Regional Municipality of Waterloo
Planning and Works Committee
Agenda
Tuesday, September 13, 2016
Approximately 10:00 a.m. (Immediately following A&F)
Regional Council Chamber
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


Recommendation:

Regular Agenda Resumes

5. Reports – Planning, Development and Legislative Services

5.1 PDL-CPL-16-40, Conservation Authorities Act Review - Response to Conserving our Future: Proposed Priorities for Renewal

Recommendation:

That the Regional Municipality of Waterloo take the following actions with respect to the Ministry of Natural Resources and Forestry’s document “Conserving our Future: Proposed Priorities for Renewal” (EBR 012-7583):

a) Endorse the five identified priority areas as warranting further elaboration in draft legislation, regulation, policy and programs; and


6. Reports – Transportation and Environmental Services

Commissioner's Office

6.1 TES-WAS-16-17/COR-FFM-16-11, Corporate Asset Management Plan (Presentation)

Recommendation:

Design and Construction

6.2 **PDL-LEG-16-56**, Authorization To Expropriate Lands (1st Report) for Improvements to King Street (Regional Road 15) and Weber Street (Regional Road 8) City of Waterloo

**Recommendation:** 116-117

6.3 **PDL-LEG-16-62**, Surplus Declaration and Conveyance of Easement Interest in Favour of Waterloo North Hydro Inc.- 1-5 High Street, Waterloo

**Recommendation:**

That the Regional Municipality of Waterloo:

a) declare an easement interest in the lands described as Part Lot 12, German Company Tract, part of PIN 22276-0037 (LT) as shown as Part 1, on Reference Plan 58R-18950, in the City of Waterloo surplus to the needs of the Region, as detailed in Report No. PDL-LEG-16-62 dated September 13, 2016, and provide the standard public notification as required by the Region’s property disposition by-law; and

b) approve, enter into an Agreement for, and execute all documentation related to, the conveyance of a permanent easement to Waterloo North Hydro Inc. for the sum of $1.00, for the installation and maintenance of hydro equipment, on, over and under the lands described Part Lot 12, German Company Tract, part of PIN 22276-0037 (LT) as shown as Part 1, on Reference Plan 58R-18950, in the City of Waterloo, as detailed in Report No. PDL-LEG-16-62 dated September 13, 2016 pursuant to the Region’s property disposition by-law and the satisfaction of the Regional Solicitor.

Water Services

6.4 **TES-WAS-16-16**, William Street - Strange Street Water Supply Class Environmental Assessment: Notice of Completion

**Recommendation:**

That the Regional Municipality of Waterloo accept the “Environmental Study Report, William Street – Strange Street Water Supply Class Environmental Assessment Study,” summarized in this Report TES-WAS-16-16 dated September 13, 2016;

And that the Regional Municipality of Waterloo publish the Notice of
Completion for the Environmental Assessment 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.

6.5 **TES-WAS-16-18**, Biosolids Strategy – Project Update (Video) (Information)

7. **Information/Correspondence**

7.1 **Council Enquiries and Requests for Information**

8. **Other Business**

9. **Next Meeting – October 4, 2016**

10. **Adjourn**
## Next Meetings

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<th>Date</th>
<th>Time</th>
<th>Description</th>
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<tr>
<td><strong>Planning and Works Committee</strong></td>
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<tr>
<td>October 4, 2016</td>
<td>1:00 P.M.</td>
<td>Planning and Works Committee</td>
<td>Council Chamber 2nd Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario</td>
</tr>
<tr>
<td>November 1, 2016</td>
<td>1:00 P.M.</td>
<td>Planning and Works Committee</td>
<td>Council Chamber 2nd Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario</td>
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<tr>
<td><strong>Transportation and Environmental Services</strong></td>
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<tr>
<td>Thursday, September 15, 2016</td>
<td>5:00 P.M. – 8:00 P.M.</td>
<td>Homer Watson Boulevard Improvements, Conestoga College Boulevard to Manitou Drive, City of Kitchener - Public Consultation Centre #1</td>
<td>Waterloo Region Museum Grand Foyer 10 Huron Road – Doon Heritage Crossroads Kitchener, Ontario</td>
</tr>
<tr>
<td>Wednesday, September 21, 2016</td>
<td>Drop in anytime 9:30 AM – 8:30 PM</td>
<td>Moving Forward (Transportation Master Plan Update): Public Consultation Centre #1 – Information Package</td>
<td>Cambridge Centre Mall (outside The Bay) 555 Hespeler Road, Cambridge, Ontario</td>
</tr>
<tr>
<td>Thursday, September 22, 2016</td>
<td>Drop in anytime 5:00 PM – 8:00 PM</td>
<td>Moving Forward (Transportation Master Plan Update): Public Consultation Centre #1 – Information Package</td>
<td>Lions Arena, 20 Rittenhouse Road, Kitchener, Ontario</td>
</tr>
<tr>
<td>Thursday, September 29, 2016</td>
<td>Drop in anytime 5:00 PM – 8:00 PM</td>
<td>Moving Forward (Transportation Master Plan Update): Public Consultation Centre #1 – Information Package</td>
<td>Waterloo Memorial Recreation Centre, 2nd Floor, Hauser Haus, 101 Father David Bauer Drive Waterloo, Ontario</td>
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Region of Waterloo
Planning, Development and Legislative Services
Community Planning

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: September 13, 2016     File Code: D18-01

Recommendation:

Summary:
In accordance with the Regional By-law 01-028, as amended, and By-law 16-031 the Commissioner of Planning, Development and Legislative Services has:

- Approved the following part lot control exemption by-laws;
- Accepted the following plans of subdivision and plans of condominium;
- Draft Approved the following plan of subdivision;
- Modified the following plan of condominium;
- Released for registration the following plans of subdivision and plans of condominium; and
- Approved the following official plan amendment.

Report:
City of Cambridge
Part Lot Control Exemption By-law 2016-143
Applicant: Winzen Construction Limited
Part Lot Control Exemption By-law 2016-143

Location: Chester Drive
Proposal: To create 37 Parcels of Tied Land (POTL) associated with Plan of Condominium 30CDM-15102 and various easements. These POTLs are developed with 37 townhouse units.
Processing Fee: Paid July 19, 2016
Commissioner’s Approval: July 20, 2016

Plan of Subdivision Application 30T-16103

Date Accepted: July 28, 2016
Applicant: Brian Domm Farms Ltd.
Location: Bismarck Drive
Proposal: To permit the development of 317-369 dwelling units, including single detached, multiple residential and mixed use units, as well as open space and storm water management.
Processing Fee: Paid June 30, 2016

Plan of Subdivision Application 30T-16104

Date Accepted: July 28, 2016
Applicant: Hallman Construction Limited
Location: Blenheim Road
Proposal: To permit the development of 519-610 dwelling units, including single detached, multiple residential and mixed use units. As well as a school block, open space and storm water management.
Processing Fee: Paid June 30, 2016

Registration of Draft Plan of Subdivision 30T-05102

Draft Approval Date: May 28, 2008
Phase: Phase 2b, Final
Applicant: Chrisview Custom Homes Ltd.
Location: Water Street and Myers Road
Registration of Draft Plan of Subdivision 30T-05102
Proposal: To permit the development of 24 single detached residential units.
Processing Fee: Paid June 14, 2016
Commissioner’s Release: July 20, 2016

Registration of Draft Plan of Condominium 30CDM-16101
Draft Approval Date: April 28, 2016
Phase: Entire Plan
Applicant: Haastown Holdings (Cambridge 2012) Inc.
Location: 150 Water Street North
Proposal: To permit the development of 109 residential condominium apartment units.
Processing Fee: Paid July 15, 2016
Commissioner’s Release: August 8, 2016

City of Kitchener

Registration of Draft Plan of Subdivision 30T-10202
Draft Approval Date: January 16, 2012
Phase: Stage 3
Applicant: Rockway Holdings Limited
Location: Old Zeller Drive and Fairway Road
Proposal: To permit the development of 137 single detached residential units, 76 street-fronting residential townhouse units and 162 multiple use residential units.
Processing Fee: Paid July 4, 2016
Commissioner’s Release: July 29, 2016

Registration of Draft Plan of Condominium 30CDM-12204
Draft Approval Date: November 23, 2012
Phase: Phase 5
Registration of Draft Plan of Condominium 30CDM-12204

Applicant: Deerfield Homes Ltd.
Location: Isaiah Drive, Eliza Avenue, Nyles Drive
Proposal: To permit the development of 11 residential townhouse units
Processing Fee: Paid July 11, 2016
Commissioner’s Release: July 12, 2016

Registration of Draft Plan of Condominium 30CDM-14205

Draft Approval Date: July 12, 2015
Phase: Stage 3
Applicant: Deerfield Homes Ltd.
Location: 388 Old Huron Road
Proposal: To permit the development of 16 residential condominium apartment units.
Processing Fee: Paid July 14, 2016

Registration of Draft Plan of Condominium 30CDM-15210

Draft Approval Date: February 25, 2015
Phase: Entire Plan
Applicant: Andrin City Centre One Ltd.
Location: 85 Duke Street West
Processing Fee: Paid July 15, 2016
Commissioner’s Release: August 8, 2016

City of Waterloo

Part Lot Control Exemption By-law 2016-043

Applicant: Carey Homes
Location: 607 Montpellier Drive
Proposal: To create 2 semi-detached residential units.
Part Lot Control Exemption By-law 2016-043

Processing Fee: Paid August 31, 2016

Commissioner's Approval: August 31, 2106

Plan of Subdivision Application 30T-16402

Date Accepted: August 23, 2016

Applicant: 2115881 Ontario Limited

Location: Conservation Drive and Beaver Creek Road

Proposal: To permit the development of 478 residential units comprised of single-detached units, street-townhouse units, back-to-back townhouse units, a school block, parks, stormwater management, open space, walkways and trail, and road widening block.

Processing Fee: Paid July 20, 2016

Plan of Condominium Application 30CDM-16408

Date Accepted: August 22, 2016

Applicant: U.I.D. Developments Inc.

Location: 8 and 10 Noecker Street

Proposal: To permit the development of 169 residential condominium apartment units and 1 commercial unit.

Processing Fee: Paid August 17, 2016

Plan of Condominium Application 30CDM-16409

Date Accepted: August 24, 2016

Applicant: 2371632 Ontario Inc.

Location: 300 to 330 Phillip Street

Proposal: To permit the development of 624 residential condominium apartment units and 9 commercial units.

Processing Fee: Paid August 5, 2016
Plan of Condominium Application 30CDM-16407

Date Accepted: August 18, 2016
Applicant: 246 Albert Inc.
Location: 246 Albert Street
Proposal: To permit the development of 58 residential condominium apartment units and 1 commercial unit.
Processing Fee: Paid August 12, 2016

Plan of Condominium Application 30CDM-16411

Date Accepted: August 31, 2016
Applicant: IN8 (Ivy Towns 2) Developments
Location: 288, 290, 294 Albert Street and 287, 289 Hemlock Street
Proposal: To permit the development of 33 stacked townhouse units, 4 commercial units and 40 at-grade parking units.
Processing Fee: Paid August 31, 2016

Plan of Condominium Application 30CDM-16412

Date Accepted: August 31, 2016
Applicant: IN8 (Ivy Towns 3) Developments
Location: 288, 290, 294 Albert Street and 287, 289 Hemlock Street
Proposal: To permit the development of 43 stacked townhouse units, 3 commercial units and 49 at-grade parking units.
Processing Fee: Paid August 31, 2016

Draft Approval of Plan of Condominium 30CDM-15407

Applicant: IN8 (Ivy Towns) Developments Inc.
Location: 253 Albert Street
Proposal: To permit the development of 68 residential condominium apartment units.
Processing Fee: Paid July 7, 2016
Commissioner’s Approval: August 11, 2016
Draft Approval of Plan of Condominium 30CDM-15407

Came Into Effect: September 1, 2016

Modification of Draft Plan of Condominium 30CDM-15406

Draft Approval Date: June 6, 2016
Applicant: IN8 (Sage II) Developments Inc.
Location: 318 Spruce Street
Proposal: Through a Zone Change Approval to increase the permitted density to 813 bedrooms per hectare through density bonusing, the applicant proposed to convert 19 office units to 19 residential units.

Processing Fee: Paid June 29, 2016
Commissioner’s Approval: August 18, 2016
Came Into Effect: Immediately, due to nature of application.

Registration of Draft Plan of Subdivision 30T-05404

Draft Approval Date: May 1, 2014
Phase: Entire Plan
Applicant: 1353843 Ontario Limited
Location: 353 Woolwich Street
Proposal: To permit the development of 67 single detached residential units.

Processing Fee: Paid June 2, 2016
Commissioner’s Release: July 6, 2016

Registration of Draft Plan of Condominium 30CDM-15401

Draft Approval Date: March 11, 2016
Phase: Entire Plan
Applicant: JD Development Phillip Street Ltd.
Location: 256 Phillip Street
Registration of Draft Plan of Condominium 30CDM-15401

Proposal: To permit the development of 106 residential condominium apartment units.

Processing Fee: Paid June 10, 2016

Commissioner’s Release: July 15, 2016

Registration of Draft Plan of Condominium 30CDM-16401

Draft Approval Date: Exempt

Phase: Phase 1

Applicant: Hawkesview Homes/Grey Silo

Proposal: To permit the development of 23 residential condominium townhouse units.

Location: 243 Grey Silo Road

Processing Fee: Paid August 1, 2016

Commissioner’s Release: August 18, 2016

Township of North Dumfries

Registration of Draft Plan of Subdivision 30T-11301

Draft Approval Date: October 7, 2015

Phase: Entire Plan

Applicant: 2081788 Ontario Limited

Location: Brant-Waterloo Road, Ayr

Proposal: To permit the development of 46 single detached residential units, 12 semi-detached residential units and 5 residential townhouse units.

Processing Fee: Paid June 28, 2016

Commissioner’s Release: July 6, 2016

Registration of Draft Plan of Subdivision 30T-05301

Draft Approval Date: April 28, 2006

Phase: Phase 3 (Final)
Applicant: 839685 Ontario Inc.
Location: Hilltop Community, Ayr
Proposal: To permit the development of 43 single detached residential units, 38 semi-detached residential units and 52 residential townhouse units.
Processing Fee: Paid July 5, 2016
Commissioner's Release: July 19, 2016

Township of Woolwich

Registration of Draft Plan of Subdivision 30T-14701
Draft Approval Date: November 7, 2014
Phase: Entire Plan
Applicant: Birdlands Development Ltd.
Location: 3114 Listowel Road, Elmira
Proposal: To permit the development of 82 single detached residential units, 26 semi-detached residential units and 33 residential townhouse units.
Processing Fee: Paid July 15, 2016
Commissioner's Release: July 20, 2016

Official Plan Amendment Number 27
Applicant: Conestoga Meat Packers
Location: 313 Menno Street
Proposal: To add Rural Special Policy Area 6.1.2.2.7, applicable to a portion of the lands, with site-specific policies under Section 6.1.2.2 Non-Farm-Related Non-residential Development to facilitate a major expansion to an existing industrial use/operation located outside of a Settlement Area. The proposed site-specific policies would permit an expansion to Conestoga Meat Packers to a maximum gross floor area of 41,808 m² and to a maximum area of operation of up to approximately 20 hectares.
Official Plan Amendment Number 27

Processing Fee: June 17, 2016
Commissioner’s Approval: July 15, 2016
Came Into Effect: August 5, 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 areas.

