Design and Construction

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Area Municipality</th>
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<tbody>
<tr>
<td>73</td>
<td>Kitchener Wastewater Treatment Plant Upgrades</td>
<td>Kitchener</td>
<td>Geoff Lorentz John Gazzola Yvonne Fernandes</td>
</tr>
<tr>
<td></td>
<td>Design and Construction ongoing in 2016-2020</td>
<td></td>
<td></td>
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<tr>
<td>74</td>
<td>Waterloo Wastewater Treatment Plant Upgrade Project</td>
<td>Waterloo</td>
<td>None Required at this time</td>
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<tr>
<td></td>
<td>Construction 2016-2017</td>
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<td></td>
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<tr>
<td>75</td>
<td>Preston Wastewater Treatment Plant Upgrades</td>
<td>Cambridge</td>
<td>None Required at this time</td>
</tr>
<tr>
<td></td>
<td>Design/Construction ongoing 2016-2017</td>
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<td></td>
</tr>
<tr>
<td>76</td>
<td>Heidelberg Wastewater Treatment Plant Upgrades</td>
<td>Woolwich</td>
<td>None Required at this time</td>
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<tr>
<td></td>
<td>Construction 2016</td>
<td></td>
<td></td>
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<td>77</td>
<td>Foxborough Wastewater Treatment Plant Upgrades</td>
<td>Wilmot</td>
<td>None Required at this time</td>
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<td></td>
<td>Construction 2016</td>
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<tr>
<td>78</td>
<td>Elmira Wastewater Treatment Plant SCADA Upgrades</td>
<td>Woolwich</td>
<td>None Required at this time</td>
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<td></td>
<td>Construction 2016</td>
<td></td>
<td></td>
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<tr>
<td>79</td>
<td>Baden and New Hamburg Waste Water Treatment Plant Expansion</td>
<td>Baden / New Hamburg</td>
<td>Les Armstrong Barry Fisher</td>
</tr>
<tr>
<td></td>
<td>Design 2016</td>
<td></td>
<td></td>
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<td>Construction 2017</td>
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### Planning And Works – Project Teams – 2016

<table>
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<tr>
<th>No.</th>
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<th>Area</th>
<th>Municipality</th>
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<tr>
<td>80.</td>
<td>Southern Ayr Wastewater System Upgrades</td>
<td></td>
<td>North Dumfries</td>
<td>None Required at this time</td>
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<tr>
<td></td>
<td>Construction in 2016</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Waste Management

| 81. | Waterloo Region Landfill Liaison Committee                                 | Region          | Jane Mitchell| Bob Mavin                                              |
|     |                                                                             |                 |              |                                                        |
| 82. | Waste Management Master Plan Working Group                                 | Region          | Tom Galloway | Karl Kiefer                                           |
|     |                                                                             |                 |              | Jane Mitchell                                         |
|     |                                                                             |                 |              | Joe Nowak                                              |
| 83. | Waterloo Landfill Site Stormwater Management Pond 3 / South Boundary Well Pumphouse | Waterloo        | None Required at this time                            |
|     | Design and Construction 2016                                               |                 |              |                                                        |
| 84. | Waterloo Landfill Site New Cell SE-4B and Stormwater Management Pond 5     | Waterloo        | None Required at this time                            |
|     | Design and Construction 2016-2018                                           |                 |              |                                                        |
| 85. | McLennan Park Cap Restoration                                               | Kitchener       | None Required at this time                            |
|     | Design and Construction 2016-2017                                           |                 |              |                                                        |
Region of Waterloo
Planning, Development and Legislative Services
Community Planning
Corporate Services
Treasury Services

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: March 22, 2016 File Code: L04-20
Subject: Brownfields Financial Incentives Program - Assignment and Amendment of Tax Increment Grant Agreement by Riverbank Lofts GP Inc. (HIP Developments) – 19 Guelph Avenue, Cambridge

Recommendation:
That the Regional Municipality of Waterloo approve the following actions regarding the Tax Increment Grant for the property municipally known as 19 Guelph Avenue, Cambridge, as described in Report PDL-CPL-16-21/COR-TRY-16-22:

a) Assign the Brownfield Remediation and Redevelopment Agreement dated April 22, 2014 between 2151073 Ontario Ltd, the City of Cambridge and the Regional Municipality of Waterloo (the TIG Agreement) to Riverbank Lofts GP Inc. (HIP Developments), the new owners of the subject lands;

b) Amend the TIG Agreement to provide for (1) a revised redevelopment plan and such other revisions as are satisfactory to the Region’s Commissioner of Planning, Development and Legislative Services and the Region’s Chief Financial Officer, and (2) payment of the approved joint Tax Increment Grant to the previously approved maximum of $2,496,764 after allowing for other future financial assistance subject to reasonable conditions, upon completion of remediation and redevelopment of the property, and upon final confirmation of any additional brownfield related financial assistance provided under the Region’s Brownfield Financial Incentive Program or
through the City of Cambridge; and

c) Authorize the Region’s Commissioner, Planning, Development and Legislative Services and Chief Financial Officer to execute an Assignment and Amending Agreement with the new owner(s) of 19 Guelph Avenue and the City of Cambridge, with such agreement to be satisfactory to the Region’s Commissioner of Planning, Development and Legislative Services, Chief Financial Officer and Regional Solicitor.

Summary:

In 2009, the City of Cambridge and Region of Waterloo received a joint Tax Increment Grant (TIG) application from 2151073 Ontario Ltd. to remediate and redevelop the property municipally known as 19 Guelph Avenue, Cambridge. On December 11, 2013 Regional Council, through Report P-13-120/F-13-114, approved a joint TIG for 19 Guelph Avenue for an amount not to exceed $2,496,764 to be financed from the incremental tax revenue for the property following remediation, redevelopment and reassessment.

Based on this approval, a Brownfield Remediation and Redevelopment Agreement (the TIG Agreement) was executed between the City of Cambridge, the Region of Waterloo, and 2151073 Ontario Ltd. on April 22, 2014.

In November 2015, Riverbank Lofts GP Inc. (HIP Developments) purchased the subject property from 2151073 Ontario Ltd. Following the purchase, the new owners requested an assignment and amendment of the TIG Agreement. The previously signed agreement between all parties requires the express written consent of the City of Cambridge and Region to assign the joint TIG to the new owner. HIP Developments also proposed a new redevelopment plan, including construction of 197 residential units (compared to 125 units as originally proposed) in two development phases. The first phase of development includes a new rental apartment building, while the second phase consists of the adaptive reuse of an existing industrial building for condominiums. It is anticipated that construction of the apartment building will begin in spring 2016. Official Plan and Zoning By-law amendments were approved in 2010 to allow multi-unit residential on this site. The revised site plan is awaiting approval by the City. As a result of changes to site ownership and redevelopment plans, an assignment and amendment to the TIG Agreement is required.

Consistent with the previously approved Remedial Work Plan for the site, HIP Developments expects to undertake environmental remediation as part of the redevelopment to comply with Provincial Record of Site Condition requirements on the site. The maximum total approved TIG amount would stay the same at $2,496,764, Regional portion only.

On March 8, 2016, City of Cambridge Council approved a recommendation supporting the assignment and amendment of the TIG Agreement to Riverbank Lofts GP Inc. (HIP
Developments) for 19 Guelph Avenue. This report recommends that Regional Council support the same assignment and amendment to the TIG Agreement.

Report:

Joint Tax Increment Grant (TIG) Program

Tax Increment Grants for brownfields (environmentally contaminated sites) are part of the Region’s Brownfield Financial Incentive Program, which also includes Phase Two Environmental Site Assessment (ESA) Grants and Regional Development Charge (RDC) Exemptions. TIGs are offered jointly with participating Area Municipalities, including the City of Cambridge. The Region created the Brownfields Financial Incentive Program to encourage the remediation and redevelopment of brownfields sites, to protect the Region’s groundwater resources, to promote intensification, to build transit ridership, and to protect farmland by directing population and employment growth into existing urban areas in support of the Regional Official Plan.

Council approved Regional participation in the joint TIG program in 2007 (Report F-07-046/P-07-079). The joint TIG helps to cover the remediation costs of a development, by providing developers with a grant based on the increase in municipal taxes resulting from the remediation, redevelopment and reassessment of brownfield lands. In accordance with the approved joint TIG program, the amount of the TIG is calculated upon completion of the remediation and redevelopment of a brownfield property and is equal to the lesser of: (a) the Council approved maximum amount; (b) the incremental difference in municipal taxes before and after remediation and redevelopment multiplied by ten (the maximum number of years of annual payments); and (c) the actual rehabilitation costs (as calculated by deducting other prescribed brownfield assistance such as the Phase Two Environmental Site Assessment Grant and/or RDC Exemption amount and any Area Municipality specific assistance). The cost of the TIG is shared between the Region and the Area Municipality based on their respective shares of the municipal taxes for the property. An agreement setting out the terms and conditions of the TIG is executed by the Region, the participating Area Municipality, and the property owner.

Previous Approval

In 2009, the City of Cambridge and Region of Waterloo received a joint TIG application from 2151073 Ontario Ltd. regarding the remediation and redevelopment of the property municipally known as 19 Guelph Avenue, Cambridge. Please see the attached site map in Attachment 1 of this report. The property is the former American Standard site located on the banks of the Speed River and east of the intersection of Guelph Avenue and Queen Street in Hespeler’s Core Area. Official Plan and Zoning By-law amendments were approved in 2010 to allow multi-unit residential on this 1.32 ha (3.27 acre) property.
In 2010, the Ministry of Environment and Climate Change: 1) accepted a Risk Assessment; 2) issued a Certificate of Property Use; and 3) acknowledged a Record of Site Condition for the property. These documents outline the conditions and risk mitigation measures that need to be in place in order to protect health and public safety. As part of the TIG application process, the applicant submitted a Remedial Work Plan on November 6, 2013. This work plan confirmed cost estimates for future eligible environmental remediation (including future demolition works required to implement environmental risk mitigation measures, environmental monitoring programs and the removal of lead paint and asbestos), which the City of Cambridge and Regional staff reviewed and found to be acceptable. Given that future environmental remediation work is required to meet Provincial requirements as the site redevelops, this site was deemed to meet the definition of a 'brownfield' and is eligible for approval under the Region’s joint TIG program.

Estimated environmental remediation costs for the site total $3,819,340. This amount, plus a 10% allowance for indirect costs afforded under the joint TIG program ($381,934), less assistance already received under the Phase Two Environmental Site Assessment Grant ($40,000) results in a maximum eligible TIG of $4,161,274. This site may also be eligible for a City of Cambridge Contaminated Sites Grant, which would be deducted from the maximum eligible TIG if approved by the City of Cambridge.

On December 11, 2013 Regional Council approved the following recommendations for the subject site (as described in Report P-13-120/F-13-114):

a) Approve a joint Tax Increment Grant for an amount not to exceed $2,496,764 to be financed from the incremental tax revenue for the property following remediation, redevelopment and reassessment;

b) Provide the Tax Increment Grant subject to the completion of remediation and redevelopment on the property and upon final confirmation of any additional brownfield related financial assistance provided under the Region’s Brownfield Financial Incentive Program or through the City of Cambridge;

c) Amend the 2014 Capital Budget and Forecast to include the Region’s share of the proposed joint Tax Increment Grant; and

d) Authorize the Region’s Commissioner of Planning, Housing and Community Services and Chief Financial Officer to execute any associated agreements with the registered owner of 19 Guelph Avenue and the City of Cambridge, with the form and content of such agreement(s) to be satisfactory to both the Regional and City of Cambridge Solicitors.

On April 22, 2014, a Brownfield Remediation and Redevelopment Agreement was executed between the City of Cambridge, the Region of Waterloo, and 2151073 Ontario Ltd.
Request to Assign and Amend TIG Agreement

In November 2015, ownership of the subject site changed and the new owners, Riverbank Lofts GP Inc. (HIP Developments) requested that the Brownfield Remediation and Redevelopment Agreement executed on April 22, 2014 by 2151073 Ontario Ltd. be assigned to them. The current agreement between 2151073, the City of Cambridge and the Region of Waterloo requires the express written consent of the City and Region in order to assign the TIG from one owner to another. In addition, HIP Developments proposed a new redevelopment plan, including construction of 197 residential units, compared to 125 units as originally proposed (please see the revised site plan in Attachment 2). The new redevelopment proposal also proposes construction in two phases given the adaptive reuse of existing Building A and the proposed construction of a new building on the south east part of the site (Building B). The revised site plan is awaiting approval by the City.

The new owners estimate that the future environmental remediation costs will remain the same as previously estimated by the Remedial Work Plan in 2013 and do not wish to modify the previously approved TIG maximum amount.

On March 8, 2016, City of Cambridge Council approved a recommendation (see Attachment 3):

- Supporting the assignment and amendment of the TIG/Brownfield Remediation and Development Agreement to Riverbank Lofts GP Inc. (HIP Developments); and
- Ensuring that the joint TIG does not exceed the total amount of $4,161,274 for the City and Regional shares minus any other financial assistance, as approved by Cambridge City Council on November 13, 2013.

This report recommends that Regional Council support the same assignment and amendment to the TIG Agreement. The Region has previously consented to a TIG Agreement assignment with respect to The Tannery site at 36 Francis Street South, Kitchener. In this case, the TIG Agreement was assigned to a new owner in 2012, which occurred after the remediation and redevelopment was complete.

Corporate Strategic Plan:

The TIG program aligns with the 2015-2018 Corporate Strategic Plan Objectives to:

1) Plan for and provide the infrastructure and services necessary to create the foundation for economic success under Focus Area 1 Thriving Economy; and

2) Work in partnership to manage growth and improve environmental sustainability and livability in intensifying urban and rural settlement areas under Focus Area 3 Environment and Sustainable Growth.
Financial Implications:

There are no new financial implications arising from the staff recommendation. Regional Council approved the Region’s share of the maximum potential TIG of $2,496,764 based on the estimated net eligible remediation costs in Report P-13-120/F-13-114 in December 2013 and this amount is included in the approved 2016-2025 capital program. The Region’s actual share of the TIG, will be confirmed once the actual remediation costs are reviewed, all other financial assistance is finalized and the property is reassessed by Municipal Property Assessment Corporation (MPAC) but will not exceed $2,496,764.

Under the funding model for joint tax increment grants adopted by Regional Council in 2013, the annual TIG payments would be funded from the increased tax revenue on the property occurring in the same year. Grant payments would not be expected to commence before 2019 as the first grant payment is contingent on remediation of the entire site, redevelopment and subsequent reassessment by MPAC.

Once the TIG is fully paid, the increased assessment resulting from the redevelopment would benefit the overall tax levy. In addition to the joint TIG, staff note that, as with other sites in Hespeler’s Core Area, this site will also be exempt from City and Regional Development Charges until March 2019.

Other Department Consultations/Concurrence:

Regional Community Planning, Legal, and Finance staff were involved in the preparation of this report. Regional staff also consulted with staff from the City of Cambridge and they are also in support of the staff recommendations.

Attachments:

Attachment 1 – Site Map of 19 Guelph Avenue, Cambridge

Attachment 2 – Revised Site Plan (Simplified) dated December 22, 2015

Attachment 3 – City of Cambridge Staff Report dated March 8, 2016

Prepared By: Peter Ellis, Principal Planner

Angela Hinchberger, Director of Treasury Service /Deputy Treasurer

Approved By: Rob Horne, Commissioner, Planning Development and Legislative Services

Craig Dyer, Commissioner, Corporate Services/Chief Financial Officer
Attachment 1 – Site Map
Attachment 3 – City of Cambridge Staff Report dated March 8, 2016

To: Planning and Development Committee

Date of Meeting: March 8, 2016

Prepared by: Valerie Spring, Senior Planner - Reurbanization

Approved by: Hardy Bromberg, Deputy City Manager Development and Infrastructure

Department: Development and Infrastructure

Date to Sr. Mgmt. Team: February 24, 2016

File No.: D18.04.04.15.02

Ward No.: 2

Recommendations:

THAT Cambridge City Council supports the assignment of the Tax Increment Grant to Riverbank Lofts GP Inc. (HIP Developments) for the property municipally known as 19 Guelph Avenue;

THAT the joint Tax Increment Grant does not exceed the total amount of $4,161,274 for the City and Regional shares minus any other financial assistance, as approved by Cambridge City Council on November 13, 2013;

AND THAT Council authorizes the Mayor and Clerk to execute any amending agreement with the registered owner of 19 Guelph Avenue and the Region of Waterloo, with the form and content of such amending agreement to be satisfactory to both the Regional and City of Cambridge Solicitors.

Summary:

- The property has been sold and the new owners are requesting a transfer of Tax Increment Grant (TIG) to them.
- The TIG agreement requires both City and Regional Council provide written consent prior to assigning the TIG from one owner to another.
Background:
In 2008, the City of Cambridge in cooperation with the Region of Waterloo, established a Tax Increment Grant (TIG) Program to assist property owners with the remediation and redevelopment of contaminated properties in the City of Cambridge. The TIG is based on the increase in assessed value to cover up to the cost of remediation and is a grant equal to the full amount or portion of the amount that municipal and regional property taxes increase after a property is reassessed following the remediation and redevelopment of a property.

The subject property is the former American Standard site abutting the Speed River in Hespeler Village. In 2013, a joint TIG was approved for the remediation, redevelopment and reassessment of this property. The Region’s portion of the TIG is a maximum of $2,496,764 and the City's portion is a maximum of $1,664,510.

Since that time, the ownership of the property has changed and the current owners, Riverbank Lofts GP Inc. (HIP Developments) wish to have the TIG assigned to its company in order to carry on with the redevelopment of the site.

The current proposal is to construct 197 units instead of the 125 units as originally proposed. Remediation costs will remain the same but the assessed value will increase because of the increase in the number of units. The site plan will be revised to acknowledge the change in unit number and will be presented at an upcoming neighbourhood meeting.

The owners are proposing two phases of the development starting with the new rental apartment building and then finishing with the adaptive reuse of the building along the river for condominiums. It is anticipated that construction of the apartment building will begin in spring 2016.

The signed agreement between all parties and dated April 2014 requires the express written consent of the City and the Region in order to assign the TIG from one owner to another.

Existing Policy/By-Law:
The property was rezoned from Industrial (M3) to Commercial/Multi-Residential (C1RM2). In addition, the property was the subject of an Official Plan Amendment to redesignate a portion of the site identified on Map 11 of the Official Plan from Flood Way to Flood Fringe.

Financial Impact:
Currently the property is exempt from City and Regional Development Charges because of its location in the Hespeler Core Area.
The TIG is based on the increase in assessed value to cover up to the cost of remediation and is a grant equal to the full amount or portion of the amount that municipal and regional property taxes increase after a property is reassessed following the remediation and redevelopment of the site. Based on the eligible remediation costs and the estimated future remediation costs the total amount of the TIG is not to exceed $4,161,274 minus any other financial assistance.

Public Input: N/A

Internal/External Consultation:
Planning and Legal staff from the City of Cambridge has worked with the Region of Waterloo to determine the protocol for completing an assignment of a TIG from one owner to another. A parallel report is scheduled to go to Regional Committee on March 22, 2016.

Comments/Analysis:
Both municipal and regional level staff is recommending approval of the TIG assignment to Riverbank Lofts GP Inc. (HIP Developments) in order to facilitate the redevelopment of this site.
Region of Waterloo

Planning Development and Legislative Services

Legal Services

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016    File Code: L07-90

Subject: Authorization to Expropriate Lands (2nd Report) for improvements to Ira Needles Blvd (Regional Road 70) at Erb Street West, City of Waterloo

Recommendation:

That the Regional Municipality of Waterloo approve the expropriation of lands for the purpose of construction of road improvements to Ira Needles Blvd (Regional Road 70), in the City of Waterloo, in the Region of Waterloo as detailed in Report PDL-LEG-16-22 dated March 22, 2016 described as follows:

Fee Simple Partial Taking:

a) Part of Lot 41, German Company Tract, being Parts 2, 3 and 4 on 58R-18609 (650 Erb Street West, Waterloo);

Hydro Easement:

The right and easement, being an easement in gross, for itself, its successors and assigns and anyone authorized by it, in perpetuity to, at any time enter upon the following properties for purposes of constructing, laying down, installing, inspecting, repairing, altering, enlarging, replacing, correcting, operating, and maintaining hydro installations and infrastructure, both under ground and overhead, including cables, pipes, conduits of all kinds, all necessary poles, supporting wires and braces and other equipment and appurtenances thereto, herein referred to as the utility plant, which may be determined necessary from time to time through, over, upon, along and across the lands, and for all such purposes together with the free, unimpeded and unobstructed access for itself, its successors and assigns, servants, agents, contractors, workmen and anyone authorized by it, and vehicles, supplies and equipment at all times and for all purposes and things necessary for or incidental to the exercise and enjoyment of the right and easement:
a) Part of Lot 41, German Company Tract being Parts 1, 5 and 6 on 58R-18609 (650 Erb Street West, Waterloo);

And that staff be instructed to register a Plan of Expropriation for the property, or such lesser portions of any of the said properties as may be determined through the design process, within three months of the granting of the approval to expropriate the property, as required by the *Expropriations Act*;

And that the registered owners be served with a Notice of Expropriation and a Notice of Possession for the property after the registration of the Plan of Expropriation and the Regional Solicitor is authorized to take any and all actions required to enforce such Notices including but not limited to any application pursuant to Section 40 of the *Expropriations Act*;

And that all above-referenced fee simple partial takings situated adjacent to an existing Regional public highway be acquired for road widening purposes and therefore be deemed to form part of the adjacent public highway in accordance with subsection 31(6) of the Municipal Act, 2001, S. O. 2001, c.25;

And that if no agreement as to compensation is made with an owner, the statutory Offer of Compensation and payment be served upon the registered owners of the property in the amount of the market value of the interests in the land as estimated by the Region’s appraiser in accordance with the Expropriations Act;

And further that the Regional Solicitor be authorized to discontinue expropriation proceedings or any part thereof, in respect of the above described lands, or any part thereof, upon the registration on title of the required documentation to complete the transaction, or if otherwise deemed expedient by the Commissioner or Transportation and Environmental Services that such lands, or any part thereof, are not required for the subject Project.

**Summary:** NIL

**Report:**

In 2014 the Region completed the first phase of widening Ira Needles Blvd from Highview Drive to the north entrance of the Boardwalk development. The second phase of the widening, scheduled for 2016, from the north entrance of the Boardwalk to Chablis Drive requires some additional property at the Erb Street roundabout to accommodate growth of future developments in the west Waterloo area. These road improvements include the addition of northbound and southbound by-pass lanes at the roundabout and relocation of a number of hydro poles.

Land acquisitions were required from three (3) property owners. The acquisitions are one fee simple partial taking for road widening purposes and three permanent
easements in favour of Waterloo North Hydro Inc. for the relocation of hydro facilities. The Region has entered into an agreement with two of the three property owners to obtain the required permanent easement in favour of Waterloo North Hydro Inc. and these agreement has been completed by registration of the Easement on title.

Council approved the commencement of expropriation of the subject property on August 19, 2015 as detailed in report PDL-LEG-15-59. The appropriate forms under the Expropriations Act were served in order to initiate formal proceedings under the Act. All of the affected property owners were previously contacted by Legal Services staff and informed of the project as well as the Region’s intention to commence the expropriation process and the Region’s Expropriation Information Sheet was provided to each of them. The affected property owners have also been provided with offers to purchase. Legal Services staff also contacted all property owners and informed them of the Region’s intention to continue with the expropriation process in order to ensure that the construction timeline is maintained, including this report going forward, as detailed in the Region’s Expropriation Information Sheet.

Should a negotiated settlement be reached with the one outstanding property and a conveyance of the required acquisition be completed before the Expropriation process is complete, the Expropriation process will be discontinued by the Regional Solicitor.

The Region did not receive a notice for a Hearing of Necessity within the statutory time frame established by the Expropriations Act from any of the affected property owners. The next step in the proceedings is for Council to approve the expropriation of the property. This approval will ultimately be endorsed upon a certificate of approval on the Plan of Expropriation for those properties not acquired under agreement. The Plan is then registered within 3 months of the approval. Ownership of the property vests with the Region upon the registration of the Plan. Notices of Expropriation are then served upon all registered owners, including tenants as shown on the assessment roll.

Once ownership by the Region is secured through the registration of the Plan, it is possible to serve the Notice of Possession. The date for possession can be no sooner than 3 months following the date of service of the Notice of Possession. The Notices of Expropriation and Notices of Possession may be served at the same time.

After the registration of the Plans of Expropriation and prior to the taking of possession of the property the expropriating authority is required to serve the registered owners with an offer in full compensation for their interests in the land. The offer must be accompanied by the immediate payment of one hundred (100%) of the appraised market value of the land to the registered owners as estimated by the Region’s appraiser. The registered owners are also to be served with a report appraising the market value of the property, which report formed the basis for the offer of compensation.