Financial Implications:

Nil.

Other Department Consultations/Concurrence:

Nil.

Attachments:

Nil.

Prepared By: Andrea Banks, Program Assistant

Approved By: Debra Arnold, Acting 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: September 13, 2016       File Code: D06-80
Subject: 2012 – 2015 Corporate Greenhouse Gas Reduction Plan Progress

Recommendation:
For Information.

Summary:
This report provides a progress update on the corporate Greenhouse Gas (GHG) emission reductions achieved under the Region’s commitment to the Federation of Canadian Municipalities Partners for Climate Protection program and the local Sustainable Waterloo Region initiative. Emission reductions from Regional operations as of year-end 2015 were estimated to be 15% below the base year of 2009 despite significant increases in the size of Regional facilities and fleet of vehicles. The Region currently appears to be on track to meet its emission reduction target of 10% below 2009 emissions level by the year 2019. More detailed analysis of trends and key performance indicators as well as projections to the year 2019 are included within Attachment A.

Sustained efforts to control GHG emissions continue to be required to offset growth in Regional operations and to help reduce the rising costs of fuel, electricity and natural gas. This will likely be achieved via improved asset management as well as the use of efficiency measures, alternative technologies and renewable energy sources where appropriate. Increases in emissions from fleet and the landfill, as well as overall energy use, are expected over the next several years due to planned expansion of programs and operations servicing the needs of a growing local population. The Province of Ontario is also adding more regulatory controls for climate change which are briefly outlined within this report and will be addressed in more detail within reports to the Administration and Finance and Planning and Works Committees later this year.
Report:

Regional Council previously approved a Greenhouse Gas (GHG) Action Plan pertaining to corporate operations under the responsibility of the Region of Waterloo (report CR-FM-11-011, dated May 3, 2011). The action plan was part of a commitment to the national Partners for Climate Protection program administered by the Federation of Canadian Municipalities and the local Sustainable Waterloo Region initiative (CR-FM-10-007, dated April 6, 2010). Both of these voluntary initiatives require implementation of actions towards achieving a GHG emission reduction target. The Region’s corporate GHG target is 10% reduction of 2009 emissions by the year 2019 (CR-FM-13-015.1, October 9, 2013). This current report provides a progress update on corporate GHG emission reductions achieved up to calendar year-end 2015.

Reducing Corporate GHG Emissions from Regional Operations

The overall goal of the Region’s Corporate GHG Action Plan is to reduce emissions from operations while continuing to provide high quality community programs and services to a growing population. This goal will be reached by focussing on the following three objectives which incorporate the expectation that Regional operations are likely to grow along with increased community demand for various infrastructure, programs and services:

1. Optimize the efficient consumption of stationary energy (i.e., within Regional facilities and assets including the use of renewable energy where appropriate);

2. Manage the Region’s fleet of vehicles to achieve ongoing improvements in fuel efficiency including the use of suitable alternative fuels and technologies; and

3. Ensure other Regional operations exploit opportunities to reduce GHG emissions where feasible such as solid waste management, wastewater treatment and biosolids using best management practices.

A previous progress report was provided to Regional Council in 2013 for emissions from corporate operations up to calendar year 2011 (CR-FM-13-015.1, October 9, 2013). Since then, Environment Canada has issued guidance to calculate GHG emissions coming from methane using a higher global warming potential value which consequently increases the estimates of GHGs coming from Regional landfills along with wastewater treatment and biosolids management. Previous years’ emissions estimates were adjusted accordingly so that year-to-year comparisons can be made using this updated method. A reassessment of emissions from wastewater treatment and biosolids management was also incorporated in the values for 2009 – 2015. Figure 1 illustrates total emissions from Regional operations during this period.
Emissions were reduced by 15% as of year-end 2015 compared to base year estimates for 2009, a reduction of over 23,000 tonnes of GHGs. This reduction was achieved despite a 13% increase in the Region’s facility space and fleet of vehicles that occurred during the same period. Figure 2 illustrates emissions by source for the year 2015.
Calculations were based on the International Local Government GHG Emission Analysis Protocol required by the Federation of Canadian Municipalities – Partners for Climate Protection program.

As indicated in Table 1 below, three of six sources of emissions decreased during 2009 – 2015, most significantly from electricity use and biosolids from wastewater treatment. The lower emissions from electricity use during this period was due to the significant decrease in GHG emissions within the provincial energy grid, whereas, the large reduction of emissions from biosolids were caused by planned operational improvements made to management practices within this area.

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<tbody>
<tr>
<td>Landfills</td>
<td>53,668</td>
<td>42,743</td>
<td>49,748</td>
<td>50,828</td>
<td>-5%</td>
</tr>
<tr>
<td>Fleet (including contracted transport e.g. waste collection)</td>
<td>36,013</td>
<td>37,254</td>
<td>38,344</td>
<td>39,547</td>
<td>10%</td>
</tr>
<tr>
<td>Natural Gas Use</td>
<td>14,821</td>
<td>14,268</td>
<td>14,598</td>
<td>15,708</td>
<td>6%</td>
</tr>
<tr>
<td>Biosolids from Wastewater Treatment</td>
<td>27,955</td>
<td>34,530</td>
<td>17,860</td>
<td>12,737</td>
<td>-54%</td>
</tr>
<tr>
<td>Electricity Use</td>
<td>17,345</td>
<td>14,288</td>
<td>11,886</td>
<td>8,404</td>
<td>-52%</td>
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<tr>
<td>Staff Business Travel</td>
<td>519</td>
<td>490</td>
<td>459</td>
<td>518</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Totals (rounded)</strong></td>
<td><strong>150,320</strong></td>
<td><strong>143,573</strong></td>
<td><strong>132,894</strong></td>
<td><strong>127,742</strong></td>
<td><strong>-15%</strong></td>
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Increases in emissions occurred within the Region’s expanding fleet of vehicles from higher fuel consumption, whereas, those from natural gas consumption are due in part to expanding facility space in addition to the influence of weather variation year-to-year which affects space heating during cooler months. The Regional fleet is a challenging area with regard to reducing GHG emissions as more vehicles are used to service a growing population such as with GRT, Police and EMS which collectively account for 90% of the Region’s fleet fuel consumption. The decrease in emissions from the landfill between 2009 – and 2015 are due partly to increased diversion of organic waste and a continually declining emission level from the closed Cambridge landfill site. However, emissions from the landfill may increase between 2015 and 2019 as more solid waste is deposited in the Waterloo landfill each year due to increases in population and economic activity.
Although the Region appears to be currently on track to meet its emission reduction target, continued growth in operations will provide upward pressure on annual emission values over the next few years. More detailed analysis of trends and key performance indicators, as well as projections to the year 2019, are included within Attachment A.

Sustained efforts to control GHG emissions continue to be required to offset growth in Regional operations and to help reduce the rising costs of fuel, electricity and natural gas. This will likely be achieved via improved asset management as well as the use of efficiency measures, alternative technologies and renewable energy sources where appropriate. Regional Council may want to consider establishing a longer-term (for example to the year 2050) and deeper emission reduction target for its Corporate GHG action plan in order to be consistent with other leading government entities across Canada and internationally. This could be considered when future progress reports are completed or when the plan is updated after the current target year of 2019.

**Relevant Legislation**

The Province of Ontario has been actively developing regulatory mechanisms to control GHG emissions. Bill 172, the Climate Change Mitigation and Low-Carbon Economy Act, 2016 was passed on May 18 to implement what is commonly known as the Cap and Trade legislation. Although this legislation will not directly require emission reductions from Regional operations, it is expected to indirectly impact the cost of energy such as vehicular fuel, natural gas and electricity. Staff in the Region’s Corporate Energy Office within the Facilities Management and Fleet Services Division is planning to prepare a report for the Administration and Finance Committee later this year with more details and analysis on this issue.

The Province has also proposed changes to land use planning legislation and plans which may require municipalities to incorporate GHG emission reduction targets, as well as climate adaptation strategies within Regional and Municipal official plans. Planning, Development and Legislative Services staff is preparing a report for the Planning and Works Committee in the fall to address the implications of the proposed Growth Plan for the Greater Golden Horseshoe, 2016. An initial review of the proposed Growth Plan indicates that commitments within the Region’s current Corporate Strategic Plan (Environment and Sustainable Growth Focus Area) is in alignment with the Province’s general direction in terms of further developing and implementing climate change related strategies.

**Corporate Strategic Plan:**

This report directly addresses the Focus Area Environment and Sustainable Growth within the Region’s Corporate Strategic Plan with respect to the following Strategic Objective and Action:
3.3 Enhance efforts to improve air quality.

3.3.1 Reduce emissions of greenhouse gases (GHGs) from Regional operations, activities and facilities.

Actions referenced within this report and attachment also pertain indirectly to the following Strategic Objectives:

3.1 Increase the amount of waste diverted from the landfill.
3.2 Protect the quality and quantity of our water resources.

In addition, several actions from the Region’s previous Corporate Strategic Plans (2007 – 2014) are reflected in some of the emission reductions captured within this report such as diversion of organic waste (expansion of green bin program), construction of new LEED buildings and development of an energy reduction plan for Water and Wastewater facilities to name a few.

Financial Implications:

The vast majority of actions referenced within this report and attachment are being implemented under previously approved operating and capital budgets of the corresponding lead departments. Examples of these actions include construction of new LEED buildings, implementation of the recommendations from the Fleet Services Program Review, diversion of organics through the green bin program and upgrades to water services and wastewater facilities. Those actions that require new financial support will follow the normal budget approval processes prior to implementation with priority given to those initiatives with strong business cases and where paybacks exist within the Region’s useful life of the asset. In most cases if not all, actions identified within the plan provide operational / service improvements and/or cost savings as well as GHG emission reductions.

Other Department Consultations/Concurrence:

Staff in Transportation and Environmental Services and Corporate Services were involved in the review of the report and attachment.

Attachments:

Attachment A – Region of Waterloo Corporate GHG Progress Report 2012 - 2015

Prepared By: David Roewade, Sustainability Specialist
Nicholas Cloet, Student Planner – Climate Change

Approved By: Debra Arnold, Acting Commissioner, Planning, Development and Legislative Services
Region of Waterloo Corporate GHG Progress Report 2012 - 2015

September 2016
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   Biosolids from Wastewater Treatment ....................................................................................... 27
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Background

Growing concentrations of greenhouse gases (GHGs) in the atmosphere threaten to disrupt climatic and ecological systems crucial to our quality of life. Governments, businesses and other organizations are attempting to mitigate their impacts on the global climate by reducing their emissions of GHGs. Not only is mitigation an important step to preventing further climate change, but reducing GHG emissions can also result in additional benefits to human health (e.g., reducing air pollution from combustion vehicles), the environment (e.g., more sustainably managing natural resources) and the economy (e.g., by saving money through energy conservation for more productive use elsewhere).

In May, 2011, Regional Council approved the Greenhouse Gas (GHG) Inventory and Action Plan for the Region of Waterloo’s corporate operations (i.e., activities that are the responsibility of the Region). The overall goal of the Action Plan is to reduce GHG emissions of operations while continuing to provide high quality community programs and services to a growing population. Growing demand for various programs and services by the community often requires expansion of Regional operations and/or infrastructure, thereby increasing the potential for GHG emissions from corporate operations. The Region is taking responsibility for the effects of its activities on the environment and continues to monitor and continuously reduce its GHG emissions according to established reduction targets.

The original GHG reduction target set by Regional Council committed the Region to maintain corporate emissions at 2009 levels until 2019, with a forecasted overall reduction of more than 40,000 tonnes of GHGs measured in CO₂ equivalent (CO₂e), and a 14% per capita intensity-based reduction by 2019. In the previous Progress Report: Region of Waterloo Corporate GHG Inventory and Action Plan (CR-FM-13-015.1, October 9, 2013) Council adopted a more ambitious, yet still attainable GHG target of 10% below 2009 levels. With forecasted population growth, this is equivalent to a 23% reduction in per capita corporate GHG emissions. These absolute and intensity-based commitments were made with respect to the Federation of Canadian Municipalities (FCM) Partners for Climate Protection program (PCP) and Sustainable Waterloo Region (SWR) in their program to help local organizations reduce their carbon footprint. The Region reports on its GHG emissions performance to both of these organizations on an annual basis.

The Region’s corporate scope GHG calculations only capture emissions from Regional operations and do not capture emissions generated in the overall community of Waterloo Region. The community scope is being addressed in collaboration with several local partners through an initiative called Climate Action WR. More information on this program is available at the following website: www.climateactionwr.ca/.
Region of Waterloo Corporate GHG Inventory for 2015

The emissions inventory was originally developed in 2010 in accordance with the International Local Government GHG Emission Analysis Protocol – Version 1.0 (October 2009), which is required by the FCM-PCP program. Emissions from the following Region of Waterloo operations are included within the scope of the emissions inventory based on the operational control approach defined within the protocol:

- Electricity used by buildings, street lighting and traffic signals, and water treatment facilities;
- Natural gas used by buildings;
- Fleet fuel use including GRT and contracted transport (e.g. waste collection/diversion);
- Staff business travel;
- Landfill gas emissions (flared and fugitive); and,
- Biosolids from Wastewater Treatment.

The inventory comprises annual activity data from various Regional divisions and applies the most recent emission factors for three of the leading contributors to climate change, including: Carbon Dioxide (CO$_2$), methane (CH$_4$), and nitrous oxide (N$_2$O). For the purpose of reporting, these GHGs are converted to equivalents of carbon dioxide (CO$_2$e) based on their recognized global warming potential. For example, methane has a global warming potential 25 times more potent than CO$_2$, meaning 1 tonne of methane is equivalent to 25 tonnes of CO$_2$e. Environment Canada$^1$ provides guidance on the global warming potentials of various chemicals.

Activity data was obtained from a number of existing Regional databases of energy consumption, fuel consumption, staff mileage claims, and other specialized operational databases. Emissions factors were applied to convert activity data (e.g. megawatt hours (MWh) of electricity consumption) into CO$_2$e; for example, the emissions factor used for 2015 electricity consumption is 0.057 tonnes of CO$_2$e per MWh based on Independent Electricity System Operator (IESO) supply information for the year 2015. When Environment Canada formally publishes this emission factor for 2015 in their national inventory report next year, staff will adjust the emissions from electricity as necessary. Established engineering models were utilized to estimate emissions for more complex sources such as fugitive emissions from the Region’s landfills and biosolids from wastewater treatment. A GHG inventory management database houses detailed calculations for all Regional emission sources.

In order to develop a GHG inventory, emissions forecasts and reduction targets, a

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baseline year must be established to allow for comparisons and the measurement of continual improvement. The Region selected a baseline year of 2009 for the established 10 year target out to 2019 due to the availability of the most accurate and complete datasets.

Overall Performance and GHG Emissions

As Figure 1 illustrates, overall GHG emissions were below the reduction target (135,500 tonnes of CO2e) in both 2013 and 2015, as part of a clear downward trend in corporate GHG emissions since 2009. The 10% reduction target is a commitment under FCM’s PCP program. This figure also shows the relative contributions of each emissions source to total GHG emissions for each year.

Figure 1 - RoW GHG Emissions from Corporate Operations by Emission Source, including Reduction Target 2009 - 2015

As shown in Figure 2, population has risen steadily since 2009 which influences Regional operations such as in transit ridership and new facilities. Despite installing new buildings and expanding services, GHG emissions per capita have declined at a faster rate (-21%) than the rate of increase in the local population (+7%). This means that even with more people, Regional operations serving the community are continually less GHG intensive on a per-person basis than in 2009. The per capita reduction target of 23% below 2009 levels is a commitment with Sustainable Waterloo Region’s program.
Figure 2 - Percent Change in Population and Per-Capita Corporate GHG Emissions, 2009 - 2015

Figure 3 illustrates the relative sizes of each GHG emission source in 2015. Solid waste (i.e. decaying organic matter in Region-operated landfills) is the highest emitter at just under 40%, followed by fleet vehicles at 31.1%, and natural gas at just over 12%. Staff business travel was the lowest emitter at 0.4% of total GHG emissions.

Figure 3 - Proportion of RoW GHG Emissions by Source, 2015
Absolute emission numbers for each category in 2009 and 2015, with a comparison of the percentage differences between these two time periods, are presented in Table 1. Emissions from Electricity consumption and from Biosolids from Wastewater Treatment had the largest GHG reductions, more than 50% lower in 2015 compared to 2009 levels. Solid Waste saw a more modest reduction of 5% below 2009 levels, though for Solid Waste this translates to a significant absolute reduction (3,271 tonnes CO$_2$e). Two categories did contribute more GHG emissions in 2015 compared to 2009: Fleet Vehicles (with a 10% increase), and Natural Gas (with a 6% increase). More detail on these emissions, context and explanations for each source category can be found in the following sections.

Table 1 - Comparison of 2009 and 2015 Corporate GHG Emissions from Regional Operations

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>2009 GHGs (Tonnes CO$_2$e)</th>
<th>2015 GHGs (Tonnes CO$_2$e)</th>
<th>Difference (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid Waste (Waterloo/Cambridge landfills)</td>
<td>53,668</td>
<td>50,828</td>
<td>-5%</td>
</tr>
<tr>
<td>Fleet/Transit Vehicles (including contracted transportation e.g., waste collection and diversion)</td>
<td>36,013</td>
<td>39,547</td>
<td>10%</td>
</tr>
<tr>
<td>Natural Gas (buildings/facilities)</td>
<td>14,821</td>
<td>15,708</td>
<td>6%</td>
</tr>
<tr>
<td>Biosolids from Wastewater Treatment (related to methane – not energy use)</td>
<td>27,955</td>
<td>12,737</td>
<td>-54%</td>
</tr>
<tr>
<td>Electricity (buildings/facilities, streetlights and traffic signals, leased space)</td>
<td>17,345</td>
<td>8,404</td>
<td>-52%</td>
</tr>
<tr>
<td>Staff Business Travel</td>
<td>519</td>
<td>518</td>
<td>-0%</td>
</tr>
<tr>
<td>Totals</td>
<td>150,556</td>
<td>127,742</td>
<td>-15%</td>
</tr>
</tbody>
</table>

Energy-Source GHG Emissions

Emissions can be roughly divided into those sources originating from the Region’s consumption of energy resources (i.e. electricity, natural gas, diesel and gasoline from fleet vehicles and staff business travel) and emissions from operations that deal with decaying organic matter (i.e. landfilled solid waste, and biosolids from wastewater treatment). In terms of energy sources, Table 2 quantifies the Region’s energy...
consumption and associated GHG emissions, and Figure 4 visually illustrates the Region’s GHG emissions by energy source.

Table 2 - CO\textsubscript{2}e Emissions by Energy Source, 2015

<table>
<thead>
<tr>
<th>Energy Source* (unit)</th>
<th>Quantity</th>
<th>Emissions (Tonnes)</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity (MWh)</td>
<td>138,357</td>
<td>7,886</td>
<td>$21,122,862</td>
</tr>
<tr>
<td>Natural Gas (m3)</td>
<td>8,261,256</td>
<td>15,708</td>
<td>$2,757,582</td>
</tr>
<tr>
<td>Diesel (L)</td>
<td>10,593,819</td>
<td>28,655</td>
<td>$9,358,602</td>
</tr>
<tr>
<td>Gasoline (L)</td>
<td>1,532,678</td>
<td>3,560</td>
<td>$1,418,952</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>55,809</td>
<td><strong>$34,657,998</strong></td>
</tr>
</tbody>
</table>

*Excludes leased space, contracted transport and staff travel

Figure 4 - Proportional Emissions (tonnes CO\textsubscript{2}e) by Energy Source, 2015

As Figure 4 illustrates, diesel fuel is the highest contributor to the Region’s GHG emissions from energy consumption (51%), followed by natural gas (28%) and electricity (14%), while gasoline accounts for just 7% of emissions from energy consumption. More details are available in the following sections on Electricity, Natural Gas, Fleet Vehicles and Staff Business Travel.

Electricity

The Region’s electricity consumption increased between 2009 and 2015; however, GHG emissions actually decreased significantly (Figure 5). The reason for this
discrepancy is a reduction of GHG-emitting energy sources in Ontario, which has
decreased the electricity emission factor since 2010. Emission factors are updated
annually by Environment Canada to reflect the varying composition of electricity
generation in Ontario. Electricity in Ontario\textsuperscript{2} is primarily a mix of nuclear (60%), hydro
(24%), gas (9%), and non-hydro renewable sources (7%). The large reduction in
emission factors (0.12 tonnes CO\textsubscript{2}e/MWh in 2009, to 0.057 tonnes CO2e/MWh in 2015
– a 53% reduction) is largely due to the provincial phase-out of coal power plants which
was completed in 2014.

Figure 5 - Total RoW GHG Emissions from Electricity Consumption, 2009 - 2015

With a growing population, there have been increases in facility and service needs. New
and expanded buildings will increase total electricity consumption, as will additional
traffic signals and streetlights installed to better serve users of an expanding Regional
road network. The largest consumer of electricity within Regional facilities is water and
wastewater operations. This consumption is primarily attributed to pumping and
treatment requirements within provincial regulations. Table 3 contains electricity
consumption data with the percentage change between 2009 and 2015 for each
corporate electricity-use category. Despite the 7% increase in population between 2009
and 2015, there was only a 2% increase in MWh consumed by Regional buildings,
facilities and services. Trends for these categories are presented visually for each year
between 2009 and 2015 in Figure 6.

\textsuperscript{2} http://www.energy.gov.on.ca/en/archive/the-end-of-coal/
Table 3 - Electricity Consumption (MWH) by Source, with Population, 2009 - 2015

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings</td>
<td>43,784</td>
<td>47,393</td>
<td>8%</td>
</tr>
<tr>
<td>Traffic Signals &amp; Streetlights</td>
<td>9,441</td>
<td>9,232</td>
<td>-2%</td>
</tr>
<tr>
<td>Water and Wastewater</td>
<td>82,240</td>
<td>81,732</td>
<td>-1%</td>
</tr>
<tr>
<td>Other (housing and leased space)³</td>
<td>9,073</td>
<td>9,073</td>
<td>0%</td>
</tr>
<tr>
<td>Total Megawatt Hours</td>
<td>144,539</td>
<td>147,430</td>
<td>2%</td>
</tr>
<tr>
<td>Population</td>
<td>535,700</td>
<td>575,000</td>
<td>7%</td>
</tr>
</tbody>
</table>

Figure 6 - Region of Waterloo Electricity Consumption by Category compared with Population Growth, 2009 - 2015

³ A portion of these facilities are not captured within the Region’s corporate energy database.
Building Electricity Consumption

Several new Regional buildings contributed to a 13% rise in square footage from 2009 to 2015; however, the amount of electricity consumption by these buildings increased by only 8% during the same period (see Table 4 for more detail).

Table 4 - Building Electricity Consumption (MWh) and Area (ft$^2$) - 2009 and 2015

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2015</th>
<th>% Change 2009-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Electricity Consumption (MWh)</td>
<td>43,784</td>
<td>47,393</td>
<td>8%</td>
</tr>
<tr>
<td>Building Area (ft$^2$)</td>
<td>5,613,079</td>
<td>6,336,691</td>
<td>13%</td>
</tr>
</tbody>
</table>

Several energy conservation and efficiency projects were completed in 2015 resulting in an approximately 720 MWh reduction in electricity consumption. In addition, although overall facility space is increasing, ten new Regional facilities that were constructed between 2009 and 2015 have been built at least LEED$^4$ Silver certified levels (five of these are LEED Gold certified), which is a result of the Region of Waterloo’s minimum sustainable design and construction standard for new Regional facilities with more than 500m$^2$ (5,400 ft$^2$) of occupied space. LEED Certified new buildings save anywhere between 25 and 50%$^5$ compared to non-LEED buildings. A recent Facilities and Fleet Management report (COR-FFM-16-02, February 23, 2016)$^6$ details the Region’s LEED designated buildings over the last 10 years.

Traffic Signals and Street Lights Electricity Consumption

Electricity consumption for street lights on Regional roads and traffic signals decreased by 2% between 2009 and 2015, with little variability in the years between. A retrofit of all streetlights to LED technology is expected to be implemented by 2017 / 2018.

Table 5 - Street Lights / Traffic Signal Electricity Consumption (MWh), 2009 - 2015

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2015</th>
<th>% Change 2009-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Lights and Traffic Signal Electricity Use (MWh)</td>
<td>9,441</td>
<td>9,232</td>
<td>-2%</td>
</tr>
</tbody>
</table>

---

$^4$ LEED stands for Leadership in Energy and Environmental Design. For more information: [http://www.cagbc.org/CAGBC/LEED/CAGBC/Programs/LEED/Going_green_with_LEE.aspx](http://www.cagbc.org/CAGBC/LEED/CAGBC/Programs/LEED/Going_green_with_LEE.aspx)


Water and Wastewater Electricity Consumption

Water and wastewater treatment facilities mainly use electricity to process water and wastewater, with relatively little consumed by lights, office space, etc. For this reason, comparing electricity usage to floor area is not a good indicator of efficiency. Instead, this type of energy consumption is compared to overall water demand and wastewater flows as influential factors on water infrastructure operations.

Table 6 - Water Treatment Electricity Consumption (MWh) and Water Demand (Millions of Litres), 2009 - 2015

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2015</th>
<th>% Change 2009-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water and Wastewater</td>
<td>82,240</td>
<td>81,732</td>
<td>-1%</td>
</tr>
<tr>
<td>Electricity Use (MWh)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Demand (Millions of</td>
<td>54,266</td>
<td>51,137</td>
<td>-6%</td>
</tr>
<tr>
<td>Litres)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wastewater Flow (m$^3$)</td>
<td>68,656,736</td>
<td>58,336,182</td>
<td>-15%</td>
</tr>
</tbody>
</table>

Electricity use has declined by approximately 1% since 2009 in water and wastewater management; however, total water demand has decreased by 6% over the same time period and wastewater flow has decreased by 15%. Wastewater flows do not follow the same trend as water demand as they are very weather dependent in terms of being significantly impacted by heavy precipitation events and the amount of runoff during spring snowmelts. Consequently, the difference in these rates of decline does not scale directly to the amount of water or wastewater processed.

The overall change in energy consumption during this period can be explained by many factors. For example, one water pumping station was taken offline since spring of 2014 and for much of 2015 which reduced electricity consumption by over 3000 MWh. Another factor pertains to water conservation efforts which are clearly succeeding, as water demand has decreased even as Waterloo Region’s population has continued to rise (Figure 2). Also, the Water Services division has implemented well pump upgrades, such as variable frequency drives, along with improvements to wastewater aeration control resulting in improved energy efficiency. In addition, new processes are coming online which are impacting electricity usage within water services due to ongoing capital upgrades to the different facilities (e.g. switching from chlorine to ultraviolet treatment of water which is a more effective form of treatment but uses more electricity).
Natural Gas

Natural gas is primarily used to heat regional buildings and facilities during periods of cool weather, meaning consumption is primarily driven by interior area (i.e. the amount of space that requires heating) and the effect of temperatures described below as Heating Degree Days or HDDs. HDDs are a simplified measure of the number of days below a baseline temperature (18 degrees C), and the number of degrees below that baseline. To illustrate, a period of three days with temperatures averaging 16 degrees (2 degrees lower than the baseline for each day) would be counted as 6 HDDs. If one year has more Heating Degree Days than another, we assume that part of an increase in natural gas use was necessary to counteract the weather, regardless of energy efficiency initiatives.

As Figure 7 illustrates, GHG emissions for natural gas follow a similar trend to the number of Heating Degree Days (HDDs).

**Figure 7 - GHG Emissions (tonnes CO\textsubscript{2}e) from Natural Gas Consumption, 2009 - 2015**

Natural gas consumption increased by 6% between 2009 and 2015, despite an increase in interior building area of 12.9% in the same time period (see Table 7), again demonstrating that building area is only one important factor of natural gas usage.
Table 7 - RoW Natural Gas Consumption (m$^3$) and Building Area (ft$^2$), 2009 - 2015

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2015</th>
<th>% Change 2009 - 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>RoW Natural Gas Consumption (m$^3$)</td>
<td>7,795,073</td>
<td>8,261,256</td>
<td>6.0%</td>
</tr>
<tr>
<td>Building Area (ft$^2$)</td>
<td>5,613,079</td>
<td>6,336,691</td>
<td>12.9%</td>
</tr>
</tbody>
</table>

Regional consumption of natural gas fluctuates more than can be accounted for by floor space. In addition to showing floor space from 2009 to 2015, Figure 8 also shows the original natural gas consumption curve with a secondary consumption curve that has been normalized to account for HDDs (utilizing the average number of HDDs from 2009 to 2015). The normalized curve illustrates that if the number of HDDs had equal across the 2009 to 2015, the Region’s natural gas consumption would have fluctuated much less. Given that there was an increase in facility space since 2009 as previously discussed, it is also important to note that conservation projects completed last year helped reduce 33,729 m$^3$ of natural gas during 2015 alone.

Figure 8 - ROW Efficiency of Natural Gas Consumption (2009 - 2015)
Fleet Vehicles

The Region’s fleet vehicles provide essential services to the community, such as public transit, police and EMS, as well as services related to road maintenance, waste and water management, airport operations, and more. More than 1,000 fleet vehicles consume significant quantities of gasoline and diesel fuel to support these services, resulting in tail-pipe emissions that impact our air quality and contribute to climate change. With volatile fuel prices, fuel efficiency is also an important opportunity for cost savings, as well as emissions control.

GHG emissions for all Region-operated fleet vehicles are presented in Table 8 which includes contracted transportation such as those used by waste collection and diversion or by suppliers delivering water management chemicals.