The expropriation process is proceeding to ensure that the Region has possession of
the land for construction in the summer of 2016.

Transportation and Environmental Services staff advises that they are not aware of any environmental concerns with respect to the subject lands. The expropriation of the lands is on an "as is" basis and upon closing the Region assumes all responsibility for the lands.

For reference, the subject lands are shown on attached Appendix ‘A’. A list of the individual and corporate owners of the fee simple interest in the subject lands is attached as Appendix “B”. Regional staff have conducted corporate profile searches of affected corporate property owners and the directors and officers are listed for each. This list does not include tenants, easement holders or holders of security interests in the subject lands.

Corporate Strategic Plan:

One of the focus areas of the Corporate Strategic Plan is to develop greater, more sustainable and safe transportation choices.

Financial Implications:

The 2016 Ten-year Transportation Capital Program includes funds of $ 5.92 million in the years 2016 to 2017 for this project to be funded from the Regional Development Charges fund. Sufficient funding for the acquisitions outlined within this report is available in the project budget.

Other Department Consultations/Concurrence:

Transportation and Environmental Services staff have been consulted in the preparation of this Report.

Attachments

Appendix “A” – Sketch of Project Area
Appendix “B” – Corporate Profiles

Prepared By: Fiona McCrea, Solicitor, Property

Approved By: Debra Arnold, Regional Solicitor, Director of Legal Services
Appendix “A”
1. 650 Erb Street West, Waterloo
   Owner: Canadian Tire Properties Inc.
   Annual Return: April 5, 2014
   Directors/Officers: Shawn Goldenberg, Howard Walton
   Fee Simple Partial Taking and Permanent Hydro Easement
Region of Waterloo

Transportation and Environmental Services

Design and Construction

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016

File Code: C04-30-04173

Subject: C2015-28 Consultant Selection – Detailed Design and Services during Construction for the Water Transmission Main from Conestogo Plains to West Montrose, Township of Woolwich

Recommendation:

That the Regional Municipality of Waterloo enter into an Agreement for Professional Consulting Services with GM BluePlan Engineering Ltd. to provide engineering services for detailed design and services during construction for the Water Transmission Main from Conestogo Plains to West Montrose, at an upset fee limit of $479,396 plus applicable taxes.

Summary:

In December 2012 and May 2015, the Region completed Class Environmental Assessment (EA) studies (Schedule B) that identified that the preferred long term water supply solution for the West Montrose and Conestogo Plains service areas is to connect to the Region’s Integrated Urban System (IUS) at St. Jacobs. The first step is to construct a watermain between Conestogo Plains and West Montrose to address current operational challenges at the West Montrose Water Treatment Plant (WTP).

A consulting engineer is required to complete the detailed design and administer the construction of this watermain. A consultant selection process was carried out in accordance with the Region’s Purchasing By-Law 04-093 for the procurement of goods and services and included price as a factor. When considering Quality, Equity, and Price Factors, the submission from GM BluePlan Engineering Ltd. scored the highest and the project evaluation team recommends that GM BluePlan Engineering Ltd. be retained to undertake this assignment at an upset fee of $479,396 plus applicable taxes.
1. **Background**

The West Montrose water supply system was constructed by a private developer in 1988. Due to concerns with water quality and overall management of the water supply system, the Region assumed operation of the system in 1994. The Region has completed several upgrades and rehabilitation at the West Montrose water system. The West Montrose water system consists of four municipal infiltration wells, a treatment system, a pumping station, and a reservoir. The West Montrose water system currently presents challenges with both water quality and quantity.

The Region completed the West Montrose Water Supply Class Environmental Assessment study (Schedule B) in December 2012. Based on an evaluation of ten alternatives, the approved water supply solution for West Montrose was to use surplus capacity from Conestogo Plains Water Supply System (Report E-12-124, Appendix A). The approved alternative requires a new watermain from the existing Conestogo Plains Water Treatment Plant to the existing West Montrose storage reservoir. The connection to the Conestogo Plains water supply system best meets the project objectives in comparison with the other alternatives, and the life cycle cost is about average in comparison to the other alternatives.

The Conestogo Plains Water Supply System was constructed in 1989 and 1992 and it consists of two municipal groundwater wells, a treatment system, a pumping station, and a reservoir. The Conestogo Plains water system currently operates below its existing rated capacity and the water quality is considered generally good.

In August 2013, the Region initiated the Conestogo Plains Water Supply Class EA study (Schedule B) to confirm the feasibility of using the Conestogo Plains water system to supply West Montrose and review alternatives to ensure long term sustainable water supply to both communities. The Class EA was completed in May 2015 (Report TES-WAS-15-14, Appendix B) and the approved water supply solution for the West Montrose and Conestogo Plains service areas is the connection to the Region’s Integrated Urban System (IUS) at St. Jacobs.

The work under this capital project is the first step in implementing both approved EAs and includes completion of the detailed design and services during construction of a new water transmission main from Conestogo Plains to West Montrose (100 mm diameter, 7.3 km long), including connecting the water transmission main to both water systems.

This new water transmission main will provide a more reliable and sustainable water service to the community of West Montrose, and will not impact the Conestogo Plains Water Supply System as it currently has surplus capacity.
2. Consultant Selection

A consulting engineer is required to provide detailed design and construction administration for this watermain. On December 8, 2015, the Region of Waterloo placed advertisements on its website, in the Waterloo Region Record, and in the Daily Commercial News inviting submissions from consultants to provide services for detailed design and services during construction for the Water Transmission Main from Conestogo Plains to West Montrose.

Eight (8) proponents submitted a Proposal (Technical and Upset Budget). Each proposal was reviewed by the consultant selection team consisting of: Pam Law, Senior Project Engineer (Water Services Division); Matt Bender, Supervisor Operations and Maintenance, (Water Services Division); Adelaide Batista, Senior Project Manager Environmental Engineering (Design and Construction Division), and Tina Lumgair (Finance).

The consultant selection process was carried out in accordance with the Region of Waterloo’s Purchasing By law 04-093 for the procurement of goods and services, and included price as a factor. The evaluation criteria were subdivided into Quality, Equity, and Price factors as follows:

Quality factors

- Project Approach/Understanding/Work Plan 25%
- Qualifications and Experience of the Project Manager 20%
- Qualifications and Experience of the Project Support Staff 15%
- Experiences of the Consultant on Similar Projects 20%

Equity Factors

- Current Workload of the Consultant with the Region 3%
- Local Office of the Consultant 2%

Price Factor

- Upset Price 15%

When considering Quality, and Equity Factors, three (3) Consultants were shortlisted and had their Upset Budget Proposal Envelopes opened:

- AECOM
- GM BluePlan Engineering Ltd.
- MMM Group

The Quality, Equity, and Price Factors were then considered for the three (3) shortlisted Consultants and the submission from GM BluePlan Engineering Ltd. received the
highest points in total and had the lowest upset fee. Staff therefore recommends that
GM BluePlan Engineering Ltd. be awarded this assignment for an upset fee of $479,396
plus applicable taxes.

3. Scope of Work

For this assignment, the Consultant will provide professional consulting services during
the detailed design, tender, construction, and post-construction phases of the capital
project. The consultant will prepare issued-for-tender, issued-for-construction, and
record versions of the Contract Drawings and Contract Specifications for the general
construction contract. The consultant will also provide services related to construction
cost estimates and cash flow projections, approvals and permits, third party
archeological and geotechnical investigation, third party materials testing and quality
control, health and safety reviews, site inspection, contract administration, equipment
acceptance tests, commissioning of new works, a custom operation and maintenance
manual, custom training sessions and administration of equipment warranties.

Appendix C provides a breakdown of the Consultant’s upset fee.

4. Schedule

Subject to Council’s approval of this assignment for professional consulting services,
detailed design will commence in March 2016 with construction planned for 2017.

Corporate Strategic Plan:

This project meets the Region’s Corporate Strategic Plan Objective 3.2 “protect the
quality and quantity of our water resources” under Focus Area “Environment and
Sustainable Growth”.

Financial Implications

The Region’s approved 2016 Ten Year Water Capital Budget and Forecast includes a
budget of $8,680,000 for the Conestogo Plains and West Montrose Water System
Upgrades (project # 4173) of which $3,500,000 is allocated for this watermain. The
consultant’s upset fee of $479,396 is within the budget allowance for engineering work
and represents approximately 14% of the total project budget of $3,500,000 for this
watermain segment. The Conestogo Plains and West Montrose Water System
Upgrades will be funded 75% ($359,547) by the User Rates Water Reserve Fund and
25% ($119,849) by the Regional Development Charges.

Other Department Consultations/Concurrence:

Nil
Attachments

Appendix A – West Montrose Water Supply Class Environmental Assessment (EA) – Notice of Completion (Report E-12-124)

Appendix B – Conestogo Plains Water Supply Class Environmental Assessment: Notice of Completion (Report TES-WAS-15-14)

Appendix C – Breakdown of Consultant’s Upset Fee.

Prepared By: Adelaide Batista, Senior Project Manager, Environmental Engineering

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Appendix A

West Montrose Water Supply Class Environmental Assessment (EA)
Notice of Completion

Report E-12-124
REGION OF WATERLOO

TRANSPORTATION AND ENVIRONMENTAL SERVICES
Water Services

TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: December 11, 2012

FILE CODE: E03-20/4930

SUBJECT: WEST MONTROSE WATER SUPPLY CLASS ENVIRONMENTAL ASSESSMENT (EA) – NOTICE OF COMPLETION

RECOMMENDATION:

THAT the Regional Municipality of Waterloo receive the report entitled “West Montrose Class Environmental Assessment Project File Report” prepared by Aecom Canada Ltd., dated December 2012, according to Report E-12-124 dated December 11, 2012;

AND THAT Regional Municipality of Waterloo issue the Notice of Completion of Project File Report, and file the Project File Report for public review in accordance with Municipal Class Environmental Assessment requirements.

SUMMARY:

The West Montrose Water Supply System currently services approximately 60 residences within the community of West Montrose, located within the Township of Woolwich. The water supply system has typically been unable to meet water demands of the community due to declining performance of the existing wells. This Class EA was initiated to develop a long-term reliable and sustainable water supply solution for the community of West Montrose.

During the Class EA the proposed alternatives were evaluated against environmental, social, economic and technical criteria. The Preferred solution for future water supply to West Montrose is a connection to the Conestogo Plains Water Supply located within the Village of Conestogo. Throughout the Class EA, consultation with the public and government agencies was conducted including a public information centre and presentation at the West Montrose Residents’ Association Annual General Meeting. The primary concern was from the residents of Conestogo who are currently not connected to the municipal water system and who may desire to do so in the future. Based on initial investigations, the Conestogo Plains system has sufficient capacity to supply the current residents connected to the Conestogo Plains system, the community of West Montrose and future potential expansion of the distribution system to unserviced areas of the Village of Conestogo. This will be confirmed through a Class EA for the Conestogo Plains system planned for 2013.

The background studies, evaluation of alternatives, public consultation and proposed work have been documented in a Project File Report for this study. Regional staff is recommending that the Notice of Completion be issued and the Project File Report be made available for 30 day public review in order to complete the required Class Environmental Assessment Process.

REPORT:

Background
December 11, 2012

The West Montrose Water Supply System partly supplies the community of West Montrose and currently consists of four infiltration wells located within the floodplain of the Grand River. These wells pump water to a treatment plant which provides iron and manganese removal and cartridge filtration is used as an additional barrier to the treatment process. Water is stored in a reservoir prior to being distributed by the Township of Woolwich to approximately 60 residences.

The water supply system was constructed by a developer in 1988 with the Region assuming ownership in 1994. The Region completed a Class EA in 1997 to address known deficiencies at that time. The recommendations from this study included the construction of a fourth infiltration well as well as a number of treatment upgrades. In recent years, the water supply source has not been able to meet community demands due to declining performance of the existing wells. In order to supplement the well supply water from another Regional source has been transported to the reservoir via trucks.

**Municipal Class Environmental Assessment**

In February 2011, Regional Council approved retaining Aecom Canada Ltd. to complete the West Montrose Water Supply Class EA and Preliminary Design (Report E-11-019, dated February 25, 2011). The Class EA has been conducted in accordance with the Municipal Engineers Association Class Environmental Assessment Process (October 2000, as amended in 2007 and 2011) including public consultation and preparation of the Project File Report. The preliminary design report for the proposed facilities will be completed following the filing of the Project File Report.

As part of the Class EA a detailed hydrogeologic assessment for the study area was completed. This included a review of the hydrogeologic investigation that was completed in 1995 (as part of the 1997 Class EA), a desktop evaluation of any new geologic mapping and well records for the area, and the construction of five boreholes to gain a better understanding of the local geology. Through the Class EA the following options were examined:

- Do nothing
- Reduce water demand
- Limit community growth
- Modify current O&M practices
- Solely truck water in
- Addition of 5th infiltration well
- New groundwater source (deep overburden aquifer)
- New groundwater source (bedrock)
- Surface water source
- Use surplus capacity from Elmira
- Use Surplus Capacity from Conestogo

The options short-listed for detailed evaluation included a new surface water source, solely trucking water in, local groundwater sources and use of surplus capacity from another water supply system.

As required by the Class EA process, the alternatives identified were evaluated based on potential impacts on the natural, social, technical and economical environments. The proposed preferred solution for the West Montrose Water Supply System is a connection via a new water main to the Region’s Conestogo Plains Water Supply System at an estimated capital cost of $5,000,000. This solution presented a low to average life-cycle cost, as compared to the other alternatives and provided high reliability for a long term water supply as related to quantity, quality and ease of operation.

Based on initial investigations, the Conestogo Plains system has sufficient capacity to supply the current residents connected to the Conestogo Plains system, the community of West Montrose and future potential expansion of the existing distribution system to unserviced areas in the Village of Conestogo. A Class EA for the Conestogo Plains system is planned for 2013 and will confirm the water supply quantity and quality needed for servicing these communities.
Public and Agency Consultation

The evaluation process incorporated public consultation including a Public Information Centre held in September 2012 to present the preferred solution. Notices of the Public Information Centre were mailed to property owners within the study area, appropriate agencies and were posted in the Woolwich Observer, the Elmira Independent and on the Region’s website.

The Public Information Centre (PIC) regarding the Class EA was held on September 18, 2012 at the Conestogo Public School. During the PIC concerns were expressed by residents of Conestogo in regards to sufficient capacity being available for future expansion of the Conestogo distribution system if water were diverted to West Montrose. As previously indicated a Class EA planned for 2013 will examine any impacts on the Conestogo Water Supply System.

Next Steps

Subject to Regional Council approval of the recommendations of this report, a Notice of Completion of the Class EA will be issued according to Class EA requirements, by means of advertisements in local newspapers and mailings to affected property owners, municipalities and agencies. Upon Region Council approval, the Project File Report will be made available for a 30 day public review period.

The preliminary design for the new water main and required modifications to the existing West Montrose Water Treatment Plant will be postponed until after the completion of Class EA for Conestogo Plains starting in 2013.

CORPORATE STRATEGIC PLAN:

Implementation of the updated preferred alternative for the West Montrose Water Supply System Class EA will support the Region’s Strategic Plan Focus Area 2: Growth Management and Prosperity, Strategic Objective 2.2, Develop, optimize and maintain infrastructure to meet current and projected needs.

FINANCIAL IMPLICATIONS:

The Region’s 2012 Ten Year Water Capital Program provides $5.2 million between 2012 and 2018 for the design, construction administration and construction of the West Montrose Water Supply Project. More detailed cost estimates will be developed during the preliminary and detailed design phases of the project and incorporated into future updates of the Water Capital Program.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

NIL

ATTACHMENTS:

NIL

PREPARED BY: Pam Law, Senior Project Engineer, Water Services

APPROVED BY: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Appendix B

Conestogo Plains Water Supply Class Environmental Assessment:
Notice of Completion

Report TES-WAS-15-14
Region of Waterloo
Transportation and Environmental Services
Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: May 26, 2015

Subject: Conestogo Plains Water Supply Class Environmental Assessment: Notice of Completion

Recommendation:


And that the Regional Municipality of Waterloo publish the Notice of Completion for the EA and provide the Environmental Study Report for public review and comment for a 30-day period, in accordance with the Municipal Engineers Association’s Class Environmental Assessment process.

Summary:

The West Montrose Water Supply Class Environmental Assessment (EA) completed in 2012 recommended the connection to the Conestogo Plains Water Supply System as the preferred strategy for long term water supply to the Village of West Montrose. The Conestogo Plains System was not investigated in detail as part of the West Montrose Class EA and a recommendation was made to undertake a Class EA for this water system, which is part of the scope of this report.

The Schedule B, Class EA study has now been completed, including the required Project File Report. This report includes the preferred strategy for long-term water supply to the communities of West Montrose and Conestogo.

The project was guided by a Steering Committee which included representation from
Regional (former Mayor Todd Cowan) and Township Councils (former councillor Bonnie Bryant). The public, applicable regulatory authorities and other stakeholders have been consulted during the study. Public Consultation Centres were held at two milestone points in the project.

The preferred water supply strategy for the communities of West Montrose and Conestogo includes the provision of water from the Region’s Integrated Urban System. This will be achieved through the installation of a water main from St. Jacobs to the Conestogo Plains System, and two subsequent water mains connecting West Montrose and Conestogo Golf Course to Conestogo Plains. The construction is anticipated to be completed in multiple phases between 2017-2020.

The Municipal Class Environmental Assessment requires public advertisement of a Notice of Completion for the EA, and public release of the Project File Report for review and comment for a period of at least 30 days following issue of the notice. Water Services recommends that the Region approve the publication of the Notice of Completion, and placement of the Project File Report for public review at the Regional Clerk’s office, on the Region’s web site, and at the Township of Woolwich’s Clerk’s office, tentatively from June 15, 2015 to July 16, 2015.

Report:

The West Montrose Water Supply System consists of four infiltration wells located within the floodplain of the Grand River and services approximately 60 homes. In recent years, the water supply source has not been able to meet community demands due to declining performance of the existing wells. In order to supplement the well supply, water from another Regional source has been transported to the reservoir via water trucks. In 2012 the Region completed a Class EA for West Montrose that recommended a connection to the Conestogo Plains Water Supply System as the preferred strategy for long term water supply to the Village of West Montrose (Report E-12-124 dated Dec.11, 2012). This study recommended a more detailed investigation of the Conestogo Plains System to confirm this strategy, which is part of the scope of this report.

In April 2013, the Region retained CIMA to complete a Schedule B Class EA for the Conestogo Plains Water System, as outlined in Report E-13-052, dated April 30, 2013. The Conestogo Plains Water System is located on the west side of the community of Conestogo and consists of two groundwater wells with iron sequestration, disinfection and associated storage and pumping. The system currently has approximately 115 service connections. The water supply to the remainder of the community of Conestogo is provided by private wells and another Regional water system servicing the Conestogo Golf Course subdivision. The scope of the Class EA was to confirm whether the existing system can sustain water supply to Conestogo Plains, West Montrose and potential
connection of properties on private wells within the settlement boundaries of these communities. The study also evaluated the alternative of potentially connecting the whole community of Conestogo (Plains, Golf Course and properties on private wells within the settlement boundary) and West Montrose to another larger water system, such as the City of Waterloo, located approximately 1.2 km from the community of Conestogo.

A Project Steering Committee provided review and guidance throughout the project. This committee included representation from Regional Council (former Mayor Todd Cowan), Township of Woolwich Council (former Councillor Bonnie Bryant), and Region and Township staff. The public, regulatory authorities and other stakeholders have been consulted in the development of the preferred concept. Public Consultation Centres were held in Conestogo in March and November 2014.

The EA phase of the consulting assignment has now been completed by CIMA, including the required Project File Report. This report includes the preferred long term water strategy for the communities of West Montrose and Conestogo.

The preferred water supply strategy includes the provision of water from the Region’s Integrated Urban System (IUS). This will be achieved through the installation of a water main from St. Jacobs to the Conestogo Plains System and two subsequent watermains connecting West Montrose and Conestogo Golf Course to Conestogo Plains. The preferred approach is shown in Figure 1, attached. This alternative provides a long-term sustainable supply that will provide sufficient water for current service connections and accommodate future connections within the settlement boundaries. This alternative will also increase the operational efficiency of these systems by eliminating the operation of six wells and eliminating the need for frequent water trucking to the West Montrose system.

The Municipal Class Environmental Assessment process requires public advertisement of a Notice of Completion for the EA, and public release of the Project File Report for review and comment for a period of at least 30 days following issue of the notice. Water Services recommends that the Region approve the publication of the Notice of Completion, and placement of the Project File Report for public review at the Regional Clerk’s office, on the Region’s web site, and at the Township of Woolwich’s Clerk’s office, tentatively from June 15, 2015 to July 16, 2015.

After the public comment period has expired and any comments received on the report are addressed, CIMA will continue with the preliminary design phase of the proposed works. Detailed design of this project will be initiated by 2016. It is expected that construction of the works will take place in four phases between 2017-2020 and includes integration of construction with the planned road reconstruction on Sawmill
Road in Conestogo in 2017. The timing of each of the anticipated construction projects is included in Table 1, attached.

**Corporate Strategic Plan:**

The Conestogo Plains Water Supply System Class EA and Preliminary Design supports the Corporate Strategic Focus Area 2: “Growth Management and Prosperity,” Strategic Objective 2.2: “Develop, Optimize and Maintain Infrastructure to Meet Current and Projected Needs,” and specifically, Strategic Action 2.2.1: “Continue to prioritize and implement capital program projects required to meet community needs and ensure sustainability.”

**Financial Implications:**

The 2015 Ten Year Water Capital Forecast includes projected spending of $8.25 million between 2015 and 2024 for upgrades to the Conestogo Plains and West Montrose Water Supply Systems. The estimated cost of construction from the EA is $8.1 million. More detailed cost estimates will be developed during the preliminary and detailed design phases of the project, and will be used for updating future Water Capital Forecasts.

**Other Department Consultations/Concurrence:**

NIL

**Attachments**

Figure 1 – Map of Preferred Water Supply Strategy

Table 1 – Timing of Construction Phases

**Prepared By:** Pam Law, Senior Project Engineer, Water Services

**Approved By:** Thomas Schmidt, Commissioner, Transportation and Environmental Services
May 26, 2015

Figure 1: Map of Preferred Water Supply Strategy
May 26, 2015

**Table 1: Timing of Construction Phases**

<table>
<thead>
<tr>
<th>Construction Phase</th>
<th>Work Included</th>
<th>Anticipated Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Construction of watermain along Sawmill Road, within the Village of Conestogo. To be completed in conjunction with road reconstruction.</td>
<td>2017</td>
</tr>
<tr>
<td>2</td>
<td>Construction of watermain from St. Jacobs to Conestogo Plains and upgrades to Conestogo Plain treatment plant.</td>
<td>2018</td>
</tr>
<tr>
<td>3</td>
<td>Construction of watermain from Conestogo Plains to West Montrose and upgrades to West Montrose treatment plant.</td>
<td>2019</td>
</tr>
<tr>
<td>4</td>
<td>Construction of watermain from Conestogo Plains to Conestogo Golf Course and decommissioning of Conestogo Golf treatment plant.</td>
<td>2020</td>
</tr>
</tbody>
</table>
Appendix C

Water Transmission Main from Conestogo Plains to West Montrose
Breakdown of Consultant’s Upset Fee
### Appendix C

**Water Transmission Main from Conestogo Plains to West Montrose**

**Breakdown of Consultant’s Upset Fee**

<table>
<thead>
<tr>
<th>Task</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td><strong>Part 1: Detailed Design and Tender Phases</strong></td>
<td></td>
</tr>
<tr>
<td><em>Detailed Design Phase</em></td>
<td></td>
</tr>
<tr>
<td>Background Review</td>
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</tr>
<tr>
<td>Detailed Design</td>
<td>$201,067</td>
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<tr>
<td>Permits and Approvals</td>
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<td><strong>Tender Phase</strong></td>
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<td>Services during Tender</td>
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<td><strong>Detailed Design and Tender Phases (Part 1)</strong></td>
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<tr>
<td><strong>Part 2: Construction and Post-Construction Phases</strong></td>
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<td><em>Construction Phase</em></td>
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<tr>
<td>Services during Construction</td>
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<td><strong>Post Construction Phase</strong></td>
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<tr>
<td>Post Construction Services</td>
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<td><strong>Construction and Post Construction Phases (Part 2)</strong></td>
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<tr>
<td><strong>Total Upset Fee – Part 1 + Part 2 (excluding applicable taxes)</strong></td>
<td>$479,396</td>
</tr>
</tbody>
</table>
Region of Waterloo
Transportation and Environmental Services
Design and Construction

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: March 22, 2016

Subject: Consultant Selection – Preliminary Design, Detailed Design,
Construction Administration and Inspection Services for Bleams
Road/Ottawa Street Reconstruction, from West of Trussler Road
(Knechtel Court) to East of Fischer-Hallman Road (Nine Pines Road)
in the Township of Wilmot and the City of Kitchener

Recommendation:

That the Regional Municipality of Waterloo enter into a Consultant Services Agreement with MTE Consultants Inc. of Kitchener, Ontario to provide consulting engineering services for preliminary design, detailed design, contract administration and construction inspection for Bleams Road/Ottawa Street Reconstruction from west of Trussler Road (Knechtel Court) to east of Fischer-Hallman Road (Nine Pines Road) in the Township of Wilmot and the City of Kitchener at an upset limit of $474,279.00 plus applicable taxes for the preliminary design and detailed design phases, with contract administration and construction inspection to be paid on a time basis in an estimated amount of $360,000.00 as described in Report TES-DCS-16-07 dated March 22, 2016.