Table 8 - GHG Emissions (tonnes CO2e) of Fleet Vehicles, 2009 - 2015

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fleet Vehicle emissions (including contracted transport)</td>
<td>36,013</td>
<td>37,000</td>
<td>37,254</td>
<td>38,327</td>
<td>38,344</td>
<td>38,525</td>
<td>39,547</td>
<td>10%</td>
</tr>
</tbody>
</table>

Despite a 13.4% increase in the number of vehicles between 2009 and 2015, there was only a 10.7% increase in the amount of fuel consumed. Table 9 compares fuel consumption and vehicle counts between 2009 and 2015.

Table 9 - Change in Fleet Vehicle Fuel Consumption (L), 2009 - 2015

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GRT</td>
<td>8,106,566</td>
<td>9,401,375</td>
<td>16.0%</td>
<td>278</td>
<td>320</td>
<td>15.1%</td>
</tr>
<tr>
<td>Police</td>
<td>1,253,189</td>
<td>1,169,673</td>
<td>-6.7%</td>
<td>344</td>
<td>368</td>
<td>7.0%</td>
</tr>
<tr>
<td>EMS</td>
<td>271,442</td>
<td>301,728</td>
<td>11.2%</td>
<td>31</td>
<td>51</td>
<td>64.5%</td>
</tr>
<tr>
<td>Rest of Fleet*</td>
<td>1,316,608</td>
<td>1,249,535</td>
<td>-5.1%</td>
<td>300</td>
<td>342</td>
<td>14.0%</td>
</tr>
<tr>
<td>Totals</td>
<td>10,947,805</td>
<td>12,122,311</td>
<td>10.7%</td>
<td>953</td>
<td>1,081</td>
<td>13.4%</td>
</tr>
</tbody>
</table>

*Rest of Fleet includes vehicles and equipment used by the airport, facilities maintenance, transportation, waste, water, and other services.
Overall fuel consumption increased at a slower rate than the growth in the number of Regional fleet vehicles. Figure 9 illustrates a proportional comparison of fuel use by the same fleet category as the previous table. The largest consumer of fuel is Grand River Transit with approximately 9.4 million litres consumed in 2015, a 16% increase over 2009 which is similar to the growth of the transit fleet of vehicles. The 15% expansion of 42 new busses in this period is expected to correlate with increased adoption of public transit by the community as part of the Region’s Transportation Master Plan. In this way, increased Regional GHGs from transit should have an offsetting decrease in a portion of the community’s emissions associated with road travel by drivers within Waterloo Region.

**Figure 9 - Proportion of RoW Fleet Vehicle Fuel Use (L) by Source, 2015**

Police vehicles increased by 7%, and EMS vehicles increased by 64.5%, however, fuel use actually decreased by 6.7% for Police partly due to use of more fuel efficient vehicles. Emissions from EMS increased by only 11%, far less than the increase in the number of EMS vehicles during this period (64%) which is intended to better serve the community by improving ambulance response times. The rest of the fleet used 5.1% less fuel in 2015 than in 2009, despite increasing in size by 42 vehicles (a 14% increase). This performance is influenced by implementation of ongoing fleet management initiatives as part of a comprehensive program review conducted in 2013 and 2014.
Figure 10 illustrates the impact of the various fleet vehicle categories on the Region’s GHG emissions over time. The GRT consumes more fuel than other categories; however, this proportion is expected given the nature of public transit, where routes often run all day and connect the towns and cities of Waterloo Region. Another expected trend is that overall fuel use generally increases with the number of fleet vehicles.

The Region’s Green Fleet Strategy, which dates back to 2011, sought to reduce operational fuel use (and consequent air and GHG emissions) while enabling Regional fleet operators to deliver quality service to a growing population. Programs delivered under this strategy included:

- Driver training of the environmental outcomes of vehicle operation and idling reduction;
- Fleet vehicle right-sizing (downsizing where appropriate, ensuring vehicles to not exceed needs);
- Improving fuel efficiency with new technologies; and,
- Reviewing fleet practices and routes to find new opportunities for efficiency.
Staff Business Travel

Although staff business travel makes up the smallest portion of the Region's overall corporate GHG emissions (0.4%), it is still an important component of the GHG inventory as staff can be ambassadors of the Regional Travelwise program promoted throughout the community. Data on business travel is very reliable, as Regional employees must claim their distance travelled in their personal vehicles while conducting Regional business in order to be eligible for mileage reimbursement. Staff business mileage is compared with the number of Regional employees which has gradually increased between 2009 and 2015 as shown in Figure 11.

Employees are making increased use of transit, car sharing, carpooling, as well as teleconferencing and video conferencing tools, which all help reduce travel distances and associated GHG emissions while still enabling staff to fulfill program and service requirements. Although staff travelled more in 2015, GHG emissions were very similar for 2015 and 2009 (Table 1). This is due to improved fuel standards during this time such as higher ethanol content in gasoline which emits fewer tonnes of GHGs per litre.

Figure 11 - Regional Staff Business Mileage (km), 2009 - 2015

Solid Waste

The Region works to reduce GHG emissions from solid waste in two ways: by encouraging behaviour change in residential waste diversion, and by managing landfill gasses. Landfill gas is largely composed of methane. A landfill gas collection system at
the Waterloo landfill site, established in 1994, generates electricity by burning methane, which releases carbon dioxide (CO₂) – a GHG with a global warming potential 25 times less than methane. This plant generates approximately 4 Megawatts (MW) of electricity using landfill gas (LFG); however, the Region cannot include any emission reductions from this operation within the GHG emissions inventory as it was active long before the baseline year of 2009. Flaring is also performed to capture and burn landfill gasses, converting smaller amounts of methane into CO₂ but without generating electricity. Flaring efforts since 2010 have reduced landfill GHGs by approximately 20,000 tonnes CO₂e or roughly 4,000 tonnes per year on average up to year 2015.

Declining emissions from the Cambridge landfill closed in 2002 and an increase in organics diversion of approximately 5,000 tonnes in 2009 to almost 9,500 tonnes in 2015, has led to lower GHG emissions from Regional waste management operations than in 2009. As Figure 12 shows, emissions gradually decreased between 2009 and 2012, but then rose to close to 50,000 tonnes of CO₂e in 2013, 2014 and 2015. This increase is in line with a corresponding increase in total waste tonnage reaching the landfill over this time period (Table 10), and also coincides with a reduction of portable flaring activities which had led to significant reductions between 2010 and 2012. This type of flaring is dependant upon the location of landfilling and is typically undertaken as a short term odour control measure, as it is not intended to be a permanent operational control. More recently, permanent gas collection piping is being installed on a more frequent basis to allow for greater utilization of methane in the adjacent power plant.

**Figure 12 - Total GHG Emissions from the Region’s Cambridge and Waterloo Landfills, 2009 - 2015**

![Graph showing total GHG emissions from the Region’s Cambridge and Waterloo Landfills, 2009 - 2015](image-url)
The Region\textsuperscript{7} works to continually divert the amount of waste requiring landfill, including organic materials, which release methane as they decompose, from the green bin, yard waste and some industrial, commercial and institutional waste (ICI). Regional programs to encourage the diversion of waste from landfill are generally succeeding. Overall, there was a 15.5% decrease in waste tonnage sent to landfill between 2009 and 2015, despite a 7.3% increase in population (see Table 10).

Table 10 - RoW Landfilled Solid Waste (tonnes) and Population, 2009 - 2015

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2015</th>
<th>% Change 2009 - 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Landfilled (Tonnes)</td>
<td>215,324</td>
<td>181,944</td>
<td>-15.5%</td>
</tr>
<tr>
<td>Regional Population</td>
<td>535,700</td>
<td>575,000</td>
<td>7.3%</td>
</tr>
</tbody>
</table>

As Figure 13 illustrates, landfilled residential waste has remained relatively steady since 2009 despite continued population growth. There was more variation in ICI waste with a low in 2013 and a gradual increase to 2015.

Figure 13 - Total Waste Landfilled in Waterloo Region 2009 – 2015

\textsuperscript{7} http://www.regionofwaterloo.ca/en/aboutTheEnvironment/Waste2.asp
Biosolids from Wastewater Treatment

The Region of Waterloo provides wastewater treatment services\(^8\) for the Region of Waterloo’s serviced area. Wastewater makes its way to Regionally-owned treatment facilities which separate the liquid and solid material and treat them separately. The treated liquid effluent is discharged into local river systems, and the treated solid material (referred to below as biosolids) is either landfilled outside of the Region or beneficially used on agricultural land and/or mine reclamation tailing ponds. Emissions for wastewater treatment and discharge were estimated using the Biosolids Emission Assessment Model (BEAM) developed by CCME (2009).

One key factor of wastewater treatment emissions is the volume of wastewater, which influences the volume of biosolids produced. The end-of-life solution also greatly influences the GHG emissions, as landfilling biosolids emits more GHGs than beneficially using biosolids on land. Figure 14 compares wastewater flow volume against GHG emissions of biosolids between 2009 and 2015.

Figure 14 - Wastewater Flow (m\(^3\)) and GHG Emissions (tonnes CO\(_2\)e) of Biosolids from Wastewater Treatment 2009 - 2015

While wastewater flow did decrease slightly from 2014 to 2015, the decrease in emissions is far more dramatic. The 2012 to 2013 increase in wastewater flow was also met with a substantial decrease in GHG emissions. Wastewater flow does not appear to be the most important driver of GHG emissions; rather, how biosolids are managed seems to be the most impactful. Values for GHG emissions of biosolids from wastewater are presented in Table 11.

Table 11 - Biosolids GHG Emissions (tonnes CO$_2$e), 2009 - 2015

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Biosolids Emissions (tonnes CO$_2$e)</td>
<td>27,955</td>
<td>31,665</td>
<td>34,530</td>
<td>31,065</td>
<td>17,860</td>
<td>24,725</td>
<td>12,737</td>
<td>-54%</td>
</tr>
</tbody>
</table>

The management of biosolids has undergone several changes since 2009, most notably the upgrade of major facilities with dewatering capabilities. Dewatering of biosolids results in a substantial reduction in volume as compared to managing liquid biosolids, and leads to the increased beneficial use of biosolids rather than landfilling (for example land application as fertilizer). These changes are the largest contributor to enormous drops in GHG emissions in 2013 and 2015 as the volumes of biosolids being managed have decreased. Emissions in 2014 increased because the contractor could not store solid biosolids and consequently had to temporarily return to landfilling the material for that time period.

The beneficial use of biosolids helps improve soil fertility, reduces the need for commercial fertilizers (typically created using fossil fuel inputs), and avoids methane emissions due to organic matter decomposition in landfills. The manufacture, transport and use of municipal biosolids are regulated at the federal, provincial, territorial and/or municipal levels. Applicable safety, quality and management standards, requirements or guidelines for municipal biosolids, including the Ontario Nutrient Management Act, are all met at the Region of Waterloo.

**Concluding Remarks**

Although the Region appears to be currently on track to meet its emission reduction target, continued growth in operations will provide upward pressure on the annual emission values over the next few years. Table 12 provides a snapshot of upward and downward influences for each emission activity.
### Table 12 - Forward Looking influences on Regional Emission Levels

<table>
<thead>
<tr>
<th>Activity / Emission Source</th>
<th>Growth Factors</th>
<th>Reduction Influences</th>
<th>Status/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stationary Energy (electricity and natural gas consumption)</td>
<td>Expansion of facilities to serve a growing population, colder winters and springs</td>
<td>Implementation of energy conservation and efficiency measures and use of renewable energy</td>
<td>In progress as part of 10-year Corporate Energy Management Plan</td>
</tr>
<tr>
<td>Landfills (methane)</td>
<td>Population growth and more waste landfilled</td>
<td>Increased waste diversion particularly organics (green bin) and use of portable flaring of methane (when practical)</td>
<td>Increased green bin diversion expected with new residential collection rules starting in March 2017.</td>
</tr>
<tr>
<td>Fleet (fuel consumption)</td>
<td>Expansion of fleet to serve a growing population</td>
<td>Improved fleet management programs, use of alternative fuels and technologies</td>
<td>Recommendations from the Fleet Program Review are being implemented with a focus on improved management practices including annual fleet utilization reviews and optimization of fleet size.</td>
</tr>
<tr>
<td>Wastewater (WW) and Biosolids (methane)</td>
<td>Population growth and increased WW flow</td>
<td>More land application of biosolids and less sent to landfill</td>
<td>In progress but impacted by agricultural demand for fertilizer</td>
</tr>
</tbody>
</table>

Projected emissions to the target year of 2019 have been forecasted using an assessment of growth trends to date for Regional operations and emissions, launch of LRT in 2018, as well as, consideration of various growth and reduction factors summarized above.

Figure 15 illustrates these trajectories in relation to a business-as-usual forecast if the Region had not reduced any emissions since 2009.
Current projections indicate that the Region will likely meet its reduction target depending on various factors occurring between 2016 and 2019. Projects previously identified within the Corporate GHG Action Plan have varying degrees of impact on the successful achievement of the reduction target as listed in Table 13. Implementation of the Region’s corporate energy plan and changes to curbside waste collection starting next spring will help keep emissions lower. However, critical activities such as successfully increasing organic and ICI waste diversion, increasing land application of anaerobic biosolids instead of sending them to landfill, and assessment of alternative vehicle fuels and technology within the Regional fleet will likely make the difference in terms of the Region meeting its current emission reduction target. The influence of weather on natural gas consumption is beyond our control to directly influence but ongoing demand-side management initiatives and equipment retrofits are decreasing natural gas consumption. Combined heat and power (cogeneration) is also being explored to help offset demand for natural gas as a more efficient means to distribute energy services.
Table 13 - Status of Major Projects and Impact on 2019 Emission Target

<table>
<thead>
<tr>
<th>Action</th>
<th>Status</th>
<th>Degree of Impact</th>
<th>GHGs Reduced (Tonnes)</th>
<th>Cost Savings</th>
<th>Lead Division</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buildings and Streetlights</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 New LEED buildings</td>
<td>Complete</td>
<td>Medium (~ 2000 T)</td>
<td>Payback within useful life of asset</td>
<td>Various / Facilities</td>
<td></td>
</tr>
<tr>
<td>Replace Streetlights with LED bulbs</td>
<td>Planned for 2017/2018</td>
<td>Low (&lt; 200 T)</td>
<td>Payback = 5 to 6 years</td>
<td>Roads</td>
<td></td>
</tr>
<tr>
<td>Planned furnace replacements in Regional housing units</td>
<td>Ongoing</td>
<td>Low (&lt; 200 T)</td>
<td>Payback within useful life of asset</td>
<td>Facilities/Housing</td>
<td></td>
</tr>
<tr>
<td>Energy efficiency projects</td>
<td>Ongoing</td>
<td>Low (300 to 400 T)</td>
<td>Average payback = 5 to 6 years</td>
<td>Facilities</td>
<td></td>
</tr>
<tr>
<td>Use of alternative energy sources (excluding FIT projects)(^a)</td>
<td>Periodic assessment</td>
<td>Low – Medium</td>
<td>Case-by-case analysis</td>
<td>Facilities</td>
<td></td>
</tr>
<tr>
<td><strong>Waste / Biosolids</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organics Diversion (green bin)</td>
<td>Ongoing</td>
<td>Medium (2000 – 3500 T)</td>
<td>Conservation of landfill space</td>
<td>Waste Management</td>
<td></td>
</tr>
<tr>
<td>Portable flaring of landfill gas</td>
<td>Dependent upon location of landfilling</td>
<td>High (4000 – 7000 T)</td>
<td>Case-by-case analysis</td>
<td>Waste Management</td>
<td></td>
</tr>
<tr>
<td>Potential impact of planned changes in Wastewater Treatment and Biosolids operations to year 2019</td>
<td>In-progress</td>
<td>High (6000 – 12000 T)</td>
<td>NA</td>
<td>Water Services</td>
<td></td>
</tr>
<tr>
<td><strong>Fleet</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biodiesel in transit buses - B5 / B20 (winter/summer)</td>
<td>Not Implemented</td>
<td>Medium (~ 2600 T)</td>
<td>1-2% increase in operating costs</td>
<td>GRT</td>
<td></td>
</tr>
<tr>
<td>Idling reduction / telematics</td>
<td>Under consideration</td>
<td>Low – medium (~1000 T)</td>
<td>To be determined</td>
<td>Fleet Services, Transit, EMS</td>
<td></td>
</tr>
<tr>
<td>Green Fleet procurement and central fleet pool</td>
<td>Under consideration</td>
<td>Low (&lt; 200 T)</td>
<td>To be determined</td>
<td>Various / Fleet Services</td>
<td></td>
</tr>
</tbody>
</table>

Note a) Renewable energy projects that sell power to the province under the Feed-in-Tariff program cannot be counted in corporate emission reductions as the ‘credit’ is claimed by the province.
Region of Waterloo

Planning, Development and Legislative Services

Community Planning

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

Date: September 13, 2016  File Code: D07-40(A)

Subject: Building Permit Activity – January to June 2016

Recommendation:

For information.

Summary:

This report summarizes building activity in both the residential and non-residential sectors in Waterloo Region for the first half of 2016 (January to June). Data for the same period in 2015 is provided for comparison. Building permit data are collected by Area Municipal staff and compiled by Regional staff for use in growth monitoring, development charge estimations, development tracking, budgets and forecasts. Building activity is also an indicator of the strength and diversity of the economy.

Overall, the total value of new building permits issued across Waterloo Region in the first half of 2016 was 23% higher than for the first half of 2015. The total value was $676.3 million. Specifically,

- Residential permits were issued for 2,429 units in the first half of 2016, 17 per cent higher than the 2,069 units in the first half of 2015.
- The value of these residential permits is $496.3 million which is 32 per cent higher than $376.2 million for the same period in 2015.
- Permits were issued for 1,154,262 square feet of non-residential floor space, 11 per cent higher than the 1,037,438 square feet in the first half of 2015.
- The value of these non-residential permits is $179.9 million which is 4% higher than the $173.2 million for the same period in 2015.
Report:

Total Value of New Construction

The first half of 2016 showed higher overall value of construction of both new residential units and non-residential square footage. The total value of new building permits issued across Waterloo Region was $676.3 million, representing an increase of 23 per cent from the first half of 2015. It is comprised of $496.3 million in the residential sector, and $179.9 million in the non-residential sector and is shown by type in Figure 1.

Figure 1 - Summary of Building Permit Activity (January – June)

<table>
<thead>
<tr>
<th></th>
<th>First Half 2015</th>
<th>First Half 2016</th>
<th>Change from First Half 2015</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value (in millions)</td>
<td>Units</td>
<td>Value (in millions)</td>
<td>Units</td>
</tr>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singles</td>
<td>$179.5</td>
<td>507</td>
<td>$265</td>
<td>777</td>
</tr>
<tr>
<td>Semi-detached</td>
<td>$4.6</td>
<td>23</td>
<td>$6.6</td>
<td>37</td>
</tr>
<tr>
<td>Townhouses</td>
<td>$45.1</td>
<td>247</td>
<td>$64.1</td>
<td>427</td>
</tr>
<tr>
<td>Apartments</td>
<td>$147</td>
<td>1,292</td>
<td>$160.6</td>
<td>1,188</td>
</tr>
<tr>
<td></td>
<td>Value (in millions)</td>
<td>Area (Sq. Ft.)</td>
<td>Value (in millions)</td>
<td>Area (Sq. Ft.)</td>
</tr>
<tr>
<td>Non-Residential</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td>$59.7</td>
<td>367,217</td>
<td>$92.5</td>
<td>506,114</td>
</tr>
<tr>
<td>Commercial</td>
<td>$28.8</td>
<td>359,498</td>
<td>$44.3</td>
<td>413,640</td>
</tr>
<tr>
<td>Institutional</td>
<td>$84.6</td>
<td>310,723</td>
<td>$43.2</td>
<td>180,508</td>
</tr>
<tr>
<td>Total Value</td>
<td>$549.4</td>
<td></td>
<td>$676.3</td>
<td></td>
</tr>
</tbody>
</table>

While there is fluctuation in the timing of issuance of building permits over the course of each year, the level of new construction in 2016 is generally consistent with construction activity seen in recent years, as shown in Figure 2.
Non-Residential Sector Building Activity

The value of the non-residential building permits was 4 per cent higher in the first half of 2016 compared to the same period in 2015. The value of industrial activity was $92.5 million, commercial was $44.3 million and institutional was $43.2 million. The largest projects by type were:

- **Industrial**  $7.9 million for Hyndman Transport’s new trucking facility located at 2616 Cedar Creek Road in North Dumfries.
- **Commercial**: $12 million for the new Costco retail warehouse at 930 Erb Street West in Waterloo
- **Institutional**: $20 million for the independent and assisted living retirement residence ‘The Uptown’, located at 215 Lexington Road in Waterloo

Total floor space was higher by 11%, with 1,037,438 square feet in the first half of 2015 and 1,154,262 square feet in the first half of 2016.

- Non-residential floor space was higher in industrial and commercial, and lower in the institutional sector.
- The overall non-residential floor space construction was 5 per cent above the 10 year average of 1,101,617 square feet and 23 per cent higher than the 5 year average of 941,354 square feet.
- Figure 3 illustrates the long-term trends in new square footage, and Figure 4 provides a summary by municipality.
2016 was off to a strong start for residential construction in Waterloo Region.

- New residential construction was $120.1 million (32%) higher than in 2015.
- The high value of the residential building permits in the first half of 2016 was comprised of $265 million of single-detached, $6.6 million of semi-detached, $64.1 million of townhouse and $160.6 million of apartment construction activity.
- Compared to first half of 2015, the construction value of single-detached increased 48 per cent, semi-detached increased 43 per cent, townhouses increased 42 per cent and apartments increased 10 per cent.
- There was a 17% increase in the number of units in the first half of 2016,
compared to same period in 2015. This represents a year-to-date increase of 360 residential units.

- In the first half of 2016, 32% of new residential units were single-detached, 2% were semi-detached, 18% were townhouse units, and 49% were apartment units as shown in Figure 5. While the number of single-detached units was 270 units higher, the number of new apartments was 104 units less than in 2015.

**Figure 5 - New Units by Structure Type by First Half of Years (2007-2016)**

There were four residential projects within Waterloo Region with the construction value over $20 million in the first half of 2016:

- $33 million for the 12-storey (146 units) and the 8-storey (94 units) ‘Trio on Belmont’ located at 460 Belmont Ave West, Kitchener
- $27.6 million for the 14-storey (208 units) and 6-storey (15 units) mixed-use building of ‘The Hub’ located at 365 Albert Street, Waterloo
- $25 million for ‘Rez-One’, a 119-unit student residence at 254 Phillip St, Waterloo
- $24 million for the 11-storey (152 units) ‘The Standard’ located on the site of the old American Standard factory in historic Hespeler at 19 Guelph Ave, Cambridge

Compared to mid-year 2015, construction of new residential units was greater in Cambridge, Kitchener and Woolwich in the same period of 2016. Waterloo had 474 units less than at this time last year, and the other municipalities were stable as illustrated in Table 6.
Table 6 - Total New Residential Units by Type, January - June

<table>
<thead>
<tr>
<th></th>
<th>Single Detached</th>
<th>Semi Detached</th>
<th>Townhouse</th>
<th>Apartment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambridge</td>
<td>47</td>
<td>191</td>
<td>2</td>
<td>3</td>
<td>49</td>
</tr>
<tr>
<td>Kitchener</td>
<td>293</td>
<td>366</td>
<td>8</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Waterloo</td>
<td>114</td>
<td>140</td>
<td>6</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>North Dumfries</td>
<td>5</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Wellesley</td>
<td>8</td>
<td>13</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wilmot</td>
<td>27</td>
<td>25</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Woolwich</td>
<td>13</td>
<td>34</td>
<td>2</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td><strong>RMW</strong></td>
<td><strong>507</strong></td>
<td><strong>777</strong></td>
<td><strong>23</strong></td>
<td><strong>37</strong></td>
<td><strong>247</strong></td>
</tr>
</tbody>
</table>

Students and Seniors

One residential building permit was issued for ‘Rez-One’, a student residence (254 Phillip Street, Waterloo) with 476 bedrooms in 119 units, part of a master planned redevelopment project. This is down from six student-oriented buildings (882 bedrooms) in the first half of 2015. While not identified as such on the building permit, In8’s Sage 6 (251 Hemlock Street, Waterloo) with 278 bedrooms in 139 units is a mixed-use project across from the 'Idea Quarter' that has student potential based on its proximity to University of Waterloo, Wilfred Laurier University and Conestoga College and a review of marketing material.

In the seniors market, a permit was issued for ‘The Uptown’ (215 Lexington Road, Waterloo), an independent and assisted living retirement residence. The first phase contains 84 independent living units (174 bedrooms) and 92 assisted living suites.

Area Municipal Consultation/Coordination

Building permit data are collected by Area Municipal staff and submitted to the Region. Area Municipal staff is consulted for verification and insight into the data. Copies of this report have been circulated to the Area Municipalities.

Corporate Strategic Plan:

Tracking and reporting building permit activity contributes to Strategic Focus Area 2: Growth Management and Prosperity as it provides an indication of the growth of both residential and non-residential sectors.

Financial Implications:

Nil.
Other Department Consultations/Concurrence:
Nil.

Attachments:
Nil.

Prepared By: Rehan Waheed, Planning Data Analyst

Approved By: Debra Arnold, Acting Commissioner, Planning, Development and Legislative Services
Homer Watson Boulevard Improvements

Conestoga College Boulevard to Manitou Drive

City of Kitchener

Public Consultation Centre #1

Information Package

What: Intersection and Active Transportation Improvements on Homer Watson Boulevard.

Where: Homer Watson Boulevard from Conestoga College Boulevard to Manitou Drive in the City of Kitchener.

Why: To address traffic operations issues and active transportation (pedestrian/cyclist) needs along the Homer Watson Boulevard corridor in the City of Kitchener.

When: Construction in 2018.

Who: Region of Waterloo Project Manager
    Justin Armstrong, P. Eng.
    Phone: (519) 575-4757 Ext 3164
    Email: JuArmstrong@regionofwaterloo.ca

Public Consultation Centre #1
Thursday, September 15, 2016, 5:00 pm to 8:00 pm
Waterloo Region Museum – Grand Foyer
10 Huron Road – Doon Heritage Crossroads
Kitchener, Ontario

There is a comment sheet at the back of this package. Please fill it out and share your comments with us.
Key Plan of Project Limits
1.0 Why is the Region of Waterloo Undertaking this Project?

The Regional Municipality of Waterloo is considering improvements on Homer Watson Boulevard from Conestoga College Boulevard to Manitou Drive in the City of Kitchener (See Page 1 – Key Plan of Project Limits) to address traffic operations issues and active transportation (pedestrian/cycling) needs of the corridor. For orientation purposes, Homer Watson Boulevard will be considered to run north-south.

This project is being completed as a Schedule A+ Class EA project (see Appendix A – Municipal Class Environmental Assessment Process) and is intended to improve capacity along the corridor by reviewing operational improvements, particularly at intersections, while accommodating future road widening considerations and addressing the impacts of various design concepts on the natural and social environments, including utility relocations and property acquisition needs. In addition, opportunities to provide and/or enhance facilities for cyclists, pedestrians and transit are also included.

2.0 Who is Directing This Project?

The planning, design and construction of these infrastructure improvements are being directed by the Regional Municipality of Waterloo through a Project Team consisting of Planning and Design staff from the Region of Waterloo, City of Kitchener, as well as Regional Councillors Elizabeth Clarke and Tom Galloway and City of Kitchener Councillor Yvonne Fernandes. The engineering consulting firm of Associated Engineering Ltd. has been retained by the Region to assist with the project.

3.0 What is the Purpose of this Public Consultation Centre (PCC)?

This is the first Public Consultation Centre for this project, and as such, the public is invited to provide comments regarding the planned improvements along the corridor.

This Public Consultation Centre is a forum for you to:

- Learn of the current and projected future traffic demands and operational issues on Homer Watson Boulevard;
- Learn of the existing environmental and social aspects within the project limits and how these factors affect the design and implementation of the preferred solution;
- Learn how the preferred alternative solutions were selected;
Review the proposed property impacts and potential acquisitions arising from the preferred alternative solutions;

Review other details of the project and provide feedback.

We ask that you complete the Comment Sheet attached to the back of this Information Package and put it in the box at the Consultation Centre, or send it to the address indicated on the Comment Sheet. Your comments will be considered, along with other information received over the course of the project.

4.0 How Does This Project Relate to the Objectives of the Regional Official Plan (ROP), the Regional Transportation Master Plan (RTMP), the Active Transportation Master Plan (ATMP) and the Regional Transportation Corridor Design Guidelines (CDG)?

The Regional Official Plan (ROP) provides, among other planning matters, a framework for addressing infrastructure needs in the Region of Waterloo. A guiding policy objective on infrastructure needs in the ROP is to plan and manage integrated, accessible and safe multi-modal transportation systems that provide transportation choice, and promote sustainability, a healthy population and the effective movement of goods.

This project supports the Regional Transportation Master Plan (RTMP) goals of optimizing our transportation system, promoting transportation choice and supporting sustainable development. This project will improve traffic operations at the intersections and convey traffic volumes efficiently considering future traffic forecast models and long-term planning horizons (i.e. beyond 2027).

This project will address the necessary intersection improvements in the short-term while considering the long-term implications identified in the RTMP. The proposed works include the introduction of a multi-use trail along the east side of Homer Watson Boulevard, as well as improving intersection configurations to support future (ultimate) road geometries at Manitou Drive, Pioneer Drive and Doon South Drive.

The Context Sensitive Regional Transportation Corridor Design Guidelines (CDG), as approved by Regional Council, set the design framework for accommodating all modes of transportation on Regional roads. Sidewalks are considered “necessary” and cycling facilities are considered “important” on most Regional roads. Homer Watson Boulevard is classified as a “Community Connector” from Ottawa Street South to Highway 401. This classification of road is intended to connect communities within the Region and incorporate a high degree of access control. Community Connectors focus on moving
vehicles for travel and transportation of goods. Community Connectors typically incorporate wide, landscaped centre medians.