Summary:

The Region of Waterloo (Region) is planning for improvements on Bleams Road/Ottawa Street in the Township of Wilmot and the City of Kitchener from Knechtel Court easterly to Nine Pines Road, a total distance of approximately 3,500 metres. The project limits are shown in the key map in Appendix “A”. Construction of the improvements is scheduled to occur in 2018 and 2019 and planning must commence now to be in a position to start the construction in 2018.

There are a number of needs driving this project but the primary driver for the timing of the work is the need to install municipal sanitary servicing on Ottawa Street for a future
new development in the north-east quadrant of the Trussler Road/Ottawa Street intersection. In order to take advantage of the construction opportunity, the Region is also considering the following other improvements as part of this project: full road reconstruction to address the poor pavement condition; urbanization of the sections of Bleams Road/Ottawa Street that currently do not have curb and gutter, storm sewers and pedestrian facilities; and the installation of Regional trunk watermain upgrades throughout the corridor. The reconstruction also provides a further opportunity to consider the installation of cycling facilities on this section of roadway, which is a designated cycling route in the Region’s Active Transportation Master Plan (ATMP).

In order to meet the 2018 and 2019 construction timeline, an engineering consultant must be hired now to undertake the preliminary design, detailed design and construction services as Region staff are currently committed to other capital projects.

A consultant selection process was conducted in accordance with the Region’s Purchasing By-Law and the Evaluation Team recommends that MTE Consultants Inc. be retained to undertake this assignment at an upset fee limit of $474,279.00 plus applicable taxes for the preliminary design and detailed design phases, with contract administration and construction inspection to be paid on a time basis in an estimated amount of $360,000.00 as described in Report TES-DCS-16-07 dated March 22, 2016.

Report:

1. **Background**

The Region of Waterloo (Region) is planning to undertake improvements on Bleams Road/Ottawa Street from west of Trussler Road (Knechtel Court) to east of Fischer-Hallman Road (Nine Pines Road) in the Township of Wilmot and the City of Kitchener (City), a total distance of approximately 3,500 metres. (See key map in Appendix “A”.)

From Knechtel Court to Wilderness Drive/International Place, Bleams Road/Ottawa Street is predominantly a 2-lane rural cross-section with gravel shoulders. Between Wilderness Drive/International Place and Nine Pines Road, Ottawa Street is a fully urbanized 4-lane roadway. The corridor includes a combination of residential and commercial uses with entrances leading into subdivisions, Regional water facilities, and plazas. No on-street parking is allowed in this corridor. Under the Region’s Transportation Corridor Design Guidelines, Bleams Road is designated as a “Rural Village – Main Street (RRMS)”, prioritized for vehicular movement and active transportation, while Ottawa Street is designated as a “Neighbourhood Connector – Avenue (NAV)”, supportive of active transportation and transit.

The primary driving factor behind the timing of this project is the sanitary servicing need for the Activa Holdings Inc. subdivision development in the north-east quadrant of the Ottawa Street/Trussler Road intersection. Further to an Ontario Municipal Board
hearing decision, a new sanitary sewage pumping station and forcemain are needed in 2018 to service the first phase of the development. The required sanitary forcemain is 1,900 metres in length along Ottawa Street and would connect to the local sanitary sewer system at David Bergey Drive.

In order to minimize overall construction duration and service disruption to the public, the Region is proposing to combine the installation of the sanitary forcemain with other planned Regional work within the project limits. The other Regional work would include full road reconstruction to address the deteriorated road condition, as well as urbanization of the rural sections with the addition of curb and gutter, catchbasins and new storm sewer. As recommended in the Active Transportation Master Plan (ATMP), sidewalks, cycling lanes and/or boulevard multi-use trails will also be considered on Bleams Road and Ottawa Street. In addition, this project will include the replacement of existing 450mm diameter Regional watermains with a new 600 mm diameter Regional watermain to provide increased water supply capacity.

Planning of these improvements will be completed in accordance with the Schedule 'A+' requirements of the Municipal Class Environmental Assessment (Class EA). This project is being led by a project team that includes staff representatives from the City, Township of Wilmot and the Region, in addition to local City Ward 5 Councillor Kelly Galloway-Sealock and Ward 6 Councillor Paul Singh, as well as the Township of Wilmot Ward 1 Councillor Al Junker.

Regional staff is fully committed to other capital projects at this time and therefore staff recommends that an external consultant be hired to complete this project. Regional staff has determined that it is necessary to commence the engineering for this project immediately in order to provide sufficient time to complete the design phases and if necessary, acquire property and complete utility relocations in advance of construction.

2. Consultant Selection

An invitation for Letters of Interest to provide engineering services for this project was advertised in The Waterloo Region Record newspaper on November 9, 2016, as well as on the Region’s website, and on the Ontario Public Buyers Association website. Nine (9) consultants submitted Letters of Interest. Following a detailed review of the submissions, three (3) firms were short-listed based on their qualifications. The detailed work plans and upset fee quotes for design activities, plus an estimate of fees for contract administration and construction inspection services from the short listed consultants were then reviewed and a final selection was made based on the evaluation criteria.

The three short-listed consultants were: MTE Consultants Inc., Walter Fedy, and GM Blueplan.
The Team involved with the consultant selection consisted of:

Boris Latkovic, Senior Project Manager, Transportation - Design and Construction, Regional Municipality of Waterloo
Gary MacDonald, Head, Transportation Rehabilitation - Design and Construction, Regional Municipality of Waterloo
John Holowackej, Project Manager – Water Services, Regional Municipality of Waterloo
Eric Riek, Project Manager, Development Engineering – City of Kitchener

The evaluation criteria used for selecting the successful consultant were in accordance with the Region’s Purchasing By-law and included price as a factor in the selection process. These evaluation criteria and their respective weightings were as follows:

**Quality Factors**

- Project Approach and Understanding: 35%
- Experience of the Project Manager: 20%
- Experience of the Project Support Staff: 10%
- Experience on Similar Projects: 15%

**Equity Factors**

- Current Workload for Region: 3%
- Local Office: 2%

**Price Factor**

- Upset Price: 15%

The Letters of Interest submitted by the three (3) short-listed consultants demonstrated a good understanding of the project, capable project teams, and experience on similar projects. When considering all quality, equity and price factors, the submission from MTE scored the highest. MTE also had the lowest upset fee submission. Based on the above evaluation criteria, including the review of the detailed work plans, project approach, schedules and upset fees provided, the Project Team recommends that MTE be retained to provide the preliminary design, detailed design, contract administration and construction inspection services for this project.

3. **Scope of Work**

For this engineering assignment, the consultant will: undertake a complete review of required infrastructure for existing and future conditions; investigate a number of alternatives to accommodate the new sanitary forcemain, the various watermains, and...
other sewers in this constrained corridor; develop and assess transportation improvement/reconstruction alternatives; conduct a public participation program; complete the preliminary and detailed design; assess the advantages and disadvantages of different construction staging alternatives; make presentations to the Township of Wilmot, the City of Kitchener, and Regional Planning and Works Committee; prepare contract drawings, specifications, and tender documents; obtain all necessary agency approvals; assist during the tendering period; provide contract administration and site inspection services during construction; prepare record drawings; and provide post-construction services during the warranty period. A breakdown of the successful consultant’s upset fee is included in Appendix “B” attached to this report.

4. Schedule

Subject to Council’s approval of the consultant assignment, the proposed implementation schedule is as follows:

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey, Base Plan, Preliminary Design and Generation of Alternatives</td>
<td>Spring to Fall 2016</td>
</tr>
<tr>
<td>Public Consultation Centre</td>
<td>Fall 2016</td>
</tr>
<tr>
<td>Council Approval of Recommended Alternative</td>
<td>Winter 2017</td>
</tr>
<tr>
<td>Property Acquisition, Utility Relocations, Final Design, Approvals and Tendering</td>
<td>Spring 2017 to Spring 2018</td>
</tr>
<tr>
<td>Construction</td>
<td>Summer 2018 to Fall 2019</td>
</tr>
</tbody>
</table>

5. Consultant’s Upset Fee

The short-listed consultants provided an upset fee for professional services for public consultation and engineering design with an estimate of contract administration and construction inspection fees. For roadway projects, the time required for contract administration and construction inspection can vary significantly depending on weather conditions, unforeseen developments during construction, contractor performance, and other unknown variables. Because an upset fee does not lend itself well to these types of services, it has been the Region’s practice for road projects to pay for contract administration and construction inspection services on a time basis. It is recommended that this same practice be followed for this project. For budgetary purposes, Region staff has estimated the cost of contract administration and construction inspection services to be $360,000, which is based on the preliminary estimate of fees submitted by MTE and a review of costs on similar projects.
The total estimated construction cost for this project, including both the Region’s and Developer’s work is $8,495,000. The upset fee for the design phases is $474,279.00 and represents approximately 5.6% of this estimated construction value which is at the low end of the range for a project of this magnitude and complexity.

Corporate Strategic Plan:

The completion of the proposed improvements on Bleams Road/Ottawa Street would meet one or more of the Strategic Objectives under the Region’s Corporate Strategic Plan Focus Areas “Thriving Economy”, “Sustainable Transportation” and “Environment and Sustainable Growth”.

Financial Implications

The Region’s 2016 Ten Year Transportation Capital Program (TCP) includes $6,795,000 for the road reconstruction component of the Bleams Road/Ottawa Street improvements, to be funded from the Road Rehabilitation Reserve Fund. The Region’s 2016 Water Capital Program includes $1,700,000 for the trunk watermain work included with these Bleams Road/Ottawa Street improvements, to be funded from the Water Capital Reserve Fund (74%) and Regional Development Charges (26%).

MTE’s total fees for the preliminary and detailed design and contract administration/construction inspection are within the consulting fee allowance provided for in the total budget for this project. The 2016 Ten Year Transportation Capital Program includes a design budget of $200,000 for this project in 2016, which is sufficient funding to cover the scheduled consultant expenditures in 2016.

Other Department Consultations/Concurrence:

Nil

Attachments

Appendix A: Project Key Plan

Appendix B: Breakdown of Consultant’s Upset Fee

Prepared By: Boris Latkovic, Senior Project Manager, Design and Construction

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Appendix “A”

Key Plan

REGIONAL ROAD No. 4
(BLEAMS ROAD / OTTAWA STREET)
WEST OF TRUSSLER ROAD (KNECHTEL CT) TO
EAST OF FISCHER-HALLMAN ROAD (NINE PINES RD)
TOWNSHIP OF WILMOT, CITY OF KITCHENER
Appendix “B”

Preliminary Design, Detailed Design, Construction Administration and Inspection Services for Bleams Road/Ottawa Street Reconstruction, from West of Trussler Road (Knechtel Court) to East of Fischer-Hallman Road (Nine Pines Road) in Township of Wilmot and the City of Kitchener

Breakdown of Consultants Upset Fee for Preliminary and Detailed Design:

- Project Initiation/Data Collection/Base Plan Preparation $62,895.00
- Class Environmental Assessment and Preliminary Design $189,400.00
- Detailed Design and Approvals $200,876.00
- Contract Document, Specifications and Tendering $21,108.00
- Sub-total $474,279.00
Region of Waterloo
Planning Development and Legislative Services
Legal Services

To: Chair T. Galloway and Members of the Planning & Works Committee

Date: March 22, 2016   File Code: L07-90

Subject: Authorization to Expropriate Land (1st Report) for Grand River Transit Facilities – 296 Fairway Road S., Kitchener and 300 Fairway Road S., Kitchener

Recommendation:

That The Regional Municipality of Waterloo direct and authorize the Regional Solicitor to take the following actions with respect to the expropriation of certain properties in the City of Kitchener described below for public transit purposes including for the construction and operation of a Grand River Transit ("GRT") Passenger Facility in accordance with the GRT Business Plan pursuant to Report P-12-013 dated January 31, 2012 and for transit parking facility purposes to be utilized by GRT and ION operators and users (the "transit facility") including,

Complete application(s) to the Council of The Regional Municipality of Waterloo, as may be required from time to time, for approval to expropriate lands, which are required for the transit facility as further described below:

Fee Simple Full Taking:

1. Part Lots 3 and 4, Plan 962 as in 641088, PIN 22590-0181 (LT), City of Kitchener, Regional Municipality of Waterloo (300 Fairway Road S., Kitchener, ON N2C 1W9);

2. Part Lot 4, Plan 962, being Parts 6 & 7, Plan 58R1271 s/t 667083 and t/w 542189 and t/w 377327 as amended by 719746, PIN 22590-0180 (LT), City of Kitchener, Regional Municipality of Waterloo (296 Fairway Road S., Kitchener, ON N2C 1W9);
A. Serve notices of the above application(s) required by the Expropriations Act;

B. Forward to the Chief Inquiry Officer any requests for a hearing that may be received within the time prescribed by the Act;

C. Attend, with appropriate Regional staff, at any hearing that may be scheduled;

D. Discontinue expropriation proceedings or any part thereof, in respect of the above described lands, or any part thereof, upon the registration on title of the required documentation to complete a transaction whereby the required interests in the lands are conveyed or if otherwise deemed expedient in the opinion of the Commissioner of Transportation and Environmental Services and the Regional Solicitor; and

E. Do all things necessary and proper to be done, and report thereon to Regional Council in due course.

Summary:

Nil

Report:

A. Project Details

Currently, there is a Grand River Transit (GRT) bus passenger facility located on the Fairview Park Mall property, adjacent to the lands that are the subject of the recommended expropriation of this Report (the “subject lands”). The Mall owner has indicated in recent years that it has alternate plans for the lands currently occupied by GRT at the Mall and requires the removal of the GRT bus passenger facility from its lands. As a consequence, staff has developed the proposed plan for the GRT passenger facility to be relocated to the subject lands from the Mall lands. As part of a comprehensive redesign of the transit network to ensure full integration of conventional and rapid transit services, staff identified that a key element of integration is the provision of passenger facilities to accommodate convenient transfers at strategic locations where routes converge, including the subject location at Fairway Road in the City of Kitchener. Accordingly, the proposed relocated GRT passenger facility will be in a location integrated with the future Fairway Road ION station in order to provide security of tenure for the GRT passenger facility and also to allow for optimal ION/GRT integration. The subject lands are best positioned to accommodate this requirement. The subject lands will also provide an area where GRT and ION transit users can "park and ride" to address parking concerns of the surrounding private commercial properties.

The proposed new transit passenger facility is shown in Appendix C to this Report. The new facility would provide platforms for 8 buses and would include a driver facility for lunch and shift changes, as well as a customer park and ride facility. Customer
amenities in the transit facility would include shelters, benches, bike parking and real-time LED displays. Space for an additional 4-5 bus bays will be provided adjacent to the north side of the LRT platform, for a total of 12-13 bus bays at the integrated transit facility. There would be parking for at least 200 vehicles. The total amount of parking may vary depending on the final configuration of the site.

The existing transit passenger facility adjacent to Hudson’s Bay on the Fairview Park Mall property would be decommissioned and the site would be restored to surface parking. The planned schedule is to complete the detailed design in 2016, begin construction in 2017 and have the new facility operational by late 2017 in anticipation of the start of ION LRT revenue service. The Region and the Mall owner continue to collaborate in connection with the logistics and timing of the relocation of the GRT passenger facility.

B. Expropriation Process

This Report is seeking approval to commence the expropriation process in connection with 296 Fairway Road South, Kitchener and 300 Fairway Road South, Kitchener (collectively, the “Restaurant Block”) representing full takings of land required for the construction and operation of the above-described transit passenger facility.

In order to meet the Rapid Transit Project timelines, the Commissioner of Transportation and Environmental Services has authorized modified prerequisites for the commencement of the expropriation process with respect to lands required for the Rapid Transit Project in accordance with the Region’s revised land acquisition policy for infrastructure projects. In keeping with these requirements, Regional Staff has contacted, in writing, the property owners impacted by these takings and have followed up in person or via telephone with all owners that have made themselves available. The property owners have been informed of the Region’s intention to proceed with the expropriation process, including this Report, and have been provided with the Region’s Expropriation Information Sheet which explains the expropriation process. A copy of the Expropriation Information Sheet is attached as Appendix “A” hereto. The owners have also been advised, that it is the Region’s intention to seek a negotiated settlement prior to the completion of the expropriation process and that the process has been commenced only to ensure that possession of the Subject Properties is secured within the required timeline. The owners have advised that they have communicated the foregoing information to their respective tenants.

Should a negotiated settlement be reached with any property owner and a conveyance of the required lands, or any of them, is completed before the expropriation process is complete, the expropriation process with respect to such lands would be discontinued by the Regional Solicitor.

It is to be noted that the expropriation of the Subject Properties are on an “as is” basis and, therefore, the Region assumes all responsibility for the said lands upon assumption of title.

The subject properties and related Project Area are shown on the map attached as Appendix “B” hereto. The Restaurant Block is currently occupied by a Burger King and
Crabby Joe’s restaurant. The fee simple owners and tenants of the subject properties and related most current available corporate profile information, as applicable, are set out in Appendix “D” hereto. Appendix “D” does not, however, include a list of affected mortgagees, tenants, execution creditors, guardians of property, or persons with a limited estate or interest in said lands such as easement holders.

Corporate Strategic Plan

The report supports Focus Area 3.1 of Council’s Strategic Focus: Implement a light rail transit system in the central transit corridor, fully integrated with an expanded conventional transit system.

Financial Implications

Since the new terminal location will provide services for both GRT and LRT park and ride passengers, it is appropriate that the land cost of such terminal be funded jointly. The allocation of costs between GRT and LRT will be finalized once the detailed design for the project is completed.

The GRT capital budget includes $500,000 in 2016 and $3.5 million in 2017 for the construction of the GRT transit facility. This cost estimate will be reviewed once the property is acquired and detailed design is complete. Should additional funding be required, this will be reflected in the 2017 – 2026 GRT Capital Budget to be submitted as part of the 2017 budget process. The funding of the GRT portion of this project will comprise 18.2% funding from RDCs and 82.8% funding from debentures. These figures could change as a result of the Development Charges Background Study for Transit and Waste Management which is currently being undertaken by the Region.

Land acquisition for the rapid transit project is being carried out by the Region outside of the DBFOM contract with GrandLinq. The budget for all the land acquisition and associated costs is $42.3 million. As of February 29, 2016 $24.4 million has been spent with the remainder committed to estimated costs of future acquisitions. The Rapid Transit project’s share of the estimated capital cost of the transit facility will be accommodated within the land acquisition budget. The Region’s portion of the RT project costs are funded through annual property tax increases in the three cities until 2019.

Other Department Consultations/Concurrence:

Rapid Transit staff and Finance staff have been consulted in the preparation of this Report.
Attachments:

Appendix “A” – Expropriation Information Sheet
Appendix “B” – Subject Lands Sketches
Appendix “C” – Site Map of Proposed ION/Grand River Transit Facility
Appendix “D” – Corporate Profile Searches (Fee Simple Owner and Tenants)

Prepared By: Liviu Cananau, Solicitor, Property (Rapid Transit)

Approved By: Debra Arnold, Regional Solicitor, Director of Legal Services
The following information is provided as a general overview of the expropriation process and is not legal advice. For complete information, reference should be made to the Ontario Expropriations Act as well as the more detailed information in the Notices provided under that Act.

**Expropriation Information Sheet**

**What is Expropriation?**

Governmental authorities such as municipalities, school boards, and the provincial and federal governments undertake many projects which require them to obtain land from private property owners. In the case of the Regional Municipality of Waterloo, projects such as the construction or improvement of Regional Roads sometimes require the purchase of land from private property owners. In many cases, the Region of Waterloo only needs a small portion of the private property owner’s lands or an easement for related purposes such as utilities, although in certain instances, entire properties are required.

Usually the governmental authority is able to buy the land required for a project through a negotiated process with the affected property owners. Sometimes, however, the expropriation process must be used in order to ensure that the land is obtained within a specific timeline. Put simply, an expropriation is the transfer of lands or an easement to a governmental authority for reasonable compensation, including payment of fair market value for the transferred lands, without the consent of the property owner being required. In the case of expropriations by municipalities such as the Region of Waterloo, the process set out in the Ontario Expropriations Act must be followed to ensure that the rights of the property owners provided under that Act are protected.

**IMPORTANT NOTE:** The Region of Waterloo tries in all instances to obtain lands needed for its projects through a negotiated agreement on mutually acceptable terms. Sometimes, the Region of Waterloo will start the expropriation process while negotiations are underway. This dual approach is necessary to ensure that the Region of Waterloo will have possession of all of the lands needed to start a construction project on schedule. However, it is important to note that Regional staff continues to make every effort to reach a negotiated purchase of the required lands on mutually agreeable terms while the expropriation process is
ongoing. If agreement is reached, expropriation proceedings can be discontinued and the land transferred to the Region of Waterloo in exchange for payment of the agreed-upon compensation.

What is the process of the Region of Waterloo under the Expropriations Act?

- Regional Council considers a request to begin an application under the Expropriations Act to obtain land and/or an easement for a specific Regional project. No decision is made at this meeting to expropriate the land. This step is simply direction for the Region of Waterloo to provide a “Notice of Application for Approval to Expropriate” to affected property owners that the process has started to seek approval to expropriate the land.

- As stated in the Notice, affected property owners have 30 days to request a Hearing to consider whether the requested expropriation is “fair, sound and reasonably necessary in the achievement of the objectives” of the Region of Waterloo. This Hearing is conducted by a provincially-appointed Inquiry Officer. Prior to the Hearing, the Region of Waterloo must serve the property owner with a Notice setting out its reasons or grounds for the proposed expropriation. Compensation for lands is not determined at this Hearing. The Inquiry Officer can order the Region of Waterloo to pay the property owner up to $200.00 as compensation for the property owner’s costs in participating in this Hearing, regardless of the outcome of the Hearing.

- If a Hearing is held, a written report is provided by the Inquiry Officer to the property owner and the Region of Waterloo. Council must consider the Report within 90 days of receiving it. The Report is not binding on Council and Council may or may not accept the findings of the Report. After consideration of the Report, Council may or may not approve the expropriation of the land or grant approval with modifications. A property owner may wish to make written and/or verbal submissions to Council at the time that it is considering the Report.

- If no Hearing is requested by the property owner, then Council may approve the expropriation of the land after expiry of a 30 day period following service of the Notice of Application for Approval to Expropriate

- If Council approves the expropriation then, within 3 months of this approval, the Region of Waterloo must register a Plan at the Land Registry Office that describes the expropriated lands. The registration of this Plan automatically transfers title of the lands to the Region of Waterloo, instead of by a Deed signed by the property owner.

- Within 30 days of registration of the Plan, the Region of Waterloo must serve a Notice of Expropriation on the affected property owner advising of the expropriation.
Within 30 days of this Notice, the property owner may serve the Region of Waterloo with a Notice of Election selecting the valuation date under the *Expropriations Act* for calculation of the compensation.

- In order to obtain possession of the expropriated lands, the Region of Waterloo must also serve a Notice of Possession setting out the date that possession of the land is required by the Region of Waterloo. This date has to be 3 months or more from the date that this Notice of Possession is served on the affected property owner.

- Within 3 months of registration of the Plan, the Region of Waterloo must provide the affected property owner with payment for the full amount of the appraised fair market value of the expropriated land or easement and a copy of the appraisal report on which the value is based. If the property owner disagrees with this amount, and/or claims other compensation and/or costs under the *Expropriations Act*, the compensation and/or costs matter may be referred to a provincially-appointed Board of Negotiation in an effort to reach a mediated settlement and/or an appeal may be made to the Ontario Municipal Board (OMB) for a decision. In any event, the Region of Waterloo continues in its efforts to reach a negotiated settlement with the affected property owner prior to the OMB making a decision.
Appendix “B”

296 Fairway Road, Kitchener (Crabby Joe’s)
300 Fairway Road, Kitchener (Burger King)
Appendix “C”

Site Map of Proposed ION/Grand River Transit Facility
Corporate Profiles:

1. Address: 296 Fairway Road S., Kitchener
   Owner: 2243902 Ontario Ltd.
   Annual Return: May 16, 2015
   Directors/Officers: Paramjit Kaur Virk; Navtej Singh Virk
   Ontario Business Corporation
   Tenant: Redberry Franchising Corp./La Corporation Des Franchises Redberry
       aka Burger King
   Annual Return: July 21, 2014
   Directors/Officers: Andreas Kragaris, Robert Laverdure, Christian LeBrun,
       Ontario Business Corporation

2. Address: 300 Fairway Road S., Kitchener
   Part Owner: Amalfi Investments Limited
   Annual Return: January 3, 2009
   Directors/Officers: Louis a. Strauss; Harry M. Strauss; Gordon S. Strauss
   Part Owner: 397219 Ontario Limited
   Annual Return: July 18, 2015
   Directors/Officers: Adam Spylo; Ahren Spylo
   Ontario Business Corporation
   Franchisor: Obsidian Group Inc.
       aka Crabby Joe’s Tap & Grill
   Annual return: February 20, 2016
   Directors/Officers: Gus Karamountzos
   Ontario Business Corporation
Region of Waterloo

Transportation and Environmental Services

Transit Development

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016  

File Code: D 28-20

Subject: Passenger Information Display Sign Acquisition – Grand River Transit

Recommendation:

That the Regional Municipality of Waterloo approve the acquisition of 55 real-time passenger information display signs from INIT Innovations in Transportation, Inc. at a total cost of $454,896.72 plus applicable taxes, as described in Report No. TES-TRS-16-07, dated March 22, 2016.

Summary:

In early 2007, Grand River Transit (GRT) began equipping buses with the Intelligent Transportation System (ITS) transit management system supplied by INIT Innovations in Transportation. The computer-aided dispatch and automatic vehicle location (CAD/AVL) system and automatic passenger counting (APC) systems have provided significant benefits relating to operational efficiency, service quality and customer service.

Currently, the provision of real-time bus arrival information occurs at 124 transit stops equipped with the passenger information displays from INIT. This includes all stops on the current iXpress 200 / ION aBRT routes, and the majority of stops on the iXpress 201 / 202 routes. The passenger information displays show real-time arrival times for all routes serving the iXpress stops.

The signs in this acquisition are to be installed on the Route 203 Franklin – Maple Grove and the Route 204 Highland – Victoria iXpress lines. These routes are providing connections to rapid transit and access to major destinations within the Region. Similar to existing iXpress routes, most stations on these lines will include bus shelters and real-time bus arrival displays. The total cost for acquiring the signs is $454,896.72 plus applicable taxes and the funds required are provided for in the approved 2016 GRT Capital Budget.
Report:

The provision of real-time bus arrival information benefits waiting transit customers as it removes the uncertainty of when the next bus will arrive at a bus stop. The provision of real-time bus arrival information is possible because each GRT conventional bus is equipped with the INIT transit management system which provides the following functionalities:

- In-vehicle next stop audio announcements and variable next stop display
- CAD/AVL system for real-time tracking of vehicles at the transit control centre
- Automatic passenger counters (APC)
- Central data processing and analysis software
- Passenger information displays at stops displaying next bus arrival information on a real-time basis
- Transit Signal Priority (TSP) at equipped intersections

Since implementation began in early 2007, the advanced technology has provided significant benefits including the automated announcement and visual display of next bus stops, greater operational efficiency and improved service reliability through central control, improved schedule reliability and the provision of real-time arrival information and schedule information through the EasyGo traveler information system.

The Region currently has real-time passenger information displays at the majority of iXpress stops. The real-time arrival times for all buses serving the stop are displayed. Real-time passenger information displays enhance the attractiveness of the service to transit customers by reducing the uncertainty when waiting at a bus stop of when the next bus will be arriving.

The Highland – Victoria and Franklin – Maple Grove iXpress lines provide connections to rapid transit and access to major destinations within the Region. Similar to the 200, 201, 202 and ION aBRT lines, real-time passenger information displays and bus shelters would be installed at most station locations along these routes.

The scope of work is for the supply of real-time electronic passenger information displays from INIT for the transit stations at 25 locations along the 204 Highland – Victoria iXpress corridor, 18 locations on the Route 203 Franklin – Maple Grove iXpress corridor, as well as, 12 additional bus stop locations. The additional stop locations recommended for passenger information displays include remaining locations along the 201 and 202 iXpress that require signs to be mounted on poles instead of shelters, most notably along the Columbia Street corridor. One multi-line unit is proposed for installation at The Boardwalk Transit Terminal.
Electrical wiring connections, from the shelter or pole to the power source, will be installed by the shelter manufacturer’s contractors. Depending on the power source, final energizing will be completed by Regional Traffic Division personnel or by crews from one of the areas Hydro-Electric companies. Electronic Technicians employed by the Transit Division will install the passenger information displays as soon as power connections are finalized.

**Corporate Strategic Plan:**

The expansion of the provision of real-time information on next bus arrival times for GRT vehicles supports the implementation of Council’s Strategic Focus, identified under Focus Area 2: Sustainable Transportation within Waterloo Region. The displays will aid with Strategic Objective 2.1 creating a public transportation system that is integrated. The sign program assists in educating and improving awareness of availability and benefits of public transportation choices and options.

**Financial Implications:**

The total cost of acquiring 55 real-time passenger information display signs from INIT is $454,896.72 plus applicable taxes. This purchase, net of HST rebate, totals $462,902.90. The approved 2016 GRT Capital Budget includes $952,000 for iXpress Station Development to be funded from development charges ($173,000; 18.2%) and debentures ($779,000; 81.8%). The funds required for this purchase are provided for in this budget.

The Purchasing By-Law provides that a “Purchase by Negotiation” is appropriate when it is “the extension of an existing or previous contract which would prove more cost effective or beneficial for the Region” and “the acquisition is required or is beneficial in regard to the standardization of goods or services for the Region”. Such negotiated acquisitions still require Council approval when the contract value exceeds $100,000.

The price per unit is slightly lower then that negotiated in 2013. Staff negotiated a 5% discount per unit in 2013 in comparison to prices paid for the 2011 order. The cost of the equipment to be supplied by INIT is considered to be fair and reasonable and reflect current market conditions. INIT Innovations has proven to be a reliable company and its technology effective for GRT use.

**Other Department Consultations/Concurrence:**

This report was prepared in cooperation with staff from Transit Services, Finance and Purchasing.

**Attachments**

Attachment A – Images of Passenger Information Display
Attachment A

Images of Passenger Information Display
Region of Waterloo
Transportation and Environmental Services
Transportation

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016

File Code: D09-90/2016 TMP

Subject: Consultant Selection – Transportation Master Plan Update

Recommendation:

That the Regional Municipality of Waterloo enter into a Consulting Services Agreement with IBI Group to provide planning and engineering services for preparation of the Transportation Master Plan Update, at an upset fee limit of $700,000, plus applicable taxes.

Summary:

A Transportation Master Plan (TMP) defines how the Region’s transportation system will grow and change in the coming decades. The TMP provides the justification for many other strategic plans. Moving Forward 2031, the current TMP, was approved by Council in 2010 in response to several new provincial and local policy initiatives that have a significant influence on the future direction of transportation in Waterloo Region. Changes to provincial and local policy initiatives mean it is now time to update the TMP. Regional staff is fully committed to other projects at this time and therefore staff recommends that an external consultant be hired to complete this project.

The Region issued a Request for Consulting Services and followed the Region’s Purchasing By-law for assignments of this nature. Four (4) proposals were received, out of which three (3) were shortlisted. Following a review and assessment of the detailed submissions, including detailed work plans, schedules and price, the consultant selection team recommends that IBI Group be retained to undertake this assignment at a total upset fee of $700,000, plus applicable taxes.
1. Background

A Transportation Master Plan (TMP) defines how the Region's transportation system will grow and change in the coming decades. The TMP provides the justification for the Ten Year Transportation Capital Program, updates to the Regional Development Charges By-Law, and many other strategic plans. Preparation of a TMP provides a periodic opportunity to accomplish the following tasks:

- Review the current state and long-term vision for transportation;
- Analyze the overall transportation system in a strategic manner;
- Integrate transportation planning with other strategic plans; and
- Consult with a broad range of stakeholders.

Moving Forward 2031, the current TMP, was approved by Council in 2010 in response to several new provincial and local policy initiatives that have a significant influence on the future direction of transportation in Waterloo Region. These include the Growth Plan for the Greater Golden Horseshoe, the Regional Growth Management Strategy, the Regional Official Plan and the Rapid Transit Project. Moving Forward 2031 involved significant public consultation and resulted in a vision to have a transportation system that would accomplish the following goals:

- Optimize the transportation system;
- Promote transportation choice;
- Foster a strong economy; and
- Support sustainable development.

Changes to provincial and local policy initiatives (i.e. new growth forecasts in the provincial growth plan and approval of the Regional Official Plan) mean it is now time to update the TMP. Regional staff is fully committed to other projects at this time and therefore staff recommends that an external consultant be hired to complete this project.

2. Consultant Selection

On January 15, 2016, the Region issued a Request for Consultant Services inviting consultants to submit proposals for the TMP Update. Four proponents submitted proposals that were reviewed by a consultant selection team consisting of:

- Geoffrey Keyworth, Acting Manager, Strategic Transportation Planning
- Tabot Eneme, Transportation EIT
- Paula Sawicki, Manager, RT Coordination
- John Hill, Manager, Development Planning
The consultant selection process was carried out in accordance with the Region of Waterloo’s Purchasing By-law 04-093 for the procurement of goods and services, and included price as a factor. The evaluation criteria were subdivided into Quality, Equity and Price factors as follows:

- **Quality factors:**
  - Project Approach and Understanding 25%
  - Qualification/Experience of Project Manager 20%
  - Qualification/Experience of Project Support Staff 20%
  - Experience of the Consultant on Similar Projects 15%

- **Equity Factors:**
  - Current Workload of the Consultant with the Region 3%
  - Local Office of the Consultant 2%

- **Price Factor:**
  - Proposal price 15%

Prior to opening the Financial Proposal envelopes containing the proposal price information, the Quality and Equity factors were evaluated. Based on the initial scores, three (3) of the four (4) proponents were shortlisted, as follows:

- Dillon Consulting
- IBI Group
- MMM Group

The proposals submitted by the shortlisted consultants demonstrated a good understanding of the project, capable project teams and experience on similar projects. The Financial Proposal envelopes were opened in the presence of Denise Schmidt, Buyer, on February 24, 2016. When considering all Quality, Equity and Price factors, the submission from IBI Group received the highest points in total. IBI Group’s proposal price was not the lowest price, but was approximately 1% lower than the average price of the shortlisted proposals. Therefore, staff recommends that IBI Group be awarded this assignment.

The scope of work for the assignment involves the tasks outlined in **Appendix A**. Subject to Council’s approval of this assignment, work will commence in April, 2016 and is expected to be completed by Spring 2018.

**Corporate Strategic Plan:**

The Transportation Master Plan is directly related to the Sustainable Transportation Focus Area and all four Strategic Objectives:

- Create a public transportation network that is integrated, accessible, affordable
and sustainable;

- Improve inter-city rail transportation services to and from Waterloo Region;
- Build infrastructure for, and increase participation in, active forms of transportation (cycling and walking); and
- Optimize road capacity to safely manage traffic and congestion.

It also influences all other Focus Areas, namely:

- Thriving Economy
- Environment and Sustainable Growth
- Healthy, Safe and Inclusive Communities
- Responsive and Engaging Government Services

Financial Implications:

The 2016 Ten Year Transportation Capital Program includes a total budget of $550,000 in the years 2016 and 2017, and will be funded from the Development Charge Reserve Fund. However, the total estimated cost of the project is $800,000, as follows:

- Consulting services assignment: $700,000
- Public opinion survey: $50,000
- Internal fees: $10,000
- Other project-related expenses: $40,000

When the scope of the consulting services assignment was initially estimated for the 2016 Budget, the TMP Update did not include some items that have since increased the scope, such as:

- Integration of Active Transportation Master Plan
- Goods movement
- Inter-city rail (a new Strategic Objective in the Corporate Strategic Plan)
- Public transit priority measures

The amount currently allocated in 2016 ($400,000) is sufficient to accommodate the expected expenses for this year. Additional required funding in the amount of $250,000 to complete the project in 2017 and 2018 will be included in the 2017 – 2026 Transportation Capital Program.

Other Department Consultations/Concurrence:

In addition to the Transportation Division, the Project Team comprises members of Regional Council (Tom Galloway and Elizabeth Clarke) and staff from the following divisions:
- Community Planning;
- Corporate Communications;
- Design and Construction;
- Healthy Living;
- Rapid Transit;
- Transit Services;
- Finance; and
- Fleet and Facilities.

As the project progresses, staff from other divisions will be consulted as required.

Attachments

Appendix A – Breakdown of Consultant’s Upset Fee

Prepared By: Geoffrey Keyworth, Acting Manager, Strategic Transportation Planning

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
### Breakdown of Consultant’s Upset Fee

<table>
<thead>
<tr>
<th>Task</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Management</td>
<td>$138,300</td>
</tr>
<tr>
<td>Phase 1: Problems and Opportunities</td>
<td>$42,080</td>
</tr>
<tr>
<td>Phase 2: Alternatives Assessment and Preferred Solution</td>
<td>$89,010</td>
</tr>
<tr>
<td>Phase 3: Supporting Strategies</td>
<td>$176,270</td>
</tr>
<tr>
<td>Phase 4: Transportation Master Plan Preparation</td>
<td>$69,600</td>
</tr>
<tr>
<td>Consultation &amp; Engagement</td>
<td>$184,740</td>
</tr>
<tr>
<td><strong>Total Upset Fee (plus applicable taxes)</strong></td>
<td><strong>$700,000</strong></td>
</tr>
</tbody>
</table>
Region of Waterloo
Transportation and Environmental Services
Water Services

To: Chair Tom Galloway and Members of the Water Planning and Works Committee
Date: March 22, 2016            File Code: E07-30
Subject: Business Certification Program – Water Efficiency

Recommendation:
That the Regional Municipality of Waterloo approve the expansion of the Water Efficient Restaurant Certification Program to include all commercial, industrial, and institutional (CII) customers, as detailed in Report TES-WAS-16-05.1 dated March 22, 2016.

Summary:
Water Efficiency staff certified five local restaurants as water efficient in 2015. These restaurants reduced water consumption by an estimated 10 per cent, or 2,426 m$^3$ per day. This is enough water to supply the daily needs of 11 average households in Waterloo Region. More water savings at these locations are expected in 2016 as water efficiency measures continue to be implemented.

Staff proposes to expand the certification program in 2016 to include all CII locations within Waterloo Region. To be certified, CII participants must engage in a number of activities that promote water efficiency/conservation. Certified businesses will be recognized through a variety of communication channels.

The recommendation was endorsed by Water Efficiency Advisory Committee (WEAC) at a meeting held March 3, 2016.

Report:
During the past 10 years, the Water Efficiency group has built relationships with hundreds of local restaurants by providing free water use reviews, funding audits and
replacing inefficient dishwasher pre-rinse spray valves with efficient models. The 597 valves replaced since 2005 are saving an average of 146 m$^3$ of water per day, for a total of 53,000 m$^3$ per year.

As suggested in the Water Efficiency Master Plan (WEMP) 2015 – 2025, staff launched a “Restaurant Certification Program” in the summer of 2015 to recognize local restaurateurs that put extra effort into saving water (TES-WAS-15-09). By year end 2015, the following five restaurants were certified as water efficient businesses:

- Angie’s Kitchen, Erb Street, Waterloo
- Borealis Grille & Bar, Kitchener
- Charcoal Steakhouse, Kitchener
- East Side Mario’s, King Street, Waterloo
- Tim Horton’s, Holiday Inn Drive, Cambridge

These restaurant locations accumulated points for taking several initiatives that save water including auditing, improving technology, and educating staff. For more details, see Attachment A, Certified Restaurants 2015.

Audits of the five certified restaurants identified a range of measures that could be implemented to reduce water consumption by up to 35 per cent. Year over year billing results have not been finalized, but early estimates show these restaurants have already reduced water consumption by 10 per cent, or 2,426 m$^3$ per day. This is enough water to supply the daily needs of 11 average households in Waterloo Region.

**Branding the Restaurant Certification Program**

Water Efficiency launched the restaurant certification program in the summer of 2015 with a fresh brand look to be used across all platforms and touch points. Staff targeted restaurants through direct mailings, magazine advertising, Environews, and web postings. See Attachment B for a sample advertisement.

Beyond saving water, energy, and money, participating restaurants also benefit from the recognition of being certified by Waterloo Region. Certified restaurants have a choice of printed materials to show customers they demonstrate “sustainable use of our water resources.” Customizable wall-mount certificates, window-clings, table-top materials and menu stickers are some of the promotional materials available to help promote certification to customers. The table-top messaging for the certified Tim Horton’s location in Cambridge includes the following message:

“By making an effort to reduce water use, this Tim Horton’s has become a good steward of the environment while saving money at the same time” (Attachment C – Horton’s Table Talker).
Certified restaurants and relevant case studies have been listed on the Region’s website and other promotions have been disseminated to the public.

**Recommended to Expand Certification to All Businesses**

At a meeting on March 10, 2015, members of the Water Efficiency Advisory Committee (WEAC) asked staff to consider expanding the restaurant certification in future to include all commercial, industrial, and institutional (CII) properties in Waterloo Region. With expansion in mind, staff developed a certification crest and communications material that can be easily adapted to include all CII customers.

The proposed expanded certification program includes a similar point system to the restaurant program. To be certified, CII owners/management would need to accumulate at least five points through activities that promote water efficiency/conservation. The point system is detailed below.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A contracted (engineering firm) water balance audit</td>
<td>3</td>
</tr>
<tr>
<td>2. A water use review with Water Services Staff</td>
<td>1</td>
</tr>
<tr>
<td>3. Billing analysis, benchmarking, and sub-metering</td>
<td>1</td>
</tr>
<tr>
<td>4. Proven water savings, post-implementation</td>
<td>3</td>
</tr>
<tr>
<td>5. An employee whose job description includes water efficiency</td>
<td>1</td>
</tr>
<tr>
<td>6. A documented policy that mandates water conservation</td>
<td>1</td>
</tr>
<tr>
<td>7. An Environmental Management System for water conservation</td>
<td>1</td>
</tr>
<tr>
<td>8. Completion of water efficiency education/training for staff</td>
<td>1</td>
</tr>
</tbody>
</table>

Water balance audits are currently funded at 50% through the Water Efficient Technology (W.E.T.) program and require the use of approved third-party consultants. Water use reviews conducted by staff are done at no charge and provide less detail than full audits. Businesses that demonstrate water savings by implementing measures recommended through a water audit or water use review will be credited with three points toward certification and may also qualify for W.E.T. funding at $0.40 per litre per day of water saved.

Water Efficiency staff will attract new certification program participants with targeted communications through a variety of channels. CII facilities certified as water efficient will receive communications support as follows:

- Literature to support staff training on water efficiency and conservation
- The business name posted to a Region web page
- A fact sheet outlining the steps CII locations took to achieve water savings
- A framed certificate to display at their facility (renewable every five years)
- Recognition in other Region of Waterloo communications (e.g. Environews).
The goal of the program is to certify at least 10 CII customers per year, including restaurants. Re-certification will be required after five years.

**WEAC Endorsement, March 3, 2016**

The Water Efficiency Advisory Committee reviewed details of the proposed certification program on March 3, 2016. Staff agreed that large organizations that have restaurants on-premises may certify the food services separately, while plant operations would be certified under the proposed business certification criteria. Staff further agreed to ensure that restaurants were implementing sustainable solutions to conserving water. For example, a restaurant switching to paper plates and cups will reduce water consumption at the expense of creating more waste, which is a negative environmental impact.

Following the discussion, committee members voted in support of the recommendation, as detailed in this report.

**Corporate Strategic Plan:**

Delivery of CII Water Efficiency program supports strategic objective 3.2, to “Protect the quality and quantity of our water resources.”

**Financial Implications:**

Capital Budget Expenditures for the 2015 Restaurant Certification Program totalled $9,500. The estimated cost for the combined and expanded water efficient business certification program will not exceed $20,000 in 2016. The approved 2016 Ten Year Water Capital Budget for the CII program is $210,000.

Water Efficiency Capital Budget is financed through development charges.

**Other Department Consultations/Concurrence:**

Nil

**Attachments**

Attachment A – Certified Restaurants 2015

Attachment B – Advertisement, Exchange Magazine, July/August 2015

Attachment C – Tim Horton’s Table Tent, January 2016

**Prepared By:** Steve Gombos, Manager, Water Efficiency

**Approved By:** Thomas Schmidt, Commissioner, Transportation and Environmental Services
Certified Restaurants 2015

Background

To be certified, restaurants must accumulate at least 5 points by completing the following activities:

- contracted water-balance audit (3 points)
- water use review with Water Services staff (1),
- billing & benchmarking analysis (1)
- proven water savings post-implementation (3)
- employee education & awareness training (2)
- register for “Blue W” drinking water promotion program (1)

With the certification, restaurants receive framed wall certificates, window clings, stickers, table-tents on request and web-page case study promotion.

Restaurants certified in 2015

- East Side Mario’s, King St. Waterloo
- Borealis Grille & Bar, Kitchener
- Charcoal Steakhouse, Kitchener
- Angie’s, Erb St., Waterloo
- Tim Hortons Holiday Inn Drive Cambridge

regionofwaterloo.ca/conservation
519-575-4400. ext. 3558
What they did to save water and become certified

All of them:
- Became a Blue W location
- Did billing analysis and benchmarking comparisons
- Had an engineering firm complete energy & water audits
- Replaced pre-rinse spray valves with water efficient models
- Educated staff (use refrigerator for meat thawing, report faucet leaks, turn off taps, ensure dishwasher racks are filled, pre-soak utensils, etc.)
- Installed Region of Waterloo supplied water efficient faucet aerators
- Ensured equipment suppliers installed energy and water efficient models

Some of them:
- Organized regular plumber visits to repair leaky faucets in a timely manner
- Had staff assist in locating leaks and reporting to plumbers

Borealis:
- Used planning pull-sheets as a tool to avoid water thawing
- Moved glass-washer to reduce water and energy use

Charcoal:
- Replaced water cooled refrigerators with air-cooled models
- Upgraded steam cooling lines to restrict extra water flows

Tim Horton’s:
- Serviced (and plan to replace) water softener system
- Reduced reverse-osmosis equipment concentrate waste
- Installed more efficient equipment during renovations
- Installed hands-free faucets to ensure taps always turn off

Angie’s:
- Had Region technologist conduct a water use review
- Will replace ice making machine with more efficient model
Advertisement, Exchange Magazine, July/August 2015

Mix business with pleasure.

Certify your restaurant as water efficient.

- Get recognized by customers
- Be more sustainable
- Improve your bottom line
- Show community leadership

Contact the Region of Waterloo Water Services for a free consultation.

519-575-4400 ext. 3558 | TTY: 519-575-4608 | www.regionofwaterloo.ca/water
Tim Horton’s Table Talker, January 2016

**RESTAURANT Certification Program**

Some steps Tim Horton’s took to become certified:
- Analyzed their water bills and benchmarked
- Had an engineering firm complete energy and water audits
- Replaced pre-rinse spray valves with water efficient models
- Educated staff on efficient water use
- Installed water efficient faucets and aerators
- Installed energy efficient appliances during recent renovation

**This Tim Horton’s is now a Water Efficient Certified Restaurant**

Restaurants receive their certification by taking the initiative to make changes at their location that conserve water and protect our precious water resources. By making an effort to reduce water use, this Tim Hortons has become a good steward of the environment while saving money at the same time.

The Region of Waterloo congratulates them on their certification.

**Demonstrating sustainable use of our water resources.**
Region of Waterloo
Transportation and Environmental Services
Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016 File Code: E14-01

Subject: Consultant Selection – Design of Cogeneration Facilities for the Kitchener, Waterloo and Galt Wastewater Treatment Plants

Recommendation:

That the Regional Municipality of Waterloo enter into a Consulting Services Agreement with CH2M HILL Canada Limited of Kitchener, Ontario, to provide consulting engineering services for undertaking the Renewable Energy Approval and Detailed Conceptual Design (Phase 1) for the Cogeneration Facilities at the Kitchener, Waterloo and Galt Wastewater Treatment Plants, at an upset limit of $403,056 plus applicable taxes.

Summary:

The Region intends on constructing three Cogeneration/Combined Heat and Power (CHP) Facilities at the Kitchener, Waterloo and Galt WWTPs. CHP/Cogeneration uses biogas produced in the treatment of biosolids for production of electrical energy, recovers waste heat from the cogeneration process, and significantly reduces Green House Gas (GHG) emissions by offsetting electrical energy and heating requirements at the WWTPs. Details on these projects were provided to the Planning and Works Committee in Report TES-WAS-15-33 on October 27, 2015. A copy of this report has been provided for reference in Attachment B.