The Active Transportation Master Plan (ATMP) builds on these previous studies and further updates the Cycling Master Plan. Facilities for active transportation (bicycles and pedestrians) are accommodated within the corridor; however, consideration should be given to separating the facilities from the roadway. Typically the adjacent land uses for Community Connectors are low density and are not street-related. This poses significant challenges in creating pedestrian- and cyclist-friendly streets. Tree planting, pedestrian clearways, multi-use trails, crosswalks and the treatment of transit stops become critical in supporting alternate modes including transit. The proposed improvements for the project will improve the active transportation environment by introducing a multi-use trail on the east side of Homer Watson Blvd from Conestoga College Boulevard to Huron Road.

5.0 What Work Has Been Done to Date?

A Draft Transportation Study of the Study area was completed by the Region of Waterloo (November 2013) in order to understand current conditions and address future needs for the road corridor given available and collected information. This Study combines information from the RTMP and current traffic volume counts to provide preliminary insights and recommendations to guide the EA process. The Transportation Study concluded that while not necessary for the 10-20 year horizon, widening of Homer Watson Boulevard to a standard six-lane cross section may be needed beyond the 20-year horizon. This project includes solutions to address the necessary improvements in the interim, while considering long-term requirements identified in the RTMP.

The following summarizes the work that has been completed in support of this project:

- A complete review and analysis of available traffic information, including traffic counts at intersections and select mid-block locations.
- Traffic forecasts based on planned development in the area and an assessment of traffic capacity for the existing, interim (up to and including 2027) and ultimate (beyond 2027) conditions (including Traffic Capacity Analysis for AM and PM peak periods).
- A review and analysis of collision history along Homer Watson Boulevard.
- Detailed topographical survey of the study area and preparation of base plans.
- An inventory and assessment of the natural environments (in-field surveys of aquatic and terrestrial habitat).

- Stage 1 Archaeological Assessment and Built Heritage Inventory studies.

- Intersection Control Study and preliminary intersection design concepts including capacity analysis for interim and ultimate scenarios (signalized intersection and roundabout concepts).

- Bridge rehabilitation and widening design concepts to support future widening needs.

- Pedestrian bridge considerations and design concepts at the North and South Schneider Creek crossings.

- Evaluation of the various intersection improvement, and bridge widening, alternatives by the Project Team.

- Selection of a preferred alternative at each of the identified intersections and bridge locations.

6.0 What are the Current and Future Vehicle, Cyclist and Pedestrian Conditions along Homer Watson Boulevard

Intersection and Roadway Traffic

Localized traffic operation issues (delay and collisions) exist along the corridor and will be worsened by projected increased traffic volume in the 2027 planning horizon. Long-term analysis (beyond 2027) shows that 3 of the 4 key intersections along this corridor, at Manitou Drive, Pioneer Drive and Doon South Drive are likely to experience operational failure beyond 2027 if left unchanged.

With respect to Conestoga College Boulevard, recent improvements (to support the Highway 401 interchange) have alleviated some operational issues. Significant modifications to the intersection would only strain other movements within the intersection.

More detailed analysis can be found in Appendix B – Operational Analysis.

The traffic analysis suggests a need to improve capacity at the three intersections (Manitou Drive, Pioneer Drive and Doon South Drive) currently operating at poor levels
of service while giving consideration to the possible need to widen Homer Watson Boulevard from four (4) to six (6) lanes in the long-term (i.e. beyond 2027).

**Public Transit, Pedestrians and Cyclists**

Grand River Transit Route 16 services the project area (along Homer Watson Boulevard between Conestoga College Boulevard and Old Carriage Drive). Other service routes within the project limits (10, 16, 61, 76, 111 and 203) are intermittent along the corridor and primarily service adjacent side streets as well as Conestoga College (See Appendix C – GRT Route Map).

The RTMP identifies local service improvement priorities in the 5- to 10-year planning horizon including new service to Doon South, increased service to Pioneer Park, Brigadoon and Conestoga College Doon Campus. Express routes are also recommended in the 2031 Transit Network Plan.

Walking and cycling infrastructure connectivity is currently incomplete and fails to satisfy Regional Policy. Sidewalks are provided along the corridor, although predominantly on one side (west side) only. Between Manitou Drive and Huron Road, sidewalks are provided on both sides of the roadway. Formal on-road cycling and/or multi-use trail facilities are absent along this corridor. The observed frequency of cyclist traffic is very low, likely due, in part, to the high volume of vehicular traffic present on the roadway, high operating speeds and limited safe refuge and delineation for cyclists.

**Bridges**

Bridge conditions were assessed based on previous Ministry of Transportation (MTO) Ontario Structure Inspection Manual (OSIM) reports. Currently, both the North and South Schneider Creek bridge structures are in good condition. OSIM reporting is required every two (2) years for all qualifying structures, which includes both the North and South Schneider Creek bridges.

**Access Management**

Homer Watson Boulevard is classified as a controlled access roadway, meaning that all commercial and industrial access onto Homer Watson Boulevard is to be a ‘right-in right-out’ type access point. The only accesses that are an exception to this are:

- Lear Corporation – full movement access (left in/out and right in/out), and
- Big Bear / Edelweiss Plaza – Left-in access.
7.0 What Alternative Solutions Were Considered for this Project?

The following Alternative Solutions were considered to address potential areas for improvement along Homer Watson Boulevard.

- **“Do-Nothing”**

As part of any Class EA project, there is always a consideration of the “Do Nothing” alternative to assess what would happen if no action is taken to address the project concerns. This assessment provides a baseline against which the other project alternatives can be measured. The “Do Nothing” solution, however, does not address the capacity and safety issues identified at the intersections. For the bridges, “Do Nothing” does not address separation of walking/cycling trails from the roadway. In all cases, “Do Nothing” will typically have rehabilitation and maintenance costs associated to maintain the existing condition (i.e. bridge rehabilitation, signal upgrades, etc.).

- **Widening of Homer Watson Boulevard**

Widening Homer Watson Boulevard by adding more traffic lanes is not a cost-effective solution in the short-term (5-10 years) because the capacity issues for Homer Watson Boulevard can be alleviated at the intersections. The long-term solution (20+ years) may require widening to 6 lanes, so intersection improvements have been designed to accommodate ultimate 6-lane geometries.
• **Intersection Improvements**

Within the project limits, the alternative solutions that were considered for each major intersection are:

<table>
<thead>
<tr>
<th>Manitou Drive / Doon Village Road</th>
<th>Pioneer Drive</th>
<th>Doon South Drive</th>
<th>Conestoga College Boulevard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do Nothing</td>
<td>Do Nothing</td>
<td>Do Nothing</td>
<td>Do Nothing</td>
</tr>
<tr>
<td>Lane Modifications (Signals)</td>
<td>Lane Modifications (Signals)</td>
<td>Lane Modifications (Signals)</td>
<td>Lane Modifications (Signals)</td>
</tr>
<tr>
<td>Potential Grade-separated Interchange</td>
<td>Roundabout</td>
<td>Roundabout (on Centreline with Doon South)</td>
<td></td>
</tr>
<tr>
<td>Roundabout</td>
<td></td>
<td>Roundabout (shifted south of Doon South)</td>
<td></td>
</tr>
</tbody>
</table>

Three (3) of the four (4) major intersections (Manitou Drive / Doon Village Road, Pioneer Drive and Doon South Drive) within the project limits will require geometry changes in order to adequately convey the forecasted traffic volumes in the interim. The alternatives considered at each of these locations include signalized intersections with improved lane geometry and roundabouts (long-term, beyond 2027). A partial grade-separated signalized urban interchange was also considered at the Manitou Drive / Doon Village Road intersection.

As noted in Section 6.0, considering recent modifications to the Conestoga College Boulevard intersection to support the Highway 401 interchange and operational needs, interim solutions were not considered further as part of this project. Future improvements may include modifications of the existing right-turn lanes to ‘smart channels’ to promote safer turning movements, multi-use trail and bike lane transitions and improvements to the northbound taper lanes. These future improvements would typically be included in the Region’s annual improvement and rehabilitation contract for various projects.
As part of this planning study, an Intersection Control Study (ICS) was completed for the noted three (3) major intersections in this corridor using forecast 2027 traffic volumes. An Intersection Control Study (ICS) compares the advantages and disadvantages of a roundabout versus the conventional intersection improvement alternative. A key component of the ICS assessment is to determine the total Life Cycle Cost (LCC) of each alternative. The LCC includes all costs associated with the roundabout over a 20-year period including estimates of the capital and maintenance costs, as well as an estimate of the injury-collision costs. The results of the ICS’ were the basis for the Preferred Alternative Solutions identified in Section 12.0.

The alternatives for the intersections (signals and roundabout) included interim and ultimate scenarios to accommodate 2027 and beyond traffic forecasts respectively.

- **Improving Transit Service**

Measures to improve the level of transit service within the corridor will be reviewed by Grand River Transit during detailed design. Various measures may potentially reduce the reliance on vehicular travel on Homer Watson Boulevard once the preferred alternatives are implemented and other community transit options are considered.

- **Improving Pedestrian and Cycling Access**

Measures to improve access for pedestrians and cyclists include the introduction of a 3.0m wide, paved multi-use trail along the east side of Homer Watson Boulevard from Huron Road to Conestoga College Boulevard. This trail will include connections at intersecting trail-heads that connect to the adjacent neighbourhoods, as well as a connection to the existing trail system located north of the Doon South Drive intersection.

Within the project limits, the alternative solutions that were considered for the bridges are:

<table>
<thead>
<tr>
<th>North Schneider Creek Bridge</th>
<th>South Schneider Creek Bridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehabilitate 4-lane bridge + Separate Pedestrian Bridge</td>
<td>Separate Pedestrian Bridge Only</td>
</tr>
<tr>
<td>4-lane Structure with Trails on Bridge (Existing Structure)</td>
<td>4-lane Structure with Trail on Bridge (Widening)</td>
</tr>
</tbody>
</table>
The bridge alternatives identified opportunities to combine pedestrian/cycling traffic with vehicular traffic onto one structure as well as separating these travel modes by directing pedestrians/cyclists onto an independent and adjacent structure. Accommodating 4 to 6 lanes of traffic was also incorporated into the alternatives to address long-term capacity needs as well as determine the physical constraints, costing and technical requirements in the widening of the existing structures.

**8.0 Will Noise Walls be Considered as Part of this Project?**

In accordance with the Region’s Implementation Guideline for Noise Policies, the Region will only initiate noise mitigation measures if certain conditions are met when a road is widened. Since intersection improvements, and not road widening, is being considered under this project, no Region-initiated noise mitigation measures are being considered at this time.

However residents can request noise Mitigation under Part ‘C’ of the Region’s Implementation Guideline for Noise Policies. If construction of a noise barrier is requested by residents and merited per policy, the cost of designing and constructing the noise barrier may be shared among the residents (50%) and the Region (50%) subject to Regional Council approval. In accordance with the Local Improvements Act, construction of the barrier must be supported by at least 2/3 of the affected residents representing at least 50% of the property value. The cost of the design and construction will be charged over a period of 10 years by the Area Municipality on behalf of the Region.

In order for the resident-requested noise barrier warrants to be met, the following must apply:

- the existing noise level exceeds 60dBA; and
1.0 Analysis of Part “C” noise barrier warrants

- the installation of a noise barrier attenuates the noise levels by 5dBA or more. To a level less than 60dBA.

An analysis of Part “C” resident-requested noise barrier warrants is being completed and the results will be made available at a later date.

9.0 How is the Natural Environmental Being Considered?

Preliminary environmental investigations of the study area have been compiled based on the review of background information provided by the Ministry of Natural Resources and Forestry (MNRF), Grand River Conservation Authority (GRCA), Region of Waterloo and various studies previously completed in the vicinity of the project limits.

In addition, various natural environment surveys were completed to gain an understanding of specific natural environment features. These surveys included Ecological Land Classification, spring amphibian call surveys (frog calls), breeding bird, vegetation and targeted surveys for Species At Risk (SAR). Through these surveys, and a thorough review of background information, 2 SAR and 4 Regionally Significant species have potential habitat within the project limits.

Field work was completed at additional stations within the overall project limits, to provide additional natural heritage data that was taken into consideration before selecting the preferred intersection and corridor improvements.

Following recent discussion between Project Team and MNRF representatives, a scoped information request was submitted to MNRF for review and comment. A meeting was hosted by MNRF on August 29 for all to discuss the project. Based on that meeting and the potential habitat for 2 SAR, the next step will be to submit a technical memorandum for MNRF’s review. The MNRF will then determine if the project poses an impact to SAR potential habitat and, if so, what additional steps are necessary. At this time, it is anticipated that the project will be able to avoid any potential impacts to SAR potential habitat.

10.0 Are There Features of Heritage Significance within the Study Area?

A Cultural Heritage Resource Inventory identified a number of 19th and 20th century cultural heritage resources along the road corridor. These include:
• One (1) residence – **39 Doon Valley Drive** is a one-and-a-half storey, three-bay, rough-cut stone with broken coursing Ontario Cottage style house and is designated under Part IV of the Ontario Heritage Act.

• One (1) Heritage Conservation District (HCD) – The **Upper Doon HCD** is located within a valley traversed by watercourses with a rich natural environment. The ‘unplanned natural quality’ of the village is valued as a pleasing contrast to the subdivisions bordering the HCD.

• One (1) watercourse – **Schneider Creek** crosses the corridor at two (2) locations. This creek is of heritage value as it relates to the development of the Village of Doon, being of aesthetic and industrial importance.

• One (1) museum – The **Waterloo Region Museum** (Doon Heritage Village) was constructed in 2011, importing recycled materials, locally sourced limestone and incorporates a lake for rainwater reclamation. Within the building, the historic intersection of Huron Road and the Preston and Berlin Railway has been memorialized by two intersection walkways along their original alignments. The **Doon Heritage Village** is a significant cultural heritage resource for both its contents and its role as a unique, early example, of a Canadian open air museum.

• Two (2) railscapes – The remnant **Preston and Berlin Railway/Grand Trunk Railway** followed the same line through, and north of, the project corridor. The former railway has important historical associations within the Region, playing a significant role in the development of the Village of Doon, the City of Kitchener and the Region of Waterloo. The mid-to-late 20\textsuperscript{th} century **Spur Line**, linking with the historic Grand Trunk Railway ends at the Lear Corporation Kitchener Plant. This railway has important associations to the industrialization of Kitchener and the area around the project corridor.