The Region plans to proceed with the completion of the Renewable Energy Approval (REA) and detailed conceptual design (Phase 1), followed by detailed design and construction of the three facilities (Phase 2) according to the recommendation in Report TES-WAS-15-33. The consultant selected to undertake Phase 1 may be retained to undertake Phase 2, depending on the performance and satisfactory completion of
Phase 1, and successful fee negotiations. The negotiated upset fee will be submitted for Regional Council approval in a separate report following the completion of the Phase 1 work.

A consultant selection process was followed in accordance with the Region By-law 04-093 for the procurement of goods and services and included price as a factor. It is recommended that CH2M HILL of Kitchener, Ontario, provide consulting engineering services to complete the Renewable Energy Approval and Detailed Conceptual Design (Phase 1) for the Cogeneration Facilities at the Kitchener, Waterloo and Galt WWTPs, at an upset limit of $403,056 plus applicable taxes.

Report:

Through previous master plans and studies the Region identified the benefits associated with constructing Cogeneration/Combined Heat and Power (CHP) Facilities at the Kitchener, Waterloo and Galt WWTPs. CHP/Cogeneration uses biogas produced in the treatment of biosolids for production of electrical energy, recovers waste heat from the cogeneration process, and significantly reduces Green House Gas (GHG) emissions by offsetting electrical energy and heating requirements at the WWTPs. Details on these projects, including potential energy savings and incentives available through the Ontario Ministry of Energy, was provided to the Planning and Works Committee in Report TES-WAS-15-33 on October 27, 2015. A copy of this report has been provided for reference in Attachment B.

Consultant Selection

A Request for Consultant Services for the Design and Construction of Cogeneration Facilities at the Kitchener, Waterloo and Galt WWTPs was advertised in the Kitchener-Waterloo Record and on the Region’s website on January 29, 2016. The Region received submission of Detailed Work Plans from nine consultants.

The individuals on the Project Team involved in the consultant selection were:

- J. Cavalcante, Manager, Engineering and Planning, Water Services
- J. Medd, Project Manager, Design and Construction
- T. Bellamy, Senior Project Engineer, Wastewater Operations, Water Services
- P. Law, Senior Project Engineer, Engineering and Planning, Water Services

The evaluation criteria used for selecting the successful consultant was consistent with the Region’s Purchasing By-law and consultant selection policies. The evaluation criteria and their respective weightings are:
Quality Factors (80%)

- Project Approach and Understanding (25%)
- Experience of the Project Manager (20%)
- Experience of Project Support Staff (20%)
- Experience on Similar Projects (15%)

Equity Factors (5%)

- Current Regional Workload (3%)
- Local Office (2%)

Price Factor (15%)

- Upset Price (15%)

Upon review of the Detailed Work Plans the Region’s Project Team finalized the quality and equity scores. Based on this scoring the following three firms were short-listed and their upset budget fees envelopes were opened:

- CH2M HILL
- Stantec
- GHD

After opening the upset budget fees envelopes CH2M HILL obtained the highest overall score with the lowest total cost. CH2M HILL’s estimated fees (including labour, disbursements and engineering contingency) for Phases 1 and 2 are $2,590,345 plus applicable taxes (Phase 1 $403,056 and Phase 2 $2,187,289). Only Phase 1 will be awarded as part of this report. Phase 2 work plan and engineering fees will be reviewed and finalized upon the completion of the Phase 1 work. The Phase 2 work plan and estimate will be used as a base and will be adjusted as required once additional information for the implementation of the project is identified during Phase 1.

The Project Team, therefore, recommends that CH2M HILL be retained to undertake Phase 1 of this assignment at an upset fee limit of $403,056 plus applicable taxes. CH2M HILL may be retained to undertake Phase 2, depending on performance and satisfactory completion of Phase 1, and successful fee negotiations. Award of the Phase 2 assignment will be part of a separate Planning and Works report, and will immediately follow completion of the Phase 1 work.

Work Plan

The main tasks for this assignment include:
• Completion of the Renewable Energy Approval (Renewable Energy Approval O.Reg. 359/09 is granted for a generating facility that generates electricity from a renewable energy source – biofuel.)
• Detailed Conceptual Design

Schedule

Subject to Council’s approval of this assignment, the proposed schedule for Phase 1 of the project is approximately sixteen (16) months commencing in April 2016 and ending in August 2017.

Consultant Upset Limit

The upset limit for consulting fees and disbursements for completing the Renewable Energy Approval and Detailed Conceptual Design for the Cogeneration Facilities at the Kitchener, Waterloo and Galt Wastewater Treatment Plants (Phase 1) is $403,056 plus applicable taxes. A breakdown of the successful consultant's upset fee is included in Attachment A attached to this report.

Corporate Strategic Plan:

The implementation of CHP/Cogeneration at the Galt, Kitchener and Waterloo WWTPs contributes to Focus Area 3: Environment and Sustainable Growth and Strategic Objective 3.6 Improve environmental sustainability and livability in intensifying urban and rural settlement areas.

Financial Implications:

The 2016 Wastewater Ten Year Capital Program includes $25.8 million for the implementation of CHP/Cogeneration at the Region’s WWTPs, including $800,000 in the years 2016 to 2017 for the completion of this assignment. This project is to be funded from the Water Reserve Fund (73.7 percent) and Development Charges (26.3 percent).

The Ontario Ministry of Energy has initiated a number of programs to reduce energy consumption in the Province. They also offer financial incentives to large electricity users for implementing projects such as CHP/Cogeneration. The Region will apply for this funding as appropriate to offset the capital costs for this project. Incentives will cover a maximum of 40 percent of the project capital cost and are based on the first year of projected electrical energy production of the facility (must be operational by December 31, 2020).

Other Department Consultations/Concurrence:

Planning, Development and Legislative Services and Design and Construction were
consulted regarding the implementation of CHP/Cogeneration at the Region’s WWTPs.

Attachments

Attachment A: Breakdown of Consultant’s Upset Fee

Prepared By: Pam Law, Senior Project Engineer, Water Services
Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services

Breakdown of Consultant’s Upset Fee

<table>
<thead>
<tr>
<th>Item</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion of the Renewable Energy Approval</td>
<td>$272,184</td>
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<tr>
<td>Detailed Conceptual Design</td>
<td>$130,872</td>
</tr>
<tr>
<td>Total Upset Fee</td>
<td>$403,056</td>
</tr>
</tbody>
</table>
Region of Waterloo

Transportation and Environmental Services

Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: October 27, 2015

File Code: E14-01

Subject: Cogeneration at the Region’s Wastewater Treatment Plants

Recommendations:

That the Regional Municipality of Waterloo:

a) Endorse the plan for implementation of Cogeneration at Galt, Kitchener and Waterloo Wastewater Treatment Plants according to report TES-WAS-15-33 dated October 17, 2015;

b) Approve the approach for awarding the Renewable Energy Approval and Preliminary Design of the project for Cogeneration at the Region’s Wastewater Treatment Plants, and upon successful completion of this phase of the project, extend the consulting contract to also complete the Detailed Design and Construction Administration with the same Consultant in order to accelerate the implementation of this project.

Summary:

The Biosolids Master Plan completed in 2011 recommended that Combined Heat Power (CHP)/Cogeneration be installed at the Region’s three largest WWTPs (Galt, Kitchener and Waterloo). CHP/Cogeneration uses biogas produced in the treatment of biosolids for production of electrical energy, recovers waste heat from the cogeneration process, and significantly reduces Green House Gas (GHG) emissions by offsetting electrical energy and heating requirements at the WWTPs.

The Ontario Ministry of Energy is currently offering financial incentives to large electricity users in the Province of Ontario for implementing energy efficient upgrades.
and behind-the-meter generation projects, such as biogas CHP/Cogeneration. These incentives are available between 2015 and 2020, and will cover a maximum of 40 percent of the project capital cost. For eligibility, the power generation facility must be commercially operational before December 31, 2020.

Due to the tight schedule for completion of these facilities, Regional staff recommend that Regional Council approve a streamlined approach to accelerate the implementation of this project, where the same Consultant will be used for all phases of the project. This approach is in line with the Region’s Purchasing By-Law (By-Law Number 04-093), Part VII – Purchase By Negotiation, Section 21.(1).(g), which states that the Chief Purchasing Officer may acquire goods and services by negotiation when the extension of an existing or previous contract would prove more cost effective or beneficial for the Region.

The approved 2015 Wastewater Ten Year Capital Program includes $25.8 million between 2018 and 2024 for the implementation of CHP/Cogeneration at the Region’s WWTPs. It is expected that engineering costs for this project be approximately $3 million. In the upcoming 2016 Wastewater Ten Year Capital Program, these funds will be advanced to allow implementation of the CHP/Cogeneration at the Galt, Kitchener and Waterloo WWTPs before December 31, 2020.

Report:

Background Wastewater

The Region operates 13 Wastewater Treatment Plants (WWTP). Wastewater treatment at these plants separates the liquid stream from the solid material. The liquid stream is treated to remove bacteria and nutrients (ammonia and phosphorous) before treated wastewater (effluent) is safely discharged into the river. The solid material is further treated to create an organic conditioned substance called ‘Biosolids.’ Treatment of the solid material at the Region’s largest plants also produces methane gas (biogas), which currently powers boilers for heating the treatment of the solid material during colder periods of the year. The excess biogas is flared to the atmosphere.

The Biosolids Master Plan completed in 2011 recommended that Combined Heat Power (CHP)/Cogeneration be installed the Region’s three largest WWTPs (Galt, Kitchener and Waterloo). This Master Plan is currently being updated with completion expected by mid-2019. However, the recommendation for implementation of CHP/Cogeneration is not part of this update, and is not expected to change. CHP/Cogeneration uses biogas produced in the treatment of biosolids for production of electrical energy. It also recovers waste heat from the cogeneration process to provide heat required at other wastewater treatment processes and for heating buildings. This process significantly reduces Green House Gas (GHG) emissions by offsetting electrical energy and heating requirements at the WWTPs.
Energy Usage at Wastewater Treatment Plants

Electrical energy is one of the highest operating costs for wastewater treatment, representing 25 percent of these costs. In 2014, Galt, Kitchener and Waterloo WWTPs consumed approximately 27 million kilowatt-hours (kWh) of electricity at a cost of $3.6 million. Electrical energy used at these three plants represents approximately 70 percent of the total electrical energy consumed in the Region’s wastewater treatment systems. Municipalities are adopting renewable energy produced by biogas CHP/Cogeneration to offset energy requirements, reduce the impact of raising electricity costs and reduce GHG emissions.

Regional Council approved on May 3, 2011 the report “Corporate Greenhouse Gas Action Plan.” This report recommended several programs for reducing GHG emissions in the Region, including the long term implementation of CHP/Cogeneration at the Region’s larger WWTPs.

The Ontario Ministry of Energy is currently offering financial incentives to large electricity users in the Province of Ontario for implementing energy efficient upgrades and behind-the-meter generation projects, such as biogas CHP/Cogeneration. More details about this program are provided below.

Ministry of Energy Savings Program

The Ontario Ministry of Energy has initiated a number of programs to reduce energy consumption in the Province. Water Services has identified a number of projects at its wastewater facilities that are potentially eligible for financial incentives through the saveONenergy program. This program is sponsored by the Independent Electricity System Operator (IESO) and administered by the three local power supply utilities (Cambridge and North Dumfries Hydro, Kitchener-Wilmot Hydro and Waterloo North Hydro, from here on identified as CKW Group). Report TES-WAS-15-28 dated September 15, 2015, provides more details about the Water Services Energy Management Plan and the projects above.

IESO through the Process and Systems Upgrade Initiative (PSUI) also offers financial incentives to large electricity users for implementing projects such as CHP/Cogeneration. This program is also administered by the CKW Group and funding is available between 2015 and 2020. Incentives will cover a maximum of 40 percent of the project capital cost, and, for eligibility, the power generation facility must be commercially operational before December 31, 2020. The eligible incentive for each CHP/Cogeneration facility will be calculated based on the first year of the projected electrical energy production for this facility. The program will also require that that each facility delivers a minimum of 80 percent of this projection for the next 10 years of operation.
October 27, 2015

Report: TES-WAS-15-33

CHP/Cogeneration Feasibility Assessments

Prior to approval for CHP/Cogeneration financial incentives, the CKW Group will require that the Region complete an individual feasibility study for each of the three WWTPs potentially eligible for CHP/Cogeneration.

Parallel with the ongoing consulting assignment for the Preliminary Design of the Galt WWTP Upgrades, the Region is also completing a feasibility assessment for the implementation of CHP/Cogeneration at this plant. As part of the design for upgrading the Kitchener and Waterloo WWTPs, the Region has already completed preliminary assessments for the implementation of CHP/Cogeneration at these plants in May 2011 and June 2011, respectively. For these two plants, the Region is also completing additional work to meet specific requirements of the feasibility assessment required by the CKW Group. Feasibility assessments for all three WWTPs will be completed by December 2015.

Proposed Energy Savings

Based on the assessment work completed to-date, it is expected that all three WWTPs above will be eligible for the implementation of CHP/Cogeneration. Preliminary work has indicated that the following approximate amount of electrical energy can be produced at each of the three WWTPs above:

- Galt WWTP: 400 kW (40 percent of the current plant energy consumption)
- Kitchener WWTP: 600 kW (60 percent of the current plant energy consumption)
- Waterloo WWTP: 400 kW (35 percent of the current plant energy consumption)

The above numbers are approximate and do not include the benefits of Heat Recovery from the CHP/Cogeneration facilities, which will provide additional operational savings and GHG emissions reduction at the WWTPs. Upon completion of these three feasibility assessments, more details will be available. Based on current electricity rates, it is expected that the payback for each CHP/Cogeneration facility be less than 10 years.

Proposed Schedule

To be eligible to the PSUI financial incentives, the CHP/Cogeneration facility must be commercially operational before December 31, 2020. The planning phase of this project will require a Renewable Energy Approval by the Ministry of the Environment and Climate Change (MOECC) that follows a process similar to the Class Environmental Assessment, normally followed by water and wastewater projects. Only after receiving this approval, municipalities can proceed to the design and implementation phases of the proposed facilities. The preliminary schedule for the implementation of the
October 27, 2015

Report: TES-WAS-15-33

CHP/Cogeneration at the Galt, Kitchener and Waterloo WWTPs is summarized below:

- Feasibility Studies for Galt, Kitchener and Waterloo WWTPs: December 2015
- Renewable Energy Approval and Pre-Design: Summer 2017
- Detailed Design: End 2018
- Start Construction: Summer 2019
- Commissioning: Fall 2020

Project Delivery

The schedule to meet the deadline of December 31, 2020 to be eligible for the Province financial incentives is very tight. Normal project delivery process used by the Region for capital projects would split the consulting assignment in two phases: Renewable Energy Approval and Pre-Design (Planning Phase), and Detailed Design and Construction Administration (Implementation Phase). The consultant selection for each of these phases could take up to 6 months from preparing the Terms of Reference, to receiving Council approval and initiating the assignment.

For some large and complex consulting assignments such as the Kitchener WWTP Upgrades (2010 to date) and the Federal Stimulus Fund Projects (2009 to 2011), the Region received Council approval for accelerating project delivery by retaining the same Consultant for all the phases of the project. For these projects, a Consultant was selected using the Region’s consultant selection policies for completing the consulting work for the Planning Phase of the project. Upon successfully completing this phase of the project, when sufficient details were available for defining the consulting requirements for the Implementation Phase of the project, the same Consultant prepared a work plan and consulting cost estimate for this phase. Region’s staff reviewed the proposed costs, negotiated with the Consultant, and upon agreement that the proposed costs were fair for the undertaking, recommended Council award for the Implementation Phase of the project. Delivery of the projects based on this approach was successful by reducing project costs and delivery time by almost one year.

The above streamlined approach is in line with the Region’s Purchasing By-Law (By-Law Number 04-093), Part VII – Purchase By Negotiation, Section 21. (1). (g). This section states that the Chief Purchasing Officer may acquire goods and services by negotiation when the extension of an existing or previous contract would prove more cost effective or beneficial for the Region.

Due to the limited timeframe for the implementation of the CHP/Cogeneration facilities, Regional staff recommends a streamlined approach to accelerate the implementation of
October 27, 2015  

this project, where the same Consultant will be used for all phases of the project.

Corporate Strategic Plan:

The implementation of CHP/Cogeneration at the Galt, Kitchener and Waterloo WWTPs contributes to Focus Area 1: Environmental Sustainability and Strategic Objective 1.2.3: Develop an Energy Reduction Plan for Water and Wastewater facilities.

Financial Implications:

The approved 2015 Wastewater Ten Year Capital Program includes $25.8 million between 2018 and 2024 for the implementation of CHP/Cogeneration at the Region’s WWTPs. It is expected that engineering costs for this project be approximately $3 million. In the upcoming 2016 Wastewater Ten Year Capital Program, these funds will be advanced to allow implementation of the CHP/Cogeneration at the Galt, Kitchener and Waterloo WWTPs before December 31, 2020.

Other Department Consultations/Concurrence:

Planning, Development and Legislative Services and Design and Construction were consulted regarding the implementation of CHP/Cogeneration at the Region’s WWTPs.

Attachments

Nil

Prepared By: Pam Law, Senior Project Engineer, Water Services

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services

1975636  

Page 6 of 6
Region of Waterloo
Transportation and Environmental Services
Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016  File Code: E-13-8270

Subject: Biosolids Strategy –Project Charter

Recommendation:

For information.

Summary:

The Region has commenced with the Biosolids Strategy to develop a long-term plan for managing the Region’s biosolids. Based on the breadth of the communication and engagement, one of the first planned tasks of the Biosolids Strategy was to develop a Project Charter. To develop the Project Charter, a workshop with the Project Steering Committee and Planning and Technical Advisory Committee was held.

The resulting draft Biosolids Charter is shown in Attachment A. It is a relatively short, plain-language document that outlines important aspects of the overall study including the purpose of the study, key factors to consider, and the project timeline. Based on feedback by the Project Steering Committee and by the public to review the overall Project schedule, the timeline in the Project Charter indicates a completion date of approximately April 2018.

The next step is for staff to finalize the Project Charter and make it available on the Region’s website under the Region of Waterloo Biosolids web page.

Report:

Background

The Region is responsible for wastewater treatment and biosolids management to
protect public health and the environment. The Region owns 13 wastewater treatment plants (WWTP), one biosolids processing facility, six wastewater pumping stations and two wastewater collection systems (North Dumfries and Wellesley), treating 66 Million cubic meters annually.

As the Region continues to grow, it is expected that the quantity of biosolids created in the Region will increase. In order to find sustainable management solutions appropriate for the Region’s future biosolids, it is necessary to plan now by developing a Region-wide Biosolids Strategy and document it in a Biosolids Master Plan report. On June 24, 2015, Council approved the commencement of the Biosolids Strategy study (TES-WAS-15-17).

**Key Approaches to Biosolids Strategy Implementation**

Through previous studies related to the Region’s biosolids infrastructure, the public had requested more opportunities to provide public feedback and have greater involvement in the study process.

This in turn led to three key modifications to the traditional implementation of master plans. These modifications were:

1. provide more information about the study process
2. provide additional methods of communication and engagement
3. provide technical information in a format easily understood by the public.

To reinforce this commitment to the community and stakeholders, one of the first planned tasks of the Biosolids Strategy was to prepare a draft Biosolids Strategy Project Charter (Project Charter) that would be made available to the public. To develop the Project Charter, a workshop with the Project Steering Committee (SC – comprised of designated Regional Councillors and Regional staff) and Planning and Technical Advisory Committee (PTAC – comprised of local municipal and agency staff) was held.

**Biosolids Strategy Project Charter and Workshop Development**

The Project Charter is created to provide an overview of the main aspects of a study in a relatively short, plain-language document. Not all projects require a charter however, based on the breadth of the communication and engagement approach adopted by Council for the Biosolids Strategy study (TES-WAS-15-07 dated February 24, 2015), a Project Charter was developed to help with project understanding.

To assist with the Project Charter, a workshop with members of the Project SC and PTAC was held on January 20, 2016. During the workshop, the contents of the Project Charter were explained and the ensuing discussion by the participants resulted in useful feedback to the Project Team.
As a result of the workshop, the Project Charter has the following main topics:

- Introduction: describes background and purpose of Project Charter
- Primer: describes current biosolids management in the Region
- Need: describes reasons for developing a Strategy
- Approach: describes scope, approach and guiding principles of the Strategy
- Engagement: describes how the Project Team will engage stakeholders during the Strategy
- Considerations: describes factors to consider as part of the Strategy
- Schedule: describes timeline to implement the Strategy

Based on a feedback at the most recent SC meeting, as well as feedback received by the public from the November 17, 2015 Project Launch Event, a query was received to review the overall schedule including the original completion date of spring 2019. The Project Team reviewed the schedule and found opportunities to streamline some work activities as well as combine two planned public consultation events into one. The result is an updated completion of approximately April 2018. This revised Project timeline was presented at the workshop and was endorsed by members of the SC and PTAC.

The Project Charter with the updated Project Completion reflected is shown in Attachment A.

Next Steps

The immediate next step is for staff to finalize the document and make it available on the Region’s website under the Region of Waterloo Biosolids web page, along with notification to the public through various means such as the Biosolids Bulletin.

The Biosolids Strategy will proceed according to the modified schedule. Under this schedule, the next public consultation will consists of presenting the study methodology, along with detailed technical information on the Region’s current biosolids management program will occur in late spring 2016.

Corporate Strategic Plan:

The Biosolids Master Plan supports the Corporate Strategic Focus Area 3: “Environment and Sustainable Growth”, Strategic Objective 3.2: “Protect the quality and quantity of our water resources.” Action 3.2.2: “Update the Wastewater and Biosolids Master Plans”.

Financial Implications:

Nil
Other Department Consultations/Concurrence:
Nil

Attachments
Attachment A: Project Charter (Draft)

Prepared By: Kaoru Yajima, Sr. Project Engineer, Water Services

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Region of Waterloo
Biosolids Strategy
Project Charter

Draft | February 2016
www.regionofwaterloo.ca/biosolids
biosolids@regionofwaterloo.ca
The Region of Waterloo Strategic Plan (2015-2018) has identified the Biosolids Strategy as a key component of its Environment and Sustainable Growth programs, and notes the crucial importance of public engagement as part of developing these programs:

“The Region will work in partnership with the community and area municipalities to manage growth in environmentally sustainable ways and create spaces and places that enhance living, working and travelling experiences for the community.”
"We are all involved in creating biosolids, so we should all be involved in determining what we do with them as a community. The most suitable strategies take the whole community's interests to heart and we need the public to help us identify the solutions that fit."

- Kaoru Yajima
Water Services Project Manager at the Region of Waterloo

The Biosolids Strategy Workshop Team

Background Image Credit: Jason Zedd
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Biosolids Strategy Launch Event
Region of Waterloo Museum
November 17, 2015
1.0 Introduction

The Region of Waterloo’s Biosolids Strategy: Planning for a Sustainable Solution

Biosolids are the treated organic materials removed from our water after we flush it down the drain. We are all involved in creating biosolids, so as a community we should all be involved in determining what we do with them. The Region is embarking on a comprehensive process to develop a new Biosolids Strategy and we need everyone to be involved. The successful strategy will take the whole community’s interests to heart and we need the public and all key stakeholders to help us identify the most suitable solutions.

The Biosolids Strategy will take a critical look at today’s practices, consider all the available technologies and develop a sustainable way to manage biosolids within the Region over the long term.

Purpose of the Project Charter

The Project Charter will act as a guiding document for the project and a communications tool for the public, describing the need for a Biosolids Strategy and opportunities for biosolids management. This document will serve as a reference tool for project team members and the public throughout the process, describing the scope and intent of the project. The Project Charter also provides background information both on biosolids management in the Region, and on the Biosolids Strategy project.

This Strategy development roadmap demonstrates the focus on meaningful and open conversations with citizens and collaboration with community partners.
2.0 A Primer on Biosolids Management in Waterloo Region

When you finish doing your business, that’s when the Region of Waterloo gets busy doing its business. The diagram below describes how biosolids were managed in 2015 in the Region.

Over 180,000 m³ of wastewater processed every day...

...equivalent to 72 Olympic-sized swimming pools!

13 Wastewater Treatment Plants

Clean water is discharged to the river

Over 1,370 tonnes of liquid biosolids generated daily. This means a lot of processing, transport, and management throughout the year. This is equivalent to the weight of about 390 elephants every day!

535,000 Residents... and growing!

Beneficial use refers to the application of biosolids for land-based uses to improve soil quality and enhance crop growth in varying ways from year-to-year. In 2015, Land Application in agricultural areas surrounding the Region of Waterloo (to Wellington County, County of Brant, City of Hamilton, Middlesex County, County of Oxford, and Perth County) comprised roughly 45% of the Region’s total biosolid output. In 2015, the Region also began Land Reclamation, with roughly 15% of the total used in former mining tailing ponds (near Sudbury, Ontario).

60% BENEFICIAL USE

40% NON-BENEFICIAL USE

The remainder of biosolids produced in the Region’s treatment plants is safely disposed of in landfills outside the Region of Waterloo.

The management of biosolids in the Region varies from year to year; this diagram provides an overview of the approach in 2015.
3.0 Why do we Need a Biosolids Strategy?

As the Region plans for its future, having a strong strategy for biosolids management will allow for important decisions to be made with community input. A few of the main reasons why a strategy is essential are outlined here.

**Growth**

The region is expected to experience population growth equivalent to the size of the City of Kitchener in the years ahead. This means that there will be additional demand and pressures placed on the current approach.

**Environmental Constraints**

A number of environmental, social, and economic constraints will need to be considered, including land availability, range of applications, climate change, and transportation routes.

**Regulatory Changes**

Updates to regulations can place more restrictions on how we can use biosolids, or create opportunities for beneficial use.

**Increasing Costs**

The costs associated with trucking, storage and disposal of biosolids will continue to rise over time, and it is important to consider the best value to the region in developing the strategy.

**Security**

A more diversified strategy would allow the Region the flexibility and adaptability to appropriately plan for contingencies and emergencies, manage risk, and tackle mid to long term biosolids storage needs.

**Innovation**

With new technologies and scientific advances, the region should consider and present new, feasible approaches and opportunities.
4.0 Roadmap to the Strategy

The cornerstone of a good Strategy is a strong commitment to careful planning and analysis.

Project Scope

The Strategy will focus on determining the most suitable biosolids management approach for the Region. The recommended Strategy will identify the need for any new facilities.

The siting of any such facilities is not part of the current project scope, and would be the focus of a separate and future process to develop the implementation plan for the recommended Strategy.

Project Approach

The project will follow the Municipal Class Environmental Assessment (EA) process, for masterplans, with the objective of producing a long term sustainable Strategy for biosolids management in the Region leading into 2051. The Strategy will adopt an approach to identify the opportunities for sustainable biosolids management in our community.

Guiding Principles

The Project Team will aim to meet the intent of the following principles that will guide the Strategy development process:
• Emphasize public engagement and active participation from the community;
• Identify a long term, flexible, secure, and sustainable Strategy for the Region; and
• Broadly consider all possible alternatives in developing the Strategy.
5.0 Engagement Approach

Principles of Engagement

The Region of Waterloo is committed to engaging citizens and collaborating with community partners to foster meaningful and open conversation about Regional programs and services. Throughout the Strategy development process, the Region will endeavour to provide a wide range of event types and opportunities for public engagement and involvement. The Guiding Principles for engagement are:

- Accountability
- Transparency
- Respect
- Inclusivity and Accessibility
- Responsiveness
- Clarity and Simplicity

Who do we Need to Engage?

A number of key stakeholder groups will be engaged in developing the Strategy, including:

- Community members
- Elected Officials
- Regulatory bodies
- Technical experts
- Academic advisors
- Aboriginal communities
- Advocacy groups
- Community-based organizations
- Business and industry experts
- Agricultural groups
- Health, environmental, and scientific experts
- Municipal staff

Engagement Opportunities

Public and stakeholder engagement will be achieved through a variety of channels:

- Biosolids Bulletin Email Updates
- Project Website: www.regionofwaterloo.ca/biosolids
- Public Consultation Events & Workshops
- Surveys (Online, In-person, and Telephone)
- Online and Multimedia Engagement Channels: Open Town Hall Tool, Videos, Webinar & Educational Materials
- Facebook Updates: www.facebook.com/ROWWaterServices
- Twitter Updates: @RegionWaterloo
6.0 Issues that Matter

In developing the Strategy, there are a number of important factors that will be taken into account. The categories below represent the key issues that have been raised by community members in the early stages of the project.
7.0 Project Timeline

There are a number of key questions that we need public input on at each stage of the Biosolids Strategy development process.

STAGE 1
Problem definition, establish Project Charter, Master Plan Process, Vision and Objectives

STAGE 2
Collect data, review existing conditions

STAGE 3
Identify biosolids technologies and disposal methods; determine the evaluation criteria

STAGE 4
Analyze future needs, opportunities, and constraints

STAGE 5
Identify and evaluate short list of biosolids management strategies

STAGE 6
Recommend strategies and final Biosolids Master Plan

What's our plan?
RECOMMENDED STRATEGY
• Review and comment on the recommended Strategy

EVALUATING THE SHORT LIST OF ALTERNATIVES
• Provide feedback on the evaluation of short-listed strategies

EVALUATING THE LONG LIST OF ALTERNATIVES
• Discuss the long list of alternatives and the advantages and disadvantages of each

LONG LIST OF ALTERNATIVES & EVALUATION CRITERIA
• Participate in discussions regarding potential strategies and technologies

DEFINING THE PROBLEM
• Learn about the Master Plan study process and provide feedback on the background review and data collection activities

WHAT ARE BIOSOLIDS?
• Learn more about biosolids

Region of Waterloo  |  Biosolids Strategy
PROJECT CONTACT

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Transportation and Environmental Services

Water Service

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016

File Code: E06-05/SPP

Subject: Source Protection Plan Implementation and Committee Membership

Recommendation:

That The Regional Municipality of Waterloo receive the summary of initiatives being undertaken in preparation for implementation of the Grand River Source Protection Plan; nominate the Manager of Hydrogeology and Source Water as the municipal representative for Waterloo Region to the Lake Erie Source Protection Committee, and forward this recommendation to the Grand River Source Protection Authority for formal appointment to the Lake Erie Source Protection Committee, as outlined in report TES-WAS-16-09.

Summary:

To protect the quality and quantity of drinking water sources, the ‘Clean Water Act’ (2006) established a process to create watershed based, locally-developed Source Protection Plans (SPP) for each watershed in Ontario. Policies to protect drinking water sources in Waterloo Region are in the Grand River SPP.

On November 26, 2015, the Ministry of the Environment and Climate Change (MOECC) approved the Grand River SPP with an effective date of July 1, 2016. The approval letter to the Source Protection Committee (SPC) from the Minister identified additional tasks to be completed related to reporting, updating the SPP, and incorporating water quantity policies in future amendments.

The Region is responsible for implementing a range of policy tools, including prohibition, risk management plans, incentives, and education. As of July 1, 2016 the Region is required, in vulnerable source protection areas, to initiate: screening of development and building permit applications, negotiating risk management plans for over 700...
properties, providing incentives, and implementing education and awareness programs. The status of these initiatives and the development of fees and a by-law governing the risk management plans are on-going and are presented in this report. Several initiatives will require further Regional Council consideration and reports will be prepared separately later in 2016.

With approval of the Grand River SPP, all the SPPs in the Lake Erie Region have now been approved and the role of the committee will change to that of monitoring implementation, preparation of annual reports, and preparation for amendments to the Plan. A review of municipal membership in SPCs across the province indicated that comparable municipalities recommended department staff such as Risk Management Officials or program managers for appointment to the SPCs. Accordingly, it is recommended that the Manager of Hydrogeology and Source Water in Transportation and Environmental Services be nominated to the Lake Erie SPC.

Report:

The Source Protection Plan policies will protect municipal drinking water sources

To protect the quality and quantity of drinking water sources, the ‘Clean Water Act’ (2006) established a multi-step, multi-year process to create a Source Protection Plan (SPP) for each watershed in Ontario. Policies to protect drinking water sources in Waterloo Region are in the Grand River SPP.

Over the last nine years, Region staff worked collaboratively with staff from the local municipalities and Grand River Conservation Authority (GRCA) to assess risks and develop policies. Regional Council received reports throughout this process and provided comments to the Lake Erie Source Protection Committee (SPC), the multi-stakeholder group responsible for the Grand River SPP. In addition, municipal staff participated in Water Services’ Source Water Protection Liaison Committee, which provided a forum to discuss policy development and implementation preparation.

Additional background on the policy development process, including draft policies, rationale, cost estimates, and public consultation are outlined in council-approved reports TES-WAS-15-12 (March 24, 2015), E-13-003 (January 8, 2013), E-12-089 (September 25, 2012), and E-12-075 (August 14, 2012). In addition, a complete copy of the Grand River SPP is available to read at http://www.sourcewater.ca/.

Following the provincially-prescribed process, approximately 2,655 properties were assessed as having significant activities on their properties. Policies mitigating the potential impacts to drinking water sources on these properties are required in the Grand River SPP. Each policy identifies the responsible agency, specific activity, applicable location, and policy tool. The Region is responsible for implementing a range of policy tools, including prohibition, risk management plans, incentives, and education.
programs. In total, approximately 700 properties will need risk management plans and as this is a new Regional responsibility, considerable effort in preparing for implementation is occurring.

This report provides a summary of the initiatives being undertaken by staff to be ready for implementation of the Grand River SPP. It also recommends changing the Region’s representative on the SPC now that the Grand River SPP is approved.

Implementation of the Grand River Source Protection Plan to start July 1, 2016

On November 26, 2015, the Ministry of Environment and Climate Change (MOECC) approved the Grand River SPP with an effective date of July 1, 2016. The approved plan is essentially the same as that submitted for approval by the GRCA, as noted in Report TES-WAS-15-12 dated March 24, 2015. A few minor changes were requested by MOECC but the overall intent of the policies did not change. Attachment A provides a summary of the changes incorporated in the approved Grand River SPP.

The approval letter to the SPC from the Minister also identified several additional tasks to be completed governing reporting, review of the SPP and incorporating water quantity policies. Specifically:

- An amended plan that includes the results of any detailed water budget analyses undertaken in the watershed is to be submitted by December 31, 2017
- A first annual progress report on plan implementation is to be submitted by the GRCA by May 1, 2019.
- A work plan to review the SPP including identifying which portions of the plan to be reviewed, the timeframe and consultation process is to be submitted by November 30, 2019.

Region staff have completed a detailed, Tier 3 or Local Area Water Budget and Risk Assessment following provincial rules and guidelines and is waiting for provincial approval. The water quantity risk arising from this assessment is low and therefore water quantity policies will not be required in the SPP. However, well head protection areas delineated using this assessment will change and these changes will need to be incorporated into an amended SPP in accordance with the above timeline.

As of July 1, 2016, a number of activities will be initiated in vulnerable source protection areas to be in compliance with the Grand River SPP policies. This includes the following:

- Screening of development and building permit applications by the Region;
- Negotiating of risk management plans, providing incentives, and implementing education and awareness programs by the Region; and
- Issuing and reviewing Environmental Compliance Approvals for prescribed activities by provincial ministries.
Since the initial submission of the draft Grand River SPP in 2013, Region staff have been preparing for implementation. Preparations intensified in late 2015 when it became clear that approval was imminent. As part of this preparation, a number of initiatives were undertaken. A summary of these initiatives, anticipated completion dates and when final products will be presented to Regional Council for consideration are outlined in the sections that follow. Water Services staff are aiming to have all necessary approvals ready for implementation in early June 2016.

**Development Applications and Building Permits Will Need to be Screened**

After the effective date of July 1, 2016, all planning and building permit applications within drinking water source areas will require screening by the Risk Management Official (RMO) to determine if the application is impacted by the policies in the SPP. If policies apply, the applicant may be prohibited from undertaking certain activities or may have to negotiate a Risk Management Plan with the RMO before a planning application can be submitted and/or a building permit issued. The Risk Management Plan will require measures to be implemented to reduce the risk to drinking water sources. TES-WAS-15-41 provided details of an information sheet to be distributed through Regional and local planning and building departments to inform the planning and building industry as well as the general public on the implications of the new SPP.

Region staff continue to work with area municipal staff to modify their application forms, develop/modify guidance materials to ensure applicants understand the new process, and to help train front-line staff.

It is important to note that development applications and building permit issuance policies apply even though the Regional Official Plan, area municipal plans, and zoning by-laws have not been updated to conform with the Grand River SPP. Policies in the Grand River SPP require official plans to be updated within five years of the effective date or as part of the next planned update and zoning by-laws updated two years later. The overall timing for the conformity exercise for the Regional Official Plan is under discussion with Planning and Legislative Services.

**Developing an On-Line Screening Tool to Assist Implementation**

The process for assessing risk to source water protection areas and developing policies to mitigate impacts from the 21 prescribed water quality and quantity threats for both existing and future activities resulted in a complicated policy framework. Accordingly, a screening tool to assist persons applying for development and building permit approvals was developed. This system is a property-based database with associated Geographic Information System (GIS) based mapping applications, input forms, and automatic reporting functions that are essential for implementation including storing risk assessment information, tracking property-specific policy implementation, and preparing annual reports on activities for submission to the Province.
This system will be essential for the development industry to ensure their applications have received appropriate screening/review by the RMO prior to submitting applications to area municipal staff. It will also provide information to existing property owners who may be affected by other policies in the Grand River SPP. A vendor for design of this database was approved by Regional Council in report TES-WAS-15-20 dated June 16, 2015 and is ongoing.

A prototype version of this system has been received by staff and presented to the Source Water Protection Liaison Committee. The final version is anticipated to be deployed in early June. In the meantime, a preliminary map identifying areas where the policies may apply and the information sheet discussed above is available at www.regionofwaterloo.ca/protectwater.

Incentive Program Implementation Guidelines Being Developed

On August 14, 2012, Regional Council approved the recommendation in report E-12-075 for staff to develop a policy approach and detailed implementation guidelines for an incentive program. TES-WAS-15-25 (October 6, 2015), outlined the principles and rationale for the incentive program. As noted in this report, incentives are proposed for existing activities only, for activities required as part of RMPs and in stand alone incentive policies. Incentives are not proposed for activities undertaken by municipalities or the GRCA. Staff are continuing to develop the details and a report is anticipated to be presented for Regional Council’s consideration later in 2016.

By-law Will Establish Fees and Some Process Aspects for Risk Management

Regulations under the 'Clean Water Act' prescribe the instances where the Region can develop a by-law related to the risk management process. This includes specifying types of risk management plans that will be used (e.g. for salt application or chemical storage), inspections for risk management plans, provisions related to the process of applying for a plan or a “notice,” and for fees related to the issuance of all of the above.

A notice is required to be provided as part of planning and building permit application documenting that the application has undergone appropriate screening by the RMO. Staff are continuing to develop the details of the by-law and a report is anticipated to be presented for Regional Council’s consideration later in 2016. It is important to note that it is currently proposed that fees would not be applied for negotiating risk plans for existing activities.

Responsibilities on Source Protection Committee Change with Implementation

Membership of the Source Protection Committee has remained essentially unchanged since appointments were made in 2007. With approval of the Grand River SPP, all of the SPPs in the Lake Erie Region have now been approved and the role of the
committee will change to that of monitoring implementation, preparation of annual reports, and preparation for amendments to the plan (if necessary).

Appointments to the SPC are governed by regulations associated with the Clean Water Act (O. Reg. 288/07). This regulation was recently amended to include options to reduce committee size and provide more flexible requirements for member appointment to allow balancing of renewal and retaining experience and knowledge. The Grand River Source Protection Authority determines the schedule of expiries (who and when) and is in the process of developing a comprehensive approach for member turnover.

Regional Council appointed the Commissioner of Transportation and Environmental Services to represent the municipal interests for Waterloo Region on the SPC. This staff person was recommended as the Region has water protection, treatment and storage by-law making authority in the Municipal Act and will be responsible for implementation of the risk management plan process described earlier in the report. Staff representation of the SPC ensured the Region’s interest in its source water responsibilities could be included as part of the development of the SPP.

With the approval of the SPP, the timing is appropriate for revisiting membership on the SPC given the new responsibilities associated with implementation. Staff reviewed the composition of municipal membership in SPCs across the province. The review findings indicated that the majority of comparable municipalities (i.e. Peel Region, York Region, Halton Region, City of Guelph) recommended department staff such as RMOs or program managers for appointment to the SPCs. These people will play a significant role in the implementation and monitoring of the SPP now that the policy development phase has been completed. Therefore, it is recommended that the Manager of Hydrogeology and Source Water in Transportation and Environmental Services be nominated as the Waterloo Region representative to the Lake Erie SPC and that this recommendation be forwarded to the Grand River Source Protection Authority for formal appointment to the SPC.

**Corporate Strategic Plan:**

The implementation of the Grand River SPP is an action item in the Region’s 2015-2018 Strategic Plan in Focus Area 3: Environmental and Sustainable Growth to protect the quality and quantity of our water resources.

**Financial Implications:**

The approved 2016 Water Capital Budget includes $2,850,000 for ‘Clean Water Act’ implementation and $4,870,000 for ‘Clean Water Act’ incentives between 2016 and 2025. Of the total $7,720,000, $741,000 (10%) is funded from Regional Development Charges and $6,979,000 (90%) is funded from the Water Reserve Fund.
The costs for implementing the policies in the Grand River Source Protection Plan were first presented to Regional Council in August 2012 (E-12-075) and subsequently in March 2015 (TES-WAS-15-12). These costs were added to the Water Capital Budget in 2012. Detailed cost breakdowns associated with the individual projects presented in this report will be presented to Regional Council for further consideration in the various reports discussed in the report which are anticipated later in 2016.

Other Department Consultations/Concurrence:

Staff from Citizen Service continue to provide input on the development of fees and by law and staff from Planning, Development and Legislative Services are part of the project team preparing for implementation.

Attachments

Attachment 1: Table 1: Final Changes to Policies for Waterloo Region in the Grand River Source Protection Plan

Prepared By: Eric Hodgins, Manager Hydrogeology and Source Water

Approved By: Thomas Schmidt, Commissioner Transportation and Environmental Services
Table 1: Final Changes to Policies for Waterloo Region in the Grand River Source Protection Plan

<table>
<thead>
<tr>
<th>Policy Number and Activity</th>
<th>Change Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3 (Restricted Land Use)</td>
<td>Added a clause stating that direction can be provided by RMO to enable municipal planning staff and building officials to decide whether the site specific land use, building or construction is not designated under section 59.</td>
</tr>
<tr>
<td>6 to 9 (Sewage - septic)</td>
<td>Removed septic systems as a significant threat in the Assessment Report for sodium and chloride issue contributing areas except for the issue contributing area in Branchton, North Dumfries.</td>
</tr>
<tr>
<td>10 (Sewage – septic)</td>
<td>Revised the wording of the content of the Environmental Compliance Approval from “shall” to “should”.</td>
</tr>
<tr>
<td>15 to 20 (Sewage – stormwater)</td>
<td>Added a clause in the Assessment Report indicating that stormwater policies only apply to the basins/ponds and not the related trenches/pipes to reflect that no consultation had occurred with municipalities to expand this definition.</td>
</tr>
<tr>
<td>35 (Salt)</td>
<td>Added a clause for application of salt on future roads created through and Environmental Assessment will require a RMP.</td>
</tr>
<tr>
<td>40 (Salt)</td>
<td>Added a clause to require that enhanced design recommendations arising from Environmental Assessments to create new roads be carried through to final construction of the road.</td>
</tr>
</tbody>
</table>
Region of Waterloo

Transportation and Environmental Services

Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016      File Code: E04-80/MOEC.SUM; C06-0/PW/WS.14


Recommendation:

That the Regional Municipality of Waterloo receive the 2015 Summary Report, as required by Ontario Regulation 170/03, the minutes from the annual Management Review of the Drinking Water Quality Management System (DWQMS) and maintenance plan update as outlined in report TES-WAS-16-10 dated March 22, 2016.

Summary:

This report provides an overview of the 2015 Summary Report as required by Ontario Regulation 170/03, the results of the 2015 management review and a summary of the infrastructure maintenance plan.

Report:

Background

Ontario Regulation 170/03 has several provisions including a requirement to keep Regional Council informed. The provisions require:
1. The preparation of a summary report for the period January 1 to December 31, 2015, to be issued by March 31, 2016 that includes:
   a. A statement identifying compliance with requirements including the Act, Regulations, Approvals and Ministry of the Environment and Climate Change (MOECC) orders
   b. The details of non-compliances with any requirement including duration
   c. A summary of the quantities and flow rates of water supplied
   d. A comparison of quantities and flow rates to system's approvals

2. That top management report the results of the management review, identify deficiencies, and note decisions and action items to the system owner. The management review is conducted annually evaluating the quality management system for suitability, adequacy and effectiveness. The review also follows-up on previous management reviews and staff suggestions, and reviews the status of management action items identified throughout the year.

3. That the report on the infrastructure maintenance plan highlights any changes since 2014.

Overview of Summary Report

During the inspection period the MOECC performs 22 inspections of the Region’s water supply systems including seven inspections of the distribution systems in the Townships of Wellesley and North Dumfries. A Drinking Water System Inspection Report (DWSIR) is prepared after each inspection that reviews all regulatory issues and provides non-compliance corrective actions and/or best management. The Region’s 2015 Summary Report includes all non-compliance issues identified by Waterloo Region staff through the MOECC inspections and any other relevant legislation. Reports are prepared by staff on all related corrective action or mitigating measures.

The key findings from the 2015 Summary Report (Attachment A) identified that there were a few minor incidents that were detected and corrected quickly. There were no significant issues in the Region’s water supply systems or in the Townships of Wellesley and North Dumfries distribution systems. The Region's Water Services department has initiated plans to address all best management and non-compliance issues identified by the MOECC. In summary, the water quality meets the Safe Drinking Water Act requirements.

A copy of the 2015 Summary report will be placed in the Councillors’ Library after the Council meeting on March 30, 2016. Copies of the report are available free of charge from Water Services and the report will be posted on the Region's website at [www.regionofwaterloo.ca/water](http://www.regionofwaterloo.ca/water).
Management Review

One requirement of the DWQMS is to conduct a management review every twelve months. The management review occurred December 17, 2015, at the Mannheim Water Treatment Plant and included operations management staff, Dave Young – Director, Health Protection & Investigation, Public Health and top management who as defined by the Quality Management System (QMS) procedure are Thomas Schmidt – Commissioner, Transportation and Environmental Services; Nancy Kodousek – Director, Water Services; Olga Vrentzos – Manager, Operations and Maintenance.

The purpose of the management review is to evaluate the QMS for suitability, adequacy, and effectiveness and to follow-up on previous management reviews, staff suggestions, and review the status of management action items identified throughout the year. There were no major non-conformances identified and one staff suggestion that will be implemented. As part of the annual management review process, top management is required to provide the results of the management review, identify deficiencies, and note decisions and action items to the system owner - Regional Council. The minutes from the management review along with the identified deficiencies, decisions, and action items can be found in Attachment B: QMS Management Review 2015 Meeting Minutes.

Infrastructure Management Plan

Elements 14 and 15 of the DWQMS require that the operational plan documents a procedure for the annual review of the adequacy of the infrastructure necessary to operate and maintain the system. The purpose is to review what infrastructure is necessary to maintain the system and to determine that the required infrastructure is in place as needed. The “do” component of Element 14 requires that the operating authority carry out the review and report findings to the owner. Element 15 requires a summary documenting the maintenance, rehabilitation, and renewal programs for the infrastructure. These summaries must be updated as changes occur and must be communicated to the owner. The report also includes an assessment on the effectiveness of the maintenance program.

Preventative maintenance is based on industry standards, regulatory requirements, past history, manufacturers’ recommendations, and risk analysis. A summary of the preventative maintenance being performed can be found in the 2015 Summary Report Section 5.0.

Corporate Strategic Plan:

The Annual Summary Report, the DWQMS Management Review and the Infrastructure Maintenance Plan supports Focus Area 3.2: Protect the quality and quantity of our water resources.
Financial Implications:
All costs associated with operating and maintaining the water systems are covered by the approved Water User Rate.

Other Department Consultations/Concurrence:
The Public Health Department has reviewed this report.

Attachments:

Attachment A: 2015 Summary Report for Integrated Urban and Rural Water Systems – no tables or appendices

Attachment B: 2015 Management Review 2015 Meeting Minutes

Prepared By: Olga Vrentzos, Manager, Water Operations and Maintenance

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
2015 Summary Report

Presented to Regional Council
March 2016

2012643 This document is available in alternate formats upon request
2015 Summary Report – Region of Waterloo Water Services

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2015 Summary Report – Region of Waterloo Water Services

1  OVERVIEW & BACKGROUND

This report addresses the requirements as defined under the Safe Drinking Water Act and the Drinking Water Quality Management System.

1.1  Safe Drinking Water Act

Schedule 22-2 of Ontario Regulation 170/03 states that owners of municipal drinking water systems shall ensure that, no later than March 31, of each year, a summary report is prepared for the preceding calendar year and presented to the members of municipal council. This report includes:

1. A list of the requirements in the Act, the regulations, the system’s approval, drinking water works permit, municipal drinking water license, and any order applicable to the system that was not met at any time during the period covered by the report;
2. for each requirement in (1) specify the duration of the failure and the measures that were taken to correct the failure;
3. a summary of the quantities of flow rates of water supplied during the period covered by the report, including monthly average and maximum flows;
4. a comparison of the summary referred in (3) to the rated capacity flow rates approved by the system’s approval, drinking water works permit or municipal drinking water license.