• Three (3) roadscapes:
  
  o **Huron Road** – Opened in 1827 by Dr. William “Tiger” Dunlop, it originally ran some 95 miles from Goderich to Guelph and was a focus for settlement.

  o **Doon Valley Drive/Doon Village Road** – Is a significant heritage resource important not only to the development of the Village of Doon, but also to the development of the City of Kitchener and the County of Waterloo. The road served as a primary circulation route through the Region, until the construction of Homer Watson Boulevard in 1967.
Information Package
Homer Watson Boulevard Improvements
Conestoga College Boulevard to Manitou Drive

- **Pinnacle Drive** – This thoroughfare is marked by historic tree lines heading north across Homer Watson Boulevard, towards lower Doon. The section of remnant road north of Homer Watson Boulevard is in use as an informal footpath. To the south, the road is no longer utilized and has overgrown with young trees and bushes.

No impacts to buildings or features of heritage significance will result from the proposed improvements. During construction, every effort will be made to avoid and/or mitigate negative impacts to identified areas of heritage significance. At this time, no adverse impacts to existing cultural heritage resources are anticipated.

Reports will be available at the PCC and will be accessible via the Region’s website [www.regionofwaterloo.ca](http://www.regionofwaterloo.ca) after the PCC.

### 11.0 How were the Alternative Solutions Compared?

The Project Team evaluated the various alternatives against specific criteria to determine the overall impact of each alternative solution to the surrounding environment. Alternatives that best address the Problem Statement and with the least impact to social, environmental and cultural features; or that promoted Region Policy and plans related to RTMP policies were viewed as more favourable than those that exhibited significant impact or strayed from Region transportation initiatives. The following are the four (4) main criteria used by the Project Team to compare alternatives: Natural Environment, Social/Cultural Environment, Transportation and Cost. Analysis is available for viewing at the Public Consultation Centre (PCC).

### 12.0 What are the Preferred Alternative Solutions for this Project?

Based on the evaluation completed to-date and the criteria listed under Section 11.0 of this package, the Project Team have established the following as the preferred alternative solutions for this project.

The Preferred Alternative Solutions for the intersections are as follows:

<table>
<thead>
<tr>
<th>Manitou Drive / Doon Village Road</th>
<th>Pioneer Drive</th>
<th>Doon South Drive</th>
<th>Conestoga College Boulevard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Modifications (Maintain Signal Operation)</td>
<td>Lane Modifications (Maintain Signal Operation) – Interim</td>
<td>Maintain Existing Signals – Interim</td>
<td>Do Nothing (Annual Improvement &amp; Rehabilitation)</td>
</tr>
</tbody>
</table>
The Preferred Alternative Solutions for the bridges are as follows:

<table>
<thead>
<tr>
<th>North Schneider Creek Bridge</th>
<th>South Schneider Creek Bridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehabilitate 4-lane bridge and Separate Pedestrian Bridge</td>
<td>Separate Pedestrian Bridge (Only)</td>
</tr>
</tbody>
</table>

With respect to the vehicle-travelled roadway, intersection improvements are recommended at this time as an interim solution to address 2027 forecast demands. Further evaluation and forecasting will be required in that interim timeframe in order to confirm traffic operational needs and propose long-term (i.e. beyond 2027) improvements.

### 13.0 Is Any Private Property Required for this Project?

The intent of the preliminary and detailed design process is to minimize the need for property. The proposed intersection improvements would necessitate minor property acquisitions, potentially affecting both businesses and private residences.

As the project proceeds, subject to Regional Council approval, the process of property acquisitions will be initiated by the Region of Waterloo. Affected property owners will be contacted by Region Legal staff to discuss the necessary property acquisitions. It is the Region’s standard practice to negotiate agreements of purchase and sale with the affected property owners, based on an independent appraisal of the land's fair market value. If agreements cannot be reached in time to meet the project schedule, the Region may acquire the needed lands through expropriation. For further information please see the Property Process Information Sheet in Appendix D. Property that is required is shown on the plans presented at this PCC.
14.0 Tree Removals and Landscaping

This project may necessitate the removal of various trees and/or plantings, which will be replaced (two new trees for each one removed) where space permits in the road allowance, in consultation with adjacent property owners. As well, improvements to roadside landscaping will be incorporated into the project, where appropriate and where space permits within the road allowance. Trees proposed to be removed are shown on the plans at this PCC.

15.0 Reinstatement of Lawns, Driveways and Parking Lots

Wherever possible, lawns, driveways and parking lots will be reinstated to their pre-construction condition. However, due to the nature of the work being considered, there may be lawns, driveways and parking lots that will be slightly altered from their existing condition. Details on impacts to lawns, driveways and parking lots are shown on the plans at this PCC.

16.0 Who will be Responsible for Winter Maintenance of the New Multi-Use Trail?

Currently, the City of Kitchener Community Services Department clears snow from the existing short section of sidewalk on Homer Watson Boulevard. Responsibility of snow clearing for all new sidewalk and/or multi-use trail constructed along Homer Watson Boulevard as part of this project will be a municipal responsibility to be confirmed through a future agreement between the City of Kitchener and Region of Waterloo.

17.0 What is the Estimated Cost of this Project and How Will it Be Funded?

The estimated cost of the preferred alternatives is approximately $5 million including intersection improvements, a new multi-use trail on the east side including separated pedestrian bridges over Schneider Creek and rehabilitation to the North Schneider Creek bridges (both northbound and southbound). The Region of Waterloo is funding the construction of this project from Regional Development Charges.
18.0 What are the Next Steps on the Project?

The Project Team will consider the comments obtained from the public during this PCC to select the Preferred Alternative Solutions for this project and present a recommended solution to Regional Council. Next steps for the project will include:

- Recommendation to Regional Council (early 2017);
- Circulation of plans to agencies, railways, utility authorities and other affected stakeholders for review and comment (early 2017);
- Detailed design and utility relocations (2017) and

19.0 When will a Final Decision be Made Regarding this Project?

The Project Team will review the public comments received from this Public Consultation Centre and use them as input for selecting the preferred alternative solutions for the Homer Watson Boulevard Improvements Project. The preferred alternative solutions will be presented at a future Region of Waterloo Planning and Works Committee – likely, early in 2017. In advance of this meeting, letters will be sent to all adjacent property owners and tenants (as well as to all members of the public specifically registering at this Public Consultation Centre) so that anyone wishing to speak to Committee or Council about this project may do so.

20.0 How Will I Receive Further Notification Regarding This Project?

Adjacent property owners and members of the public registering at this Public Consultation Centre, or with one of the Project Team members listed in Section 21.0, will receive all forthcoming additional information, and will be notified of any future meetings. The Region’s website will also be kept up to date with information regarding this and other Region of Waterloo projects.

21.0 How Can I Voice My Comments At This Stage?

In order to assist us in addressing any comments or concerns you might have regarding this project, we ask that you fill out the attached Comment Sheet and leave it in the box provided at the registration table. Alternatively you can mail, fax or e-mail your
Information Package
Homer Watson Boulevard Improvements
Conestoga College Boulevard to Manitou Drive

comments to one of the Project Team members listed below, no later than September 29, 2016.

We thank you for your involvement and should you have any questions or concerns please contact:

Mr. Justin Armstrong, P.Eng.  Mr. Peter Lejcar, P.Eng.
Senior Project Manager  Senior Project Manager
Region of Waterloo  Associated Engineering Ltd.
150 Frederick Street, 6th Floor  Suite 302, 508 Riverbend Drive
Kitchener, ON N2G 4J3  Kitchener, ON N2K 3S2
Telephone: (519) 575-4757 Ext. 3164  Telephone: (226) 214-3187
Fax: (519) 575-4430  Fax: (226) 214-3188
Email: juarmstrong@regionofwaterloo.ca  Email: lejcarp@ae.ca

22.0 How can I View Project Information Following the PCC?

All of the PCC display materials and other relevant project information will be available for viewing at the Region of Waterloo municipal offices as identified above. Alternatively, you may visit the Region’s website at www.region.waterloo.on.ca
Appendix A

Municipal Class Environmental Assessment Process

Ontario Environmental Assessment Act

The purpose of the Ontario Environmental Assessment Act (EA Act) is to provide for “the betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management of the environment in Ontario”. Environment is applied broadly and includes the natural, social, cultural, built and economic components.

The key principles of successful environmental assessment planning include:

- Consultation with stakeholders and affected members of the public;
- Consideration of a reasonable range of alternatives;
- Assessment of the environmental impacts for each alternative;
- Systematic evaluation of alternatives and
- Clear documentation of the process followed.

Municipal Class Environmental Assessment (EA)

The Municipal Class EA is a planning process approved under the Environmental Assessment Act that is used by municipalities to plan infrastructure enhancement projects while satisfying the requirements of the Environmental Assessment Act. Under the Class EA process, projects are planned in one of three ways depending on their scope, complexity and potential for adverse environmental impacts.

Schedule A - Includes routine maintenance, operation and emergency activities.
  - Intersection improvements (MEA Project Schedules (2010/11)).
  - The Municipality can proceed with this work without further approval or public consultation.

Schedule A+ - Includes routine maintenance, operation and emergency activities.
  - Similar to Schedule A, but the proponent must advise the public of planned work prior to implementation.
Schedule B - Includes projects with the potential for some adverse environmental effects.

- These projects are subject to a screening process that includes consultation with directly affected public and agencies.

Schedule C - Includes larger, more complex projects with the potential for significant environmental effects.

- These projects are subject to all phases of the Class EA and require a minimum of 3 points of public contact.

Public Involvement

Members of the public that have a stake in the project are encouraged to provide comment throughout the Class EA process.

For Schedule “C” projects there are a minimum of three (3) opportunities for public contact. These typically include two Public Consultation Centres and the Notice of Study Completion.

Class EA Process for Schedule C Projects

Change in Project Status – Appeal Provision

It is recommended that all stakeholders (including the proponent, public and review agencies) work together to determine the preferred means of addressing a problem or opportunity. If you have any concerns, you should discuss them with the proponent and try to resolve them. In the event that there are major issues which cannot be resolved, you may request the Minister of the Environment by order to require a proponent to comply with Part II of the EA Act before proceeding with a proposed undertaking which has been subject to Class EA requirements. This is called a “Part II Order”. The Minister will make one of the following decisions:

1.0 Deny the request (with or without conditions);
2.0 Refer the matter to mediation or
3.0 Require the proponent to comply with Part II of the EA Act, ordering a full Environmental Assessment.

All stakeholders are urged to try to resolve issues since it is preferable for them to be resolved by the municipality in which a project is located, rather than at the provincial level.
To request a Part II Order, a person must send a written request to:

Minister of the Environment & Climate Change  
135 St. Clair Avenue West  
12th Floor  
Toronto, ON M4V 1P5

The request must address the following with respect to the identified concerns:

- Environmental Impacts and specific concerns;
- Adequacy of the planning and public consultation process;
- Involvement of the person in the planning process; and

Details of discussions held between the person and the proponent.
Appendix B

Operational Analysis

Typically, Level of Service (LOS) is the method used to measure the efficiency of traffic operations at intersections. The LOS is measured by the delays a user of the intersection would experience during the morning (AM) and afternoon (PM) peak hours to make a given traffic movement such as turning left or moving straight through. The LOS ratings work on a scale from A to F; “A” is good and “F” is failing.

The Transportation Study for this project has identified the following areas for consideration:

- The intersection at Manitou Drive / Doon Village Road currently operates near capacity and the eastbound left-turn lane (EBL) has a LOS of ‘F’ in the PM peak hour. Storage for the northbound left-turn lane (NBL) is a problem in both peak hours. In the ultimate analysis, the intersection is over capacity for movements on all approaches and the intersection is close to operational failure.

- The intersection at Pioneer Drive currently operates at an overall LOS ‘C’. The two left-turn movements currently operate at a LOS ‘F’ in both AM and PM peak hours. The EBL storage lane is also too short. In the ultimate analysis, the southbound through lane (SBT) is at capacity in both peak hours causing traffic to back-up in the southbound lanes and all left-turn lanes.

- The intersection at Doon South Drive currently operates at an overall LOS ‘C’. In the interim and ultimate analyses, signals maintain the existing LOS. Maintaining signals in the interim does not preclude future improvements and no modifications are required to accommodate interim (up to 2027) forecasts. Future operational analysis and re-forecasting will determine and confirm ultimate (beyond 2027) needs.

- The intersection at Conestoga College Boulevard exhibits high pedestrian movements. The westbound left-turn (WBL) currently operates at a LOS ‘F’ in both the AM and PM peak hours. The intersection warrants dual westbound left-turn lanes. The westbound left-turn (WBL) storage is also too short. In the ultimate analysis, the westbound left-turn (WBL) continues to operate poorly. The northbound through (NBT) movement is also at capacity and causes traffic to back-up.
Recent improvements have alleviated some operational issues (i.e. 3-lane south leg, dual southbound left-turn lanes and a northbound acceleration lane). Significant modifications to the intersection (i.e. dual westbound left-turn lanes) were considered, but the Transportation Study concluded that the addition of the dual westbound left-turn lanes would only strain other movements within the intersection.

In addition to capacity and LOS considerations, existing collision history and overall safety was reviewed at each intersection. The following represents the findings of the Region’s collision assessment at key intersections:

- **At Manitou Drive**, the 5-year collision history shows that there were 117 collisions where 73 would be expected. Manitou Drive currently ranks 10th overall in the Region’s Top 100 locations in a 5-year period. Of the 117 collisions, 78 (67%) are noted as rear-end type collisions and 64% occurring on Homer Watson Boulevard approaching the intersection. Typically, rear-end collision types are the result of motorists travelling too close or being inattentive.

- **At Pioneer Drive**, the 5-year collision history shows that there were 63 collisions where 53 would be expected. Of the 63 collisions, 45 (71%) are noted as rear-end collisions: analysis shows that the majority of those involved in a rear-end collision were inattentive. A detailed review of the rear-end collisions at this intersection shows that the majority are occurring in the northbound (27) and southbound (16) directions. It should be noted that in October 2009 there were 2 collisions involving pedestrians; 1 resulted in a pedestrian fatality as a result of injuries sustained from the collision. At present, a school crossing guard is stationed at this intersection.

- **At Doon South Drive**, the 5-year collision history shows that there were 46 collisions where 52 would be expected. Of the 46 collisions, 31 (67%) are noted as rear-end type collisions; with 11 occurring northbound, 14 occurring southbound and 6 eastbound on Doon South Drive. A detailed review of the rear-end collisions shows that 45% (14) of the rear-end collisions are noted as following too close. As previously noted, the general cause of rear-end type collisions is the result of a motorist travelling too close or being inattentive.

- **At Conestoga College Boulevard**, the 5-year collision history shows that there were 91 collisions where 84 would be expected. Of the 91 collisions, 48 (53%) are noted as rear-end collisions. Analysis shows that the majority of those involved in a rear-end collision were travelling too close. A detailed review of the
rear-end collisions at this intersection shows that the majority are occurring in the southbound (20) and northbound (20) directions along Homer Watson Boulevard.
Appendix C

GRT Route Map
Appendix D

Property Acquisition Process Information Sheet

(Projects requiring Class Environmental Assessment Approval) The following information is provided as a general overview of the property acquisition process and is not legal advice. Further, the steps, timing and processes can vary depending on the individual circumstances of each case.

Once the Class Environmental Assessment is complete and the Environmental Study Report outlining the Recommended Design Concept has been approved, the property acquisition process and the efforts of Regional Real Estate staff will focus on acquiring the required lands to implement the approved design. Regional staff cannot make fundamental amendments or changes to the approved design concept.