This summary report represents all the drinking water supply systems in the Region and the distribution systems in North Dumfries and Wellesley. The water supply for the Region is from two sources: 71 percent is from ground water and 29 percent is from the Grand River. (Mannheim Water Treatment Plant)

This report captures non-compliance issues and corresponding corrective action(s) or mitigating measure(s). The Adverse Water Quality Incidents (AWQIs) not captured in the 2015 Annual Water Quality Report (issued February 28th) are identified in Appendix A.

1.2  Drinking Water Quality Management System (QMS) Conformance and Municipal Drinking Water Licensing Program

To obtain and maintain a Municipal Drinking Water License (MDWL) the Region must hold: a valid Drinking Water Works Permits (DWWP), a valid Permit To Take Water (PTTW) for each water source, operational plans as approved by the Ministry of Environment and Climate Change (MOECC), third party accreditation (audit based on DWQMS 21 Elements), and financial plans approved by Regional Council. Each Municipal Drinking Water License (MDWL) and each Financial Plan must be renewed every 5 years.
2015 Summary Report – Region of Waterloo Water Services

Management Review
The management review is conducted every twelve months to evaluate the Quality Management System (QMS) for suitability, adequacy and effectiveness. The management review also supports Top Management’s continued endorsement of and commitment to the QMS. The management review results must be communicated annually to the system owner, Regional Council.

The QMS annual management review was conducted on December 17, 2015 and included discussion on non-compliance issues and corresponding corrective/preventative action(s). There were no major non-conformances identified with the QMS. The 2015 management review minutes, identifying deficiencies, decisions and action items, are included in Appendix B.

Infrastructure Review
DWQMS (Element 14 and 15) requires that the operational plan document a summary and monitor the effectiveness of the Operating Authority’s infrastructure maintenance, rehabilitation and renewal programs for the systems and to communicate these programs and updates to the Owner. Asset management and maintenance programs are established and maintained to ensure repair and replacement of water system infrastructure. An overview of the infrastructure maintenance is found in section 5.

Next Steps
The Municipal Drinking Water Licensing Program Next Steps are as follows:
- Third party re-accreditation audit early 2016, accreditation certificates to be issued upon successful audit
- Corrective/preventative action plans to be developed, as applicable, for any identified non-conformance issues based on third party audit results
- Continual improvement of the QMS, based on audit results
- MOECC to issue 14 renewed MDWL’s by May 2016 upon successful re-accreditation audit

2 HEALTH RELATED NOTIFICATIONS – BOIL WATER ADVISORIES (BWA)/DRINKING WATER ADVISORIES (DWA)

The Region of Waterloo Water Services Division in collaboration with the Public Health Department ensures a safe water supply. There were no BWA or DWA issued during 2015.
2015 Summary Report – Region of Waterloo Water Services

3 REGULATORY COMPLIANCE

All municipally owned and operated drinking water systems have legislative requirements. These requirements are as follows:

- proper documentation;
- sampling and analytical testing;
- adverse water quality incident reporting (AWQI);
- proper treatment and maintenance
- corrective actions;
- Municipal Drinking Water Licenses;
- Drinking Water Works Permits;
- continuous water quality monitoring;
- flow monitoring;
- calibration/verification of flow meters and instrumentation and
- certified operators.

The MOECC drinking water system inspections focuses on compliance with the SDWA and related regulation(s). During 2015, 18 drinking water system inspections were completed; the average compliance ratings received for 2015/2016 inspection period was 99.21 percent. Chart 1 compares the average MOECC inspection compliance ratings over the past 9 years and Appendix E summarizes the ratings for this inspection year. The drinking water system inspection reports not captured for the 2014/2015 are included in Appendix E and the MOECC inspections for the 2015/2016 period not included in this report will be captured in the 2016 Annual Summary Report.

CHART 1 – MOECC Average Inspections Ratings

![Chart showing average inspection ratings from 2007-2016. Scores range from 98.58 to 99.29.]
## 2015 Summary Report – Region of Waterloo Water Services

### TABLE 1 - Summary of Non-Compliance Issues under the Safe Drinking Water Act (SDWA), Municipal Drinking Water Licenses (MDWL), Drinking Water Works Permits (DWWPs) and the Ontario Water Resources Act (OWRA).

<table>
<thead>
<tr>
<th>Date (2015 unless indicated otherwise)</th>
<th>Description</th>
<th>Root Cause</th>
<th>Preventative/ Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 6 0808 hrs to 0816 hrs</td>
<td>Well K24</td>
<td>The signal for well flow on the UV PLC failed and caused the default flow setting to be used in calculating UV dosage.</td>
<td>Precautionary AWQI was reported. The PLC was replaced and the default settings were adjusted.</td>
</tr>
<tr>
<td>Feb 27 0837 hrs To 0845 hrs</td>
<td>Roseville and Branchton Primary Disinfection data was not captured</td>
<td>A combination of multiple events resulting in the failure to respond according to protocol.</td>
<td>SOP was updated to reinforce the requirements and training provided.</td>
</tr>
<tr>
<td>Feb 20 0826 hrs To 0844 hrs</td>
<td>Wells H4 and H5 Primary Disinfection data was not captured</td>
<td>Numerous communication outages resulted in this oversight.</td>
<td>Daily communication outage report initiated and training was provided.</td>
</tr>
<tr>
<td>April 24 1041 hrs To 1057 hrs</td>
<td>Mannheim WTP Filter 2 effluent valve malfunctioned causing incorrect flow reading to UV system.</td>
<td>SCADA alarm was not set for low flow conditions.</td>
<td>Filter has been programmed to alarm and shut down on a low flow scenario.</td>
</tr>
<tr>
<td>May 22 0304 hrs To 0330 hrs</td>
<td>West Montrose Primary Disinfection data was not captured.</td>
<td>The SCADA backup communication system was monitoring the data but not recording the data. As a result the operator didn’t believe data logs were required.</td>
<td>SOP was amended to clearly define the communication system capabilities and training was provided. Ability to backfill data on SCADA after a communication loss is being tested.</td>
</tr>
</tbody>
</table>
## 2015 Summary Report – Region of Waterloo Water Services

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Root Cause</th>
<th>Preventative/ Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2015</td>
<td>Shades Mill WTP</td>
<td>The work order is scheduled on a monthly basis and the plant was shut down prior to the work order being completed.</td>
<td>Duty sensor was calibrated. Requirements reviewed and work order adjusted accordingly.</td>
</tr>
<tr>
<td></td>
<td>The UV reactor duty sensor was not calibrated in accordance with the manufacturer’s instructions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 14 1322 hrs To 1356 hrs</td>
<td>Mannheim WTP</td>
<td>The controller failed on a generator transfer.</td>
<td>Actual turbidity readings were taken and the filter was taken offline. The analyzer controller was repaired.</td>
</tr>
<tr>
<td></td>
<td>Filter 1 Turbidity analyzer read 0.000 NTU due to an analyzer controller failure.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nov 29, 2014 0639 hrs To 0647 hrs 0655 hrs To 0702 hrs</td>
<td>Pinebush and Turnbull WTP</td>
<td>The communication loss was not communicated to the supervisor.</td>
<td>Requirements reviewed and training provided.</td>
</tr>
<tr>
<td></td>
<td>Primary Disinfection data not reviewed within 72 hours.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nov 7, 2014 1041 hrs To 1057 hrs</td>
<td>Mannheim Zone 4 PS</td>
<td>The analyzer was unplugged by a contractor; there is not a process in place to communicate that analyzers cannot be unplugged.</td>
<td>Power was restored to the analyzer and the contractor informed that analyzers cannot be unplugged. Identify which analyzers are not hardwired and install tags to inform that they cannot be unplugged.</td>
</tr>
<tr>
<td></td>
<td>Chlorine data was not available due to power loss to analyzer.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 24</td>
<td>Well K23</td>
<td>A defined process does not exist to ensure lamp hours are regularly monitored.</td>
<td>Precautionary AWQI was reported. New module for work order system will monitor lamp hours and issue a work order prior to maximum hours.</td>
</tr>
<tr>
<td></td>
<td>UV reactor was operated outside of the manufacturer’s validated parameters. One out of the 6 UV lamps exceeded 5000 hours</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2015 Summary Report – Region of Waterloo Water Services

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Root Cause</th>
<th>Preventative/ Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 25</td>
<td>Improper sampling frequency. Well K36 raw water was sampled on May 25, 4 days after the previous sample, taken on May 21st. Samples must be taken within 5 to 10 days from the previous sample.</td>
<td>EELS scheduling software didn’t flag sampling anomalies.</td>
<td>Scheduling software modified to flag sampling anomalies and to generate daily report. EELS personnel to regularly review report to ensure appropriate action is taken.</td>
</tr>
</tbody>
</table>

4 HYDRAULIC PERFORMANCE

A summary of the monthly average and maximum flow rates of water supplied during the period is found in Appendix C.

The Region of Waterloo Drinking Water systems have 43 Permits to Take Water (PTTW) and 14 Municipal Drinking Water Licenses (MDWL) and Drinking Water Works Permits (DWWP)(refer to Appendix D for a full list of PTTW, MDWLS/DWWPs).

Flow rates exceeding the maximum allowable limits specified in the PTTW for a period of greater than 10 minutes and/or MDWL exceedances of maximum daily treated water volumes that flow from the treatment subsystem into the distribution system are listed in Table 2.

**TABLE 2** - Summary of Permit to Take Water (PTTW) and Municipal Drinking Water License (MDWL) Flow Exceedances.

<table>
<thead>
<tr>
<th>Location</th>
<th>Date (2015) &amp; Duration</th>
<th>PTTW Number</th>
<th>Root Cause</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayr</td>
<td>MAR. 05 12 MIN</td>
<td>6350-8VPSBP</td>
<td>Wells A1 and A2 running at same time.</td>
<td>1 well shut down to prevent further flow exceedance.</td>
</tr>
<tr>
<td></td>
<td>DEC 11 12 MIN</td>
<td></td>
<td></td>
<td>1 well shut down to prevent further flow exceedance. Conducted control valve maintenance and confirmed that flow rate setting is within allowable range.</td>
</tr>
</tbody>
</table>
2015 Summary Report – Region of Waterloo Water Services

5 PREVENTATIVE MAINTENANCE PROGRAMS

Elements 14 and 15 of the DWQMS require that the operational plan documents a procedure for the annual review of the adequacy of the infrastructure necessary to operate and maintain the system. The purpose is to review what infrastructure is necessary to maintain the system and to determine if that infrastructure is in place as needed. The “do” component of Element 14 requires that the operating authority carry out the review and report what is found to the owner. This ensures that the owner is regularly informed of infrastructure needs so that the owner can plan accordingly. Element 15 is about documenting a summary of the maintenance, rehabilitation and renewal programs for the infrastructure. These summaries must be updated as changes occur and must be communicated to the owner. Monitoring the effectiveness of the maintenance program is achieved by periodically reviewing the maintenance program and confirming the effectiveness of the program.

Avantis is a computerized maintenance management software (CMMS) package that identifies the infrastructure, equipment and components at water stations. The system is used to develop, monitor, and report on preventative maintenance plans for the equipment and components. The information collected is entered into the system to track the work history. Preventative maintenance is based on industry standards, regulatory requirements, past history, manufacturers’ recommendations and risk analysis. As of 2015, the following preventative maintenance programs exist:

- As per the MDWL and/or Reg. 170/03, instrumentation is calibrated and/or verified in accordance with manufacturers’ instructions. A contractor calibrates and/or verifies the flow meters annually.
- Instrumentation such as UV sensors, UVT, chlorine, and turbidity analyzers, ozone monitors, and other equipment are calibrated and/or verified in-house as per manufacturers’ recommendation.
- There is a program to maintain status with the SCADA RPU and communications system. The P&IDs (process and instrumentation drawings) are being reviewed and maintained as needed.
- Electrically, the UV ballasts are run to failure and the UV bulbs are replaced every 5000 hours and 9000 hours at Middleton as per manufacturer’s instructions.
- CSA guidelines have specific requirements for diesel generators, such as an annual load bank test, run under load for rated power, oil changes, coolant, filters, electrical test of alternator, test oil for engine problems and efficiency. There is a contract with Toromont to ensure CSA requirements are met.
- In house the diesels are run monthly under load and preventative maintenance is conducted in accordance with CSA guidelines.
2015 Summary Report — Region of Waterloo Water Services

- Sub-Station Maintenance, done twice per year, involves a visual inspection, oil testing of transformers, check connections for tightness and electrical integrity of components by Megger testing.
- All other electrical components are replaced as needed.
- Mechanically, chlorine injectors are rebuilt monthly at all sites except Mannheim; booster pumps are maintained as required, chemical pumps are checked monthly and rebuilt as required. Piping and valve work is done as required. Air chambers are checked yearly and pumped out as required and process flow diagrams (PFD) are updated as needed.
- Distribution maintenance for North Dumfries and Wellesley Townships includes annual water main flushing and hydrant maintenance. All valves are operated over a 3 to 4-year span. Water main repairs, service leaks, meter replacement and locates occur as needed.
- Distribution maintenance, including water main repairs on the trunk mains are done by the cities. Programs exist and vary by city for leak detection analysis, locates, and flushing. A more enhanced program is being developed to ensure that valves are exercised and remain operational.

6 → WELL MAINTENANCE

Wells are maintained in accordance with O. Reg. 903, (Ontario Water Resources Act) and O. Reg. 170/03 (Sch.1). Routine well inspections indicate production wells and monitoring wells were in compliance.

7 → ASSET MANAGEMENT AND CAPITAL INFRASTRUCTURE REPLACEMENT PROGRAM

To help identify and prioritize capital repair and replacements, the risk framework that has been developed is continuously refined and improved upon. The risk framework considers both the physical and performance-based condition as well as theoretical consequences of asset failures to develop annual and long-term capital budgets. In addition to regular preventative maintenance, major capital maintenance is also performed to maintain the condition of assets and help ensure expected service lives are achieved. In 2015, asset management activities included:

- Reservoir cleaning and re-coating: All elevated reservoirs have undergone or are scheduled for major maintenance of re-coating to help ensure sustainable operation and extend service life and an annual elevated tank inspection program exists.
- Facility inventory and condition assessments are performed to recognize all major building, process, and site works assets and components, as well as to assess the current physical and performance (capacity, suitability, quality, quantity, and cost)
2015 Summary Report – Region of Waterloo Water Services

energy efficiency). These assessments provide the risk assessment for water facilities and input into the annual and extended 25 year capital forecast of repair and replacements.

- Development of an Asset Management Tool is ongoing that facilitates updating asset inventories in the computerized maintenance management software (CMMS), Avantis.
- Watermain replacement requirements are reviewed based on the age, material, and condition and are coordinated with both Regional and Local transportation capital programs.
- Energy audits of water facilities are ongoing and will continue in 2016. Energy audits are being undertaken to identify potential energy conservation measures or demand management opportunities.
# 2015 Summary Report – Region of Waterloo Water Services

## Appendix A – Adverse Water Quality Incidences (AWQI) for Regional Distribution Systems (IUS)

<table>
<thead>
<tr>
<th>AWQI</th>
<th>2015</th>
<th>Location</th>
<th>Parameter</th>
<th>Result</th>
<th>Unit</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>122629</td>
<td>February 25</td>
<td>Waterloo Well Supply – Elmira West Tank</td>
<td>Combined Chlorine</td>
<td>0</td>
<td>mg/L</td>
<td>Resampled, Disinfection Restored, Flushed Mains</td>
</tr>
<tr>
<td>122874</td>
<td>March 18</td>
<td>Cambridge Well Supply – Turnbull Reservoir</td>
<td>Free Chlorine</td>
<td>0</td>
<td>mg/L</td>
<td>Resampled, Disinfection Restored, Flushed Mains</td>
</tr>
<tr>
<td>125516</td>
<td>August 6</td>
<td>Cambridge Well Supply – Rahmans Reservoir</td>
<td>Total Coliforms</td>
<td>Present</td>
<td></td>
<td>Resampled</td>
</tr>
</tbody>
</table>
2015 Summary Report – Region of Waterloo Water Services

APPENDIX B – QMS MANAGEMENT REVIEW

DATE: December 17, 2015
TIME: 1:00pm – 3:30pm
PLACE: Mannheim Training Room

PRESENT: Thomas Schmidt, Nancy Kodousek, Olga Vrentzos, Matt Bender, Peter Clarke, Dave Young Frank Infante.

ABSENT: Tim Walton

1) QMS MANAGEMENT REVIEW PROCESS
A summary was provided of the Management Review purpose and objectives- to evaluate the effectiveness and appropriateness of the QMS and to address any deficiencies.

2) QMS POLICY REVIEW AND APPROVAL
The QMS policy (DOCS#981236) was reviewed and it was agreed that the policy is appropriate. The existing photos will be updated.

3) DWQMS MANAGEMENT REVIEW REQUIREMENTS
Required Management Review agenda items were discussed in accordance with the procedure DOCS#. 500605

4) ROUND TABLE DISCUSSION
Management Review discussion conducted as per presentation (DOCS#2009272) and agenda (DOCS#2030379).

5) PREVIOUS ACTION ITEMS- FOLLOW-UP
Reviewed 2014 Management Review action status:

I. UPS Testing
Due to UPS failures resulting in non compliance issues testing and maintenance should proactively be conducted (included as part of PMs) to minimize the potential re-occurring failures. The smaller units require upgrades to the panels in order to bypass the UPS in the event of a failure.

Action: Systems Group
Timeline: Ongoing

II. Mannheim Filters ETSW
The Supervisor, Process and Compliance indicated that the MOE appears supportive of the ETSW. The consultant has completed their procedure and recommendations. The Systems Group is currently reviewing the process control narratives.
2015 Summary Report – Region of Waterloo Water Services

Action: Supervisor, Process and Compliance
Status: Ongoing (2016)

III. Protocol for Operating Hidden Valley, WMR Wells and the K80 Wells During Grand River Watershed Upsets
A peer review of the current operating protocol will be conducted to determine if the current action are appropriate.
Action: Supervisor, Process and Compliance
Timeline: Ongoing (2016)

IV. Flood Protocol
An SOP to address non-GUDI wells and other critical drinking water infrastructure should be created.
Action: Water Service Management Staff
Timeline: Ongoing (2016) – draft procedure complete

V. Chlorine Analyzer Calibrations
A consultant has been retained to review regulatory chlorine analyzer calibration practices.
Recommendations:
- Perform weekly verifications
- Conduct full analyzer calibration on chlorine residual values that are outside the acceptable variance range
  The MOECC has agreed to this approach.
Action: Systems Group
Timeline: Complete

VI. Develop Blue/Green Algae Fact Sheet
Develop and post on the Region’s website.
Action: Supervisor, Process and Compliance & Water Quality Specialist (PH has assumed this action item)
Timeline: To be addressed by PH

VII. Continuous Monitoring Non-Compliance Issues
Document the process for determining if issues exist in other similar areas and establish preventative action plans.
Action: Systems and Maintenance Groups
Timeline: Complete
2015 Summary Report – Region of Waterloo Water Services

Note: Root cause analysis is conducted for non-compliance issues.

VIII. Standard of Care Training for Regional Council (section 19 of SDWA)

Standard of Care awareness training is organized for elected Council members. Two sessions will be scheduled for Councillors and other interested stakeholders.

Action: Supervisor, Process and Compliance & Water Quality Specialist

Timeline: Complete

IX. Quality Management System Policy

The photographs in the policy will be updated.

Action: Supervisor, Process and Compliance & Water Quality Specialist

Timeline: 2016 (various photos reviewed)

6) INCIDENTS OF REGULATORY NON-COMPLIANCE REVIEW

Ten (10) regulatory non-compliance issues occurred in 2015. For each non-compliance issue a corrective/preventative action was implemented (see Management Review Presentation – DOCS#2009272 for details).

7) INTERNAL AUDIT NON-CONFORMANCE (NC) CORRECTIVE ACTIONS

- No non-conformance issues were identified during the internal audit (third party retained)
- Twenty five (25) opportunities for improvement were identified (to be assessed by management staff)

8) SURVEILLANCE AUDIT

- Two (2) minor non-conformance issues were identified and corrected (see e identified during audit (refer to Management Review presentation DOCS#2009272).
- Seven (7) opportunities for improvement were identified, implementation to be assessed by management staff.

9) NEW ACTION ITEMS

N/A

10) NEXT STEPS

- Re-accreditation Audit schedule for January 8, 2016 off-site (document review) and on-site verification January 25 to 28, 2016
- Develop NC corrective action plans as applicable
- Re-accreditation to be obtained upon successful audit
- Amend DWQMS procedures in accordance with MOECC proposed changes, as applicable
- MOECC to issue new MDWL’s by May 2016
Region of Waterloo  
Transportation and Environmental Services  
Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: March 22, 2016

File Code: C06-60(A); E13-20(A)/08305

Subject: Hauled Wastewater Management Site Selection and Financial Analysis

Recommendation:

That the Regional Municipality of Waterloo approve the following:

a) Adopt the proposed new hauled wastewater management strategy, to construct a new receiving station at the Region’s Wastewater Residuals Management Facility, 440 Manitou Drive, Kitchener, and subsequently cease receiving hauled wastewater at the New Hamburg Wastewater Treatment Plant;

b) Direct staff to proceed with detailed design of this facility; and

c) Direct staff to develop a disposal fee structure that achieves full cost recovery of the capital, operating and maintenance costs associated with providing this service and report back to Council before proceeding with tendering of the construction.

Summary:

The Region has now completed a study that started in January 2015 to evaluate alternatives for long-term management of hauled wastewater from unserviced areas (i.e., areas not serviced by municipal sewer systems) within the Region. Currently, the Region accepts and treats this wastewater from private hauling contractors at the New Hamburg Wastewater Treatment Plant (WWTP), for a fee.

The preferred site for the new receiving station is the Region’s existing Wastewater Residuals Management Facility (WWRMF) on Manitou Drive in Kitchener. Hauled wastewater will be received at the WWRMF, and conveyed through an existing pipe to
the nearby Kitchener WWTP for treatment. Hauled wastewater receiving at New Hamburg WWTP will then be discontinued.

The Region consulted with the public and other stakeholders on the proposed plan and site selection at two Public Consultation Centres (PCCs) held in December 2015, and response to the proposed Manitou Drive location was generally favourable.

The estimated capital cost of the proposed new facility is $1.6 million, and operating & maintenance costs are estimated at $67,000 per year (2016 dollars). It is anticipated that the Region’s costs can be recovered within about 15 years by setting a disposal fee rate that is somewhat higher than current rates, but still reasonable. A short pay-back period (5 years, for example) is likely not achievable, because raising the disposal fees too high would result in a decrease in disposal traffic at the Region facility, in favour of lower cost facilities outside the Region, and a corresponding decrease in fee revenue. Staff will present a report with options and recommendations for the new disposal fee rate structure once the costs are known more accurately, after detailed design.

Kitchener WWTP has sufficient capacity to accommodate the added treatment load from the receiving station without impacting the plant performance, and no additional capital works would be required at the Kitchener WWTP to accommodate the hauled wastewater.

It is recommended that the Region proceed with design of a new hauled wastewater receiving station at the WWRMF.

Report:

The Region has now completed a study begun in January 2015 to evaluate alternatives for long-term management of hauled wastewater from unserviced areas (i.e., areas not serviced by municipal sewer systems) within the Region. Report TES-WAS-15-37 (attached as Appendix A for further information), Planning & Works Committee Meeting of December 8, 2015, summarized work completed to this date for this project and presented the preferred approach for constructing a new hauled wastewater receiving facility. This report (TES-WAS-16-11) identifies the preferred alternative, presents the results of public consultation, and summarizes the financial analysis for implementing the preferred alternative.

Since 2002, the Region has allowed local private haulers to dispose of hauled wastewater at the New Hamburg Wastewater Treatment Plant (WWTP), for a fee. This trucked wastewater originates from homes and businesses in the Region that are not connected to municipal sewers. There are two types of hauled wastewater accepted: holding tank waste, which is untreated wastewater (from sinks, toilets, washing machines, etc.), and septage, which is concentrated solids that are accumulated in the tank portion of a septic system. Septage costs substantially more to treat. The Region
treats the hauled wastewater at the WWTP. The liquid fraction is co-treated in the WWTP with the wastewater collected by the Township of Wilmot’s sewer systems for New Hamburg and Baden, and the solid fraction is directed to the plant’s sludge digestion lagoons.

The Region has recognized that the New Hamburg WWTP is not suited to long-term management of these wastes, as quantities have been increasing over time, and community growth in New Hamburg and Baden places additional demands on the WWTP capacity. The Region’s proposed long-term strategy includes construction of a hauled wastewater receiving station at a more suitable location. Hauled wastewater receiving at New Hamburg WWTP will then be discontinued.

The objectives of the completed study were to:

1. Consult with the public and other stakeholders on the proposed plan and site selection,
2. Identify the preferred location for the new facility,
3. Estimate the costs to construct and operate the service at the new location, and
4. Estimate the user fees that would need to be charged to recover the Region’s capital and operating costs to continue providing the service at the new location.

A weighted-ranking method using a combination of environmental, social, technical and financial factors was used to evaluate the site options. The preferred site for the new receiving station is the Region’s existing Wastewater Residuals Management Facility (WWRMF) on Manitou Drive in Kitchener. Advantages of this site include good road network linkage to all areas of the Region, adequate existing operations staff presence, large WWTP capacity, and a greater distance to the nearest residential properties. Hauled wastewater would be received at the WWRMF, and conveyed through an existing pipe to the nearby Kitchener WWTP for treatment.

The proposed system is a Schedule “A” project under the Municipal Engineers Association Municipal Class Environmental Assessment. The Region opted to carry out public consultation for this project voluntarily. There is no provincially-mandated requirement for public consultation on a Schedule “A” project.

Advertised Public Consultation Centres (PCCs) were held on December 9, 2015 in Waterloo and on December 10, 2015 in Kitchener, to present the study scope and results. The majority of attendees of the PCCs were representatives of the local private wastewater hauling companies. Response to the proposed Manitou Drive location was generally favourable.

Two residents of the Township of North Dumfries expressed a preference for receiving stations at multiple locations, and in particular at the Galt WWTP in Cambridge, instead of the single location strategy that is proposed.
This study included evaluation of the Galt WWTP as an option for the receiving station, but the Galt WWTP was found to have less favourable characteristics than the preferred site at the WWRMF. Similarly, the option to create receiving stations at multiple locations was considered, but was determined to be less preferable than the proposed single station option, primarily due to cost.

Estimated costs for construction and operation of the proposed new hauled wastewater management system are as shown in Table 1. Operating and maintenance costs include an allowance for mechanical and electrical equipment repair and replacement.

Table 1 – Estimated Costs for Proposed Receiving Facility at the WWRMF

<table>
<thead>
<tr>
<th>Cost Component</th>
<th>Estimated Cost (2016 dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design and construction of receiving facility</td>
<td>$1,600,000</td>
</tr>
<tr>
<td>Annual operating &amp; maintenance costs for receiving and treatment (based on 20,000 m$^3$ per year received)</td>
<td>$67,000</td>
</tr>
<tr>
<td>Life Cycle Cost (Net Present Value, 5%/year discount rate, 25 years)</td>
<td>$2,600,000</td>
</tr>
</tbody>
</table>

Operating and maintenance costs (as well as user fee revenue) are dependent on the amount and type of hauled wastewater received. The cost estimates presented are based on the amounts typically received at New Hamburg in recent years. This approach to the financial analysis is conservative. Quantities are expected to increase over time, as a result of unserviced land development and increasing restrictions on agricultural land application of wastewater. Increased quantities would result in a quicker recovery of the Region’s costs, and/or allow disposal fees to be reduced.

Most municipalities, including the Region of Waterloo, only accept hauled wastewater originating from within their municipal boundaries. The Listowel WWTP (Municipality of North Perth) is the only facility in this area that accepts hauled wastewater regardless of the municipality of origin. Some hauled wastewater originating from within the Region is currently disposed of at Listowel by private haulers.

Table 2 compares the current user fees and fees charged by other nearby municipalities to the estimated user fees that would need to be charged at the new facility to recover the Region’s costs, at various payback periods.
Table 2 – Comparison of User Fees for Disposal

<table>
<thead>
<tr>
<th>Facility</th>
<th>Holding Tank Wastewater Fee (per truckload*)</th>
<th>Septage Fee (per truckload*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing New Hamburg WWTP</td>
<td>$86.17</td>
<td>$173.77</td>
</tr>
<tr>
<td>Proposed new facility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-year pay-back</td>
<td>$286</td>
<td>$356</td>
</tr>
<tr>
<td>15-year pay-back</td>
<td>$126</td>
<td>$196</td>
</tr>
<tr>
<td>25-year pay-back</td>
<td>$94</td>
<td>$164</td>
</tr>
<tr>
<td>Town of North Perth (Listowel)**</td>
<td>$161</td>
<td>$161</td>
</tr>
<tr>
<td>Average of five other municipal facilities in vicinity of the Region***</td>
<td>$131</td>
<td>$131</td>
</tr>
<tr>
<td>City of Toronto</td>
<td>$418</td>
<td>$418</td>
</tr>
</tbody>
</table>

Table 2 Notes:

*Fees indicated are for a 15 cubic metre truck load. Fees are in 2016 dollars, and it has been assumed that they would be periodically increased consistent with the inflation index. Some receiving facilities such as New Hamburg charge the same fee per truckload regardless of volume. Others such as Listowel measure the volume received and charge a fee per cubic metre.

**The Listowel facility is the only other facility in the area that accepts hauled wastewater originating from outside their municipal boundaries. Some hauled wastewater originating from within the Region is currently disposed of at Listowel by private haulers.

***City of Guelph, City of Brantford, City of London, Oxford County, and Halton Region

The financial analysis shows that the Region’s costs for implementing the proposed new system can be recovered in about 15 years, at disposal fee rates slightly higher than current rates, but still reasonable.
The figures shown in Table 2 are calculated on the assumption that the amount of wastewater disposed does not decrease with increasing disposal fee rates. In reality, if rates are raised to the high amounts shown for a 5 year pay-pack period, it is likely that a greater fraction of Region-generated wastewater would be disposed of at North Perth instead of at the Region facility, which would decrease disposal fee revenues and increase the pay-back period.

Based on the Region’s population and wastewater flow forecasts, it is expected that the Kitchener WWTP will have sufficient capacity to accommodate the added treatment load from the receiving station (0.5% to 1.5% of plant capacity) for at least three decades.

No additional capital works are required at the Kitchener WWTP to implement the proposed new receiving system. The only anticipated capital expenditures will be at the WWRMF.

Should Regional Council approve the staff recommendations outlined in this report, the Region will proceed with work for the implementation of the hauled wastewater receiving station. It is anticipated that the design and tendering would be completed by 2017 and construction completed in 2018. Based on the estimated price for construction pending final design, a final user fee structure recommendation will be developed and submitted to Council for consideration and approval prior to proceeding with tender and construction.

**Corporate Strategic Plan:**

The development of a long-term solution for management of hauled wastewater, and the elimination of the temporary hauled wastewater receiving station at the New Hamburg WWTP, support the Corporate Strategic Focus Area: “Thriving Economy” in the 2015-18 Strategic Plan; specifically Strategic Objective 1.2: “Plan for and provide the infrastructure and services necessary to create the foundation for economic success.”

**Financial Implications:**

The 2016 Wastewater Capital Program includes the $1.6 million estimated cost for the implementation of the proposed facility. Capital and operating costs will be recovered over time through the disposal fees charged to private haulers.

The 2016 Wastewater Operations budget includes the costs and revenues of the existing hauled wastewater management program at New Hamburg WWTP. Some adjustment to the operating budget from 2019 onwards may be required.
Once the actual construction cost is known (anticipated in 2017), staff will prepare a report to council, presenting disposal rate structure options and recommendations, for consideration and approval.

Other Department Consultations/Concurrence:
Finance Division, Corporate Services

Attachments
Attachment A - TES-WAS-15-37, Hauled Wastewater Receiving Station Site Selection Update

Prepared By: Dave Arsenault, Senior Project Engineer

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Region of Waterloo
Transportation and Environmental Services
Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: December 8, 2015

File Code: C06-60(A); E13-20(A)/08305

Subject: Hauled Wastewater Receiving Station Site Selection Update

Recommendation:

For Information.

Summary:

Certain areas of the Region do not have centralized municipal wastewater service, and have septic disposal systems or holding tanks that rely on private contractors to remove their wastewater and septage. Some of this material can be applied without treatment to agricultural lands as fertilizer at certain times of the year, but there is an increasing surplus of this material that cannot be land applied. Since 2002, the Region has accepted and treated hauled wastewater from these sources at the New Hamburg Wastewater Treatment Plant (WWTP) as a pilot program. This facility was adequate for the pilot program and the current volume of hauled wastewater received. If the Region decides to expand the program, the current site is not suitable for long-term management.

The Region is evaluating concepts for long-term management which includes a new hauled wastewater facility (identifying a preferred location) and reviewing the feasibility of a new facility based on a business case based on a revenue-neutral approach.

Consultants have evaluated alternative locations for a new facility and identified the Region’s Wastewater Residual Management Facility (WWRMF) on Manitou Drive as the preferred location, pending confirmation through public and stakeholder consultation, and ultimate endorsement by Regional Council. The Region will host public consultation centres in December 2015 to seek comment on the proposed location, and
once a preferred site has been selected, staff will develop a business case with estimated fees prior to making a recommendation to Council in early 2016.

The information boards to be displayed at the PCCs have also been included in Planning & Works Committee agenda for December 8, 2015.

If Regional Council endorses the selection of the site and approves the feasibility of the business case, the Region would be able to proceed with design and construction of the facility. It is anticipated that construction of this facility can be completed over a two-year time frame. The preliminary capital cost estimate for the facility is $1.6 million, and this amount has been included in the proposed 2016 Wastewater Capital Program.

Before implementation, Region staff will also be assessing the disposal fees that should be charged to hauled wastewater contractors. Rates currently charged will need to be increased if the Region wishes to provide the service on a revenue-neutral basis.

It is proposed that only waste originating within the Region will be accepted.

**Report:**

Some rural areas and smaller urban centres of the Region of Waterloo are not serviced by municipal wastewater collection and treatment systems. Homes and businesses in these unserviced areas rely on either septic systems with sub-surface leaching beds, or holding tanks. Holding tanks must be emptied regularly, and septic system tanks must be emptied every few years to maintain proper operation. Wastewater collected in portable toilets used for public events, construction sites and other unserviced locations also needs to be hauled away for disposal. A number of private companies, called hauled wastewater contractors, are licensed and regulated by the Province to haul away and dispose of stored wastewater from these various sources.

Hauled wastewater, except from portable toilets, can be applied by licensed contractors to agricultural lands during certain times of the year (sprayed on or injected into the soil), and acts as a fertilizer. The Province regulates where and when this can occur, and how much can be applied.

The Province has previously announced plans to eventually phase out land application of any untreated hauled wastewater on agricultural land, although no timetable for this change has been proposed. Furthermore, land application of hauled wastewater has become more challenging due to seasonal limitations and availability of farms willing to accept the product.

In 2002, as a result of discussions with the MOE, residents, and contractors, the Region voluntarily initiated a pilot program to receive hauled wastewater generated in the Region at the New Hamburg Wastewater Treatment Plant (WWTP) (Report E-02-018.1
dated December 3, 2002). The pilot program was found to be successful and has continued as an interim service since that time. Licensed private haulers are charged a disposal fee by the Region to accept and co-treat the hauled wastewater along with the wastewater collected by the Township of Wilmot’s sewer systems for New Hamburg and Baden.

Although the Region is not obligated by legislation at this time to accept hauled wastewater, and disposal by land application is still permitted (except for portable toilet wastes), Region staff continue to provide this service to the licensed haulers, for the benefit of residents and businesses in unserviced areas within the Region.

Discontinuation of this service would result in much of the Region’s hauled wastewater needing to be directed to more distant storage and treatment facilities outside the Region, and likely result in significant cost increases to those residents and businesses relying on the hauled wastewater contractors.

The Region has recognized that the New Hamburg WWTP is not suited to long-term management of these wastes, as quantities increase over time, and community growth in New Hamburg and Baden places additional demands on the WWTP capacity. The Region’s proposed long-term strategy includes construction of a hauled wastewater receiving station at a more suitable location. Hauled wastewater receiving at New Hamburg WWTP will then be discontinued.

In 2014, the Region completed a study to identify and evaluate potential sites for the permanent facility and recommended a short-list of preferred sites. Study results were reported to the Committee in Report E-14-093, dated August 12, 2014.

The study estimated that up to 61,000 cubic metres per year of hauled wastewater would need to be accepted and treated, in the future scenario where land application of untreated wastewater is banned and the Region ultimately accepts 100 per cent of the Region’s generated wastes. The ability of a site to accommodate this upper limit in the future was established as a key criterion for the selection of a preferred site. Currently, about 26,000 cubic metres per year are received.

The short-list of potential sites from this study was as follows:

1. The existing Region Wastewater Residuals Management Facility (WWRMF) on Manitou Drive in Kitchener
2. The existing Waterloo WWTP on University Avenue in Waterloo
3. The proposed East Side Lands Wastewater Pump Station to be located somewhere near the Kitchener-Cambridge City border, near Stage 1 of the East Side Lands developed area.
December 8, 2015

Subsequent to the 2014 study, the third location was dropped from the preferred site short-list as a result of analysis conducted within the scope of the ongoing East Side Lands Wastewater Servicing Environmental Assessment (EA).

The preliminary evaluation of the remaining two sites has now been completed. A weighted-ranking method using a combination of environmental, social, technical and financial factors was used to compare the two site options. The preliminary results show that the Region’s WWRMF on Manitou Drive in Kitchener is the preferred location for the station.

Public Consultation Centres (PCCs) in Kitchener and Waterloo are scheduled for December 2015. The information boards to be displayed at the PCCs have also been included in Planning & Works Committee Agenda for December 8, 2015.

Once consultation has been completed and a preferred site has been selected, staff will develop a business case prior to returning to Regional Council with a recommendation. If the decision is to proceed with the design phase of the hauled wastewater receiving station, it is anticipated that the design and tendering will be completed by 2017 and construction will be completed in 2018.

During the design phase, a more detailed cost estimate and proposed receiving fees for the new facility will be developed. A fee structure recommendation will be submitted to Council for consideration. It is expected that fees would need to be increased in order for the Region to recover the full cost of providing the service, including the new infrastructure.

Corporate Strategic Plan:

The development of a long-term solution for management of hauled wastewater, and the elimination of the temporary hauled wastewater receiving station at the New Hamburg WWTP, support the Corporate Strategic Focus Area: “Thriving Economy” in the 2015-18 Strategic Plan, specifically Strategic Objective 1.2: “Plan for and provide the infrastructure and services necessary to create the foundation for economic success.”

Financial Implications:

The Consultant’s analysis has indicated that the receiving facility cost is mostly independent of the site selection (likely less than a 5 per cent difference in cost between the two short-listed sites). Based on a conceptual level estimate, the proposed 2016 Wastewater Capital Program includes $1.6 million for the implementation of a new Regional hauled wastewater facility.
December 8, 2015  


Cost estimates for constructing the hauled wastewater receiving facility will be further refined during preliminary and detailed design work, which will commence after the current study is completed and the approach is approved by Regional Council. The 2017 capital budget will be adjusted to reflect the cost estimates developed during design.

Currently, the Region charges the following rates for accepting hauled wastewater at New Hamburg WWTP:

- Septic tank wastewater: $173.77 per truckload
- Domestic holding tank wastewater: $86.17 per truckload
- Industrial, commercial, or institutional wastewater: Assessed case-by-case

The revenues from the existing service averages $125,000 annually which offsets the treatment costs at the New Hamburg WWTP. The fee structure is under review to recognize the variability of the strength of the hauled waste. The new fee structure would need to account for the full strength of the material and the capital costs associated with the receiving site and treatment.

Fees to be charged at the proposed new Regional facility have not yet been developed. Preliminary assessment suggests that fees would need to be increased from current rates to fully recover both the capital and operating costs for the proposed new hauled wastewater receiving facility.

Once further information is available, staff will prepare a separate report outlining proposed new fees for Regional Council’s consideration.

Other Department Consultations/Concurrence:

Nil

Attachments

Nil

Prepared By: Dave Arsenault, Senior Project Engineer

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
March 10, 2016

Kris Fletcher, Clerk
Region of Waterloo
150 Frederick St.
P.O. Box 9051, Station C
Kitchener, ON N2G 4J3

To Ms. Fletcher,

Re: Elmira Waste Transfer Station

This letter is to inform you that Council of the Township of Woolwich ratified the following resolution at the Council Meeting held on March 8, 2016:

THAT the Council of the Township of Woolwich takes no further action in regards to pursuing a waste transfer station in Elmira;

AND FURTHER THAT the Region of Waterloo be notified of Council’s decision

Should you require any further information or clarification, please contact David Brenneman at 519-669-6002 or dbrenneman@woolwich.ca.

Yours truly,

Valrie Hummel
Municipal Clerk
Township of Woolwich

cc. Jon Arsenault, Region of Waterloo
    David Brenneman, Township of Woolwich

“Proudly remembering our past; Confidently embracing our future.”
February 19, 2016

Honourable Kathleen Wynne
Premier of Ontario
111 Wellesley Street West Room 281
Toronto, ON M7A 1A1

RE: Resolution Requesting that Ontario Limit the Jurisdiction of the OMB

Dear Premier Wynne,

Please be advised that the Council for the Township of North Dumfries, at its meeting held on February 16, 2016, passed the following resolution:

WHEREAS the Township of North Dumfries spends an incredible amount of resources and taxpayer money developing an Official Plan; and

WHEREAS the Town’s Official Plan is ultimately approved by the Province; and

WHEREAS it is within the legislative purview of Municipal Council to approve Official Plan amendments or Zoning By-law amendments that better the community or fit within the vision of the Township Official Plan; and

WHEREAS it is also within the legislative purview of Municipal Council to deny Official Plan amendments or Zoning By-law changes that do not better the community or do not fit within the vision of the Township of North Dumfries Official Plan; and

WHEREAS planning decisions may be appealed to the Ontario Municipal Board ("OMB"), an unelected, appointed body that is not accountable to the residents of North Dumfries; and

WHEREAS appeals of OMB decisions are limited to questions of law, not the findings of facts in a case; and

WHEREAS all decisions – save planning decisions – made by Municipal Council are similarly only subject to appeal by judicial review and such appeals are limited to questions of law;

Telephone: 519-632-8800 Fax 519-632-8700 E-mail: mail@northdumfries.ca
Website: www.northdumfries.ca
Resolution Requesting that Ontario Limit the Jurisdiction of the OMB
February 19, 2016
Page 2

NOW THEREFORE BE IT HEREBY RESOLVED THAT North Dumfries Township Council requests:

1. That the Government of Ontario limits the jurisdiction of the OMB to questions of law or process;

2. That the Government of Ontario be requested to require the OMB to uphold any planning decisions of Municipal Councils unless they are contrary to the processes and rules set out in legislation.

Council has requested that a copy of this resolution be forwarded to all 444 municipalities in Ontario for their endorsement and support, as well as to local MPP’s, the Progressive Conservative Party of Ontario and the Ontario New Democratic Party.

On behalf of Council, thank you for your consideration of this request.

Sincerely,

[Signature]

Julia Sippel, Acting Clerk
Township of North Dumfries

cc: Honourable Ted McMeekin, Minister of Municipal Affairs and Housing
Honourable Patrick Brown, Leader of the Ontario Progressive Conservative Party
Honourable Andrea Horwath, Leader of the Ontario NDP
Honourable Kathryn McGarry, MPP Cambridge – North Dumfries
Association of Municipalities of Ontario
February 23, 2016

I, CHRISTINE ALICE TARLING, City Clerk of the Corporation of the City of Kitchener, do hereby certify that the following is a true and correct copy of a resolution adopted by the Council of the Corporation of the City of Kitchener at its meeting held on February 22, 2016.

"That consideration of the following be referred to the October 3, Planning and Strategic Initiatives Committee meeting, to allow time for a summit to be held on the jurisdiction of the Ontario Municipal Board with the findings being presented at the 2016 Association of Municipalities of Ontario (AMO) conference, and for City staff to provide input on the subject motion:

WHEREAS the City of Kitchener spends an incredible amount of resources and taxpayer money developing an Official Plan; and,

WHEREAS the City’s Official Plan is ultimately approved by the Province; and,

WHEREAS it is within the legislative purview of Municipal Council to approve Official Plan amendments or Zoning By-law changes that better the community or fit within the vision of the City of Kitchener’s Official Plan; and,

WHEREAS it is also within the legislative purview of Municipal Council to deny Official Plan amendments or Zoning By-law changes that do not better the community or do not fit within the vision of the City of Kitchener’s Official Plan; and,

WHEREAS planning decisions may be appealed to the Ontario Municipal Board ("OMB"), an unelected, appointed body that is not accountable to the residents of Kitchener; and,

WHEREAS appeals of OMB decisions are limited to questions of law, not the findings of facts in a case; and,

WHEREAS the majority of decisions, save planning decisions, made by Municipal Council are similarly only subject to appeal by judicial review and such appeals are limited to questions of law;

THEREFORE BE IT RESOLVED that the Government of Ontario, be requested to limit the jurisdiction of the OMB to questions of law or process; and,

Cont’d... \2
DATE: March 16, 2016

TO: Colleen James, Research/Administrative Assistant to Council
Regional Councillor's Office

FROM: Michael Di Lullo, City Clerk

RE: Cambridge Official Plan Motion from the Planning and
Development Committee Meeting of Tuesday, February 9,
2016

The following recommendation was brought forward at the February 9, 2016 Planning
and Development meeting and ratified at the February 16, 2016 Council meeting and is
said to be a true and certified copy of the official record of the meeting minutes:

Corporation of the City of Cambridge – Cambridge Official Plan Motion from the
Planning and Development Committee Meeting of Tuesday, February 9, 2016:

WHEREAS the City of Cambridge spends an incredible amount of resources and
taxpayer money developing an Official Plan;

AND WHEREAS the Cambridge's Official Plan is ultimately approved by the Province;

AND WHEREAS it is within the legislative purview of Municipal Council to approve
Official Plan amendments or Zoning By-law changes that better the community or fit
within the vision of the City of Cambridge Official Plan;

AND WHEREAS it is also within the legislative purview of Municipal Council to deny
Official Plan amendments or Zoning By-law changes that do not better the community
or do not fit within the vision of the City of Cambridge Official Plan;

AND WHEREAS planning decisions may be appealed to the Ontario Municipal Board
("OMB"), an unelected, appointed body that is not accountable to the residents of
Cambridge;

AND WHEREAS appeals of OMB decisions are limited to questions of law, not the
findings of facts in a case;
AND WHEREAS all decisions—save planning decisions—made by Municipal Council are similarly only subject to appeal by judicial review and such appeals are limited to questions of law;

NOW THEREFORE BE IT HEREBY RESOLVED THAT Cambridge City Council requests the Government of Ontario to limit the jurisdiction of the OMB to questions of law or process;

AND THAT the Government of Ontario be requested to require the OMB to uphold any planning decisions of Municipal Councils unless they are contrary to the processes and rules set out in legislation;

AND THAT a copy of this Motion be sent to the Honourable Kathleen Wynne, Premier of Ontario, the Honourable Ted McMeekin, Minister of Municipal Affairs and Housing, the Honourable Patrick Brown, Leader of the Progressive Conservative Party, the Honourable Andrea Horwath, Leader of the New Democratic Party, and all MPPs in the Province of Ontario;

AND FURTHER THAT a copy of this Motion be sent to the Association of Municipalities of Ontario (AMO) and all Ontario municipalities for their consideration.

Sincerely,

Michael Di Lullo, MPA
City Clerk
BE IT FURTHER RESOLVED that the Government of Ontario be requested to require the OMB to uphold any planning decisions of Municipal Councils unless they are contrary to the processes and rules set out in legislation; and,

BE IT FURTHER RESOLVED that a copy of this Motion be circulated to the Honourable Kathleen Wynne, Premier of Ontario, the Honourable Ted McMeekin, Minister of Municipal Affairs and Housing, the Honourable Patrick Brown, Leader of the Progressive Conservative Party, the Honourable Andrea Horwath, Leader of the New Democratic Party, and local area MPPs; and,

BE IT FURTHER RESOLVED that a copy of this Motion be sent to the Association of Municipalities of Ontario (AMO) and local area municipalities for their consideration."

C. Tarling
Director of Legislated Services & City Clerk

*rd
NOW THEREFORE BE IT HEREBY RESOLVED THAT North Dumfries Township Council requests:

1. That the Government of Ontario limits the jurisdiction of the OMB to questions of law or process;

2. That the Government of Ontario be requested to require the OMB to uphold any planning decisions of Municipal Councils unless they are contrary to the processes and rules set out in legislation.

Council has requested that a copy of this resolution be forwarded to all 444 municipalities in Ontario for their endorsement and support, as well as to local MPP’s, the Progressive Conservative Party of Ontario and the Ontario New Democratic Party.

On behalf of Council, thank you for your consideration of this request.

Sincerely,

[Signature]

Julia Sippel, Acting Clerk
Township of North Dumfries

cc: Honourable Ted McMeekin, Minister of Municipal Affairs and Housing
Honourable Patrick Brown, Leader of the Ontario Progressive Conservative Party
Honourable Andrea Horwath, Leader of the Ontario NDP
Honourable Kathryn McGarry, MPP Cambridge – North Dumfries
Association of Municipalities of Ontario
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