Property Impact Plans

After the project has been approved and as it approaches final design, the project planners will generate drawings and sketches indicating what lands and interests need to be acquired from each affected property to undertake the project. These drawings are referred to as Property Impact Plans (PIP).

Initial Owner Contact by Regional Real Estate Staff

Once the PIPs are available, Regional Real Estate staff will contact the affected property owners by telephone and mail to introduce themselves and set-up initial meetings to discuss the project and proposed acquisitions.

Initial Meetings

The initial meeting is attended by the project engineer and the assigned real estate staff person to brief the owner on the project, what part of their lands are to be acquired or will be affected, what work will be undertaken, when, with what equipment, etc. and to answer any questions. The primary purpose of the meeting is to listen to the owner and identify issues, concerns, effects of the proposed acquisition on remaining lands and businesses that can be feasibly mitigated and/or compensated, and how the remaining property may be restored. These discussions may require additional meetings. The goal of staff is to work with the owner to reach mutually agreeable solutions.

Goal – Fair and Equitable Settlement for All Parties

The goal is always to reach a fair and equitable agreement for both the property owner and the Region. Such an agreement will provide compensation for the fair market value
of the lands and address the project impacts (such as repairing or replacing landscaping, fencing, paving, etc.) so that the property owner will receive the value of the lands acquired and the restoration of their remaining property to the condition it was prior to the project.

The initial meetings will form the basis on an offer of settlement or agreement of purchase and sale for the required lands or interest.
Appendix D2

Steps Toward Offer of Settlement or Agreement of Purchase and Sale

The general steps towards such an offer are as follows:

1) the Region will obtain an independent appraisal of the fair market value of the lands and interests to be acquired, and an appraisal of any effect on the value of the rest of the property resulting from the acquisition of the required lands and interests;

2) compensation will be estimated and/or works to minimize other effects will be defined and agreed to by the property owner and Region staff;

3) reasonable costs of the owner will be included in any compensation settlement;

4) an offer with a purchase price and any other compensation or works in lieu of compensation will be submitted to the property owner for consideration and

5) an Agreement will be finalized with any additional discussion, valuations, etc. as may be required.

Depending on the amount of compensation, most agreements will require the approval of Council. The approval is undertaken in Closed Session which is not open to the public to ensure a level of confidentiality.

Expropriation

Due to time constraints of projects, it is the practice of the Region to commence the expropriation process in parallel with the negotiation process to ensure that lands and interests are acquired in time for commencement of project construction. Over 90% of all required lands and interests are acquired through the negotiation process. Even after lands and interest have been acquired through expropriation an agreement on compensation can be reached through negotiation, this is usually referred to as a “settlement agreement”.

Put simply, an expropriation is the transfer of lands or an easement of 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 the Act are protected.
Comment Sheet

Regional Municipality of Waterloo

Homer Watson Boulevard Class Environmental Assessment Schedule ‘A+’

Conestoga College Boulevard to Manitou Drive

Public Consultation Centre #1 – September 15, 2016

Please complete and hand in this sheet so that your views can be considered for this project. If you cannot complete your comments today, please take this home and mail, fax or email your comments by **September 29, 2016** to either:

Mr. Justin Armstrong, P.Eng.
Senior Project Manager
Region of Waterloo
150 Frederick Street, 6th Floor
Kitchener, ON N2G 4J3
Telephone: (519) 575-4757 Ext. 3164
Fax: (519) 575-4430
Email: juarmstrong@regionofwaterloo.ca

Mr. Peter Lejcar, P.Eng.
Senior Project Manager
Associated Engineering Ltd.
Suite 302, 508 Riverbend Drive
Kitchener, ON N2K 3S2
Telephone: (226) 214-3187
Fax: (226) 214-3188
Email: lejcarp@ae.ca

1. Do you have any comments or concerns regarding the proposed improvements?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
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____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

1723131
Information Package
Homer Watson Boulevard Improvements
Conestoga College Boulevard to Manitou Drive

_________________________________________________________

Name: ___________________________________________________

Address: _________________________________________________

Postal Code: ______________________________________________

Phone & Email: _____________________________________________

Thank you for your interest and time.

Collection Notice

All comments and information received from individuals, stakeholder groups and agencies regarding these projects and meetings are being collected to assist the Region of Waterloo in making a decision. Under the “Municipal Act”, personal information (such as name, address, telephone number and property location) that may be included in a submission becomes part of the public record. Questions regarding the collection should be forwarded to the staff member noted above.
Region of Waterloo

Transportation and Environmental Services Department

Transportation Division

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

Date: September 13, 2016

File Code: D09-90/2016 TMP

Subject: Moving Forward (Transportation Master Plan Update):
Public Consultation Centre #1 – Information Package

Recommendation: For information.

Summary: Nil

Report:

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. The name “Moving Forward” has been chosen for the TMP.

2. Public Consultation

Public consultation is a critical component of Moving Forward. There will be three rounds of Public Consultation Centres as the project progresses. The first round is in September and will familiarize the public with the project and obtain input on a Regional vision and goals for transportation. This input will inform the development of Moving Forward throughout the rest of the project. Public Consultation Centre #1 will be hosted in three locations:

- September 21, 2016: Cambridge Centre Mall, City of Cambridge;
- September 22, 2016: Lions Arena, City of Kitchener; and
- September 29, 2016: Waterloo Memorial Recreation Centre, City of Waterloo.

The information package for the Public Consultation Centres is attached (Appendix A).

In addition to the Public Consultation Centres, the Region has been conducting online consultation through the Engage Region of Waterloo platform, and developing two panels of the general public and community / public sector stakeholders. These alternative forms of public consultation will enable different members of the public, who may find it difficult to participate in conventional consultation centres, to provide input. The panels will also create opportunities for sustained engagement during the course of the project.

3. Coordination with the City of Cambridge

The City of Cambridge is also developing its own Transportation Master Plan, called Moving Cambridge. The Public Consultation Centre in Cambridge will be jointly hosted to enable the public to provide input about both projects at the same time.

4. Coordination with Transit Development

The Region is also developing its Grand River Transit 2017-2021 Business Plan, and the Kitchener and Waterloo Public Consultation Centres will also present information about the following:
- Proposed 2017 transit service improvements;
- Planned 2018 and 2021 transit networks;
- The new electronic fare system; and
- The integration of ION into the GRT network A.

The public consultation materials will note that any planned transit service improvements would be subject to annual Regional Council budget approvals.

**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; and
- Responsive and Engaging Government Services.

**Financial Implications:**

As noted above, the Public Consultation Centre materials will note that any planned transit service improvements would be subject to annual Regional Council budget approvals.
Other Department Consultations/Concurrence:

The information package has been reviewed by the project Steering Committee, with representation from Regional Council (Tom Galloway and Elizabeth Clarke) and the following departments/divisions:

- Corporate Communications Division;
- Planning, Development and Legislative Services Department;
  - Community Planning Division;
- Public Health and Emergency Services Department;
  - Healthy Living Division;
- Transportation and Environmental Services Department;
  - Design and Construction Division;
  - Rapid Transit Division;
  - Transit Services Division; and
  - Transportation Division.

Attachments

Appendix A – Moving Forward Public Consultation Centre #1 Information Package

Prepared By: Geoffrey Keyworth, Acting Manager, Transportation Planning

Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Public Consultation Centre For

MOVING FORWARD

Transportation Master Plan Update

Information Package

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Wednesday, September 21, 2016</td>
<td>Cambridge Centre Mall (outside The Bay) 555 Hespeler Road Cambridge</td>
<td>Drop in anytime 9:30 AM – 9:00 PM</td>
</tr>
<tr>
<td>Thursday, September 22, 2016</td>
<td>Lions Arena, 20 Rittenhouse Road Kitchener</td>
<td>Drop in anytime 5:00 PM – 8:00 PM</td>
</tr>
<tr>
<td>Thursday, September 29, 2016</td>
<td>Waterloo Memorial Recreation Centre, 2nd Floor, Hauser House, 101 Father David Bauer Drive Waterloo</td>
<td>Drop in anytime 5:00 PM – 8:00 PM</td>
</tr>
</tbody>
</table>
Welcome.

Please fill out the comment sheet at the end of this information package.

Please sign the study mailing list if you wish to be contacted further about this study.

1. What is the purpose of this Public Consultation Centre?

Today’s meeting introduces Moving Forward and collects public input on:

- Future vision, directions and goals for the Region’s transportation system;
- Transportation needs of the Region and approaches to address these needs;
- Public opinions about transportation in Waterloo Region from a recent survey;
- New emerging trends in transportation and their effects on the Region; and
- How to get involved in the study.

Study Team members are available at this Public Consultation Centre to discuss these topics, listen to your ideas and respond to your questions.

2. What is Moving Forward?

Moving Forward is the Region of Waterloo’s transportation master plan. The plan identifies policies and projects to meet the Region’s transportation needs over the next 25 years. These include where and how to invest in Regional road improvements, traffic controls, public transit service, cycling and walking facilities, and managing travel demand. Moving Forward also addresses other related transportation needs related to provincial highways within the Region, travel to and from the Region, emerging transportation trends, and passenger rail and air service.

Why is Moving Forward important to you?

Moving Forward affects everyone. It deals with the movement of people and goods in and around Waterloo Region. This need for mobility affects every resident, business and visitor in the Region. Mobility must be safe, convenient and affordable for all, while serving our travel needs and minimizing impacts on our neighbourhoods and natural areas. It must provide for the types of travel choices expected by residents of Waterloo Region, be it walking, cycling, public transit or driving.
3. Why do we need to update Moving Forward?

The current Moving Forward plan was completed in 2010. Since then, a number of changes have taken place in the Region’s transportation system that need to be incorporated into an updated plan, such as:

- Highway 401 widening
- Intensification in the city centres
- Growing demand for travel alternatives

Other transportation plans in the Greater Toronto and Hamilton Area are expected to affect Waterloo Region. Changes to Provincial and local planning policies will also influence where and how much the Region grows over the next 25 years.

How does Moving Forward relate to other plans?

Moving Forward is consistent with the Regional Official Plan and its overall philosophy of compact, sustainable development. A similar transportation master plan is currently being developed for the City of Cambridge, and both projects are being coordinated. The Cities of Kitchener and Waterloo both have their own transportation master plans to help guide decisions in planning their City street networks, parking, goods movement, and trails. When the Kitchener and Waterloo plans are updated, they will also be based on Moving Forward.

How is Moving Forward being prepared?

Waterloo Region staff are preparing Moving Forward with assistance from IBI Group, a local transportation consulting company with transportation planning experience across Canada. The four main steps are:

- Review how the existing plan has been used over the past five years, where improvements are needed and what emerging transportation trends and issues need to be addressed;
- Identify the problems and opportunities expected in the overall Regional transportation system over the next 25 years;
- Evaluate alternative ways of addressing these problems and opportunities, resulting in a preferred set of planning solutions; and
- Prepare supporting transportation strategies involving cycling and walking, managing travel demand, public transit, transportation system management, targeted road expansions and goods movement.
4. Who Has Input Into Moving Forward?

The project Steering Committee includes Regional Councillors Tom Galloway and Elizabeth Clarke, and Regional staff from the following departments plus IBI Group consultants:

- Planning, Development and Legislative Services
- Public Health and Emergency Services
- Transportation and Environmental Services

The Region is also looking for input from the general public, community stakeholders, area municipalities and other public sector agencies.

5. Transportation Vision and Goals

What is the Vision for transportation in the Region?

<table>
<thead>
<tr>
<th>Vision</th>
<th>What Does It Mean To You?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a sustainable transportation system and policy framework</td>
<td>Provide a forward-thinking plan that promotes sustainable travel practices focused on moving people and goods in a variety of ways. This means providing for cars but supporting shifts to alternatives like transit, cycling and walking.</td>
</tr>
<tr>
<td>Encourage increased transit use and promote transportation choices</td>
<td>Offer services and facilities that encourage more transit ridership in a more balanced transportation system. This reflects increasing public interest in having greater transportation choice, that will directly contribute to our quality of life in Waterloo Region by enhancing safety, reducing transportation costs and providing accessible mobility.</td>
</tr>
<tr>
<td>Support economic growth</td>
<td>Provide a forward-thinking plan that supports a sustainable economy, creates more local jobs, supports existing business and industry, and attracts new investment.</td>
</tr>
<tr>
<td>Manage the existing transportation system assets</td>
<td>Maximize the use of the existing infrastructure before investing in new infrastructure. Optimize the capacity of the existing roads and transit systems to carry more people. Moderate the growth in travel demands. Make the existing system work better by filling in missing links, improving strategic intersections and maintaining the existing infrastructure in a good state of repair.</td>
</tr>
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</table>
What are the Goals for transportation in the Region?

<table>
<thead>
<tr>
<th>Goals</th>
<th>How?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimize the transportation system</td>
<td>Make the most of what exists. Maximize the use of existing transportation services and facilities.</td>
</tr>
<tr>
<td>Promote transportation choice</td>
<td>Offer competitive choices to move people and goods in an integrated, seamless transportation system.</td>
</tr>
<tr>
<td>Foster a strong economy</td>
<td>Provide a transportation system that supports the retention of existing businesses and attracts sustainable economic activity.</td>
</tr>
<tr>
<td>Support sustainable development</td>
<td>Provide and maintain a transportation system that supports sustainable growth in both urban and rural areas and reduces transportation contributions to climate change.</td>
</tr>
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</table>

How were this Vision and Goals developed?
The Vision and Goals for Moving Forward were developed by the Region as part of the 2010 study. The Steering Committee feels the Vision and Goals remain valid, subject to confirmation through public consultation. This includes the focus on promoting transportation choice, investing in public transit, cycling and walking, and reducing the reliance on travelling by driving alone.

Do the Vision and Goals need to be changed?
Making progress towards the Vision and Goals may require tradeoffs. Do the Vision and Goals adequately direct the future development of Regional transportation? While there are no easy answers, the Region needs your input on questions like the following:

- Optimizing the transportation system: An optimized transportation network can look very different to pedestrians, cyclists, transit passengers or car drivers. For whom should the network be optimized?
- Promoting transportation choice: Making different transportation choices more competitive may mean causing travel by private automobile to be more expensive and/or less convenient. Would this be appropriate?
- Fostering a strong economy: Moving goods by truck may consume more energy and contribute more towards global climate change, but it may also be more economically competitive. Is it possible to foster a strong economy by moving goods without sacrificing other goals?
- Supporting sustainable development: International definitions of sustainability frequently include support for economic development, environmental integrity and social quality of life. Would it be appropriate to make transportation more economically sustainable by pursuing additional revenue sources (e.g. road tolls, vehicle registration fees, etc.)? Can transportation be said to be socially sustainable if private property must be acquired?
6. What is the current state of transportation in Waterloo Region?

While the Region’s transportation system is evolving and changing to meet new travel demands, it continues to operate well. Some indicators of this include:

- Grand River Transit has achieved its 2016 ridership target, in the 2010 Transportation Master Plan, of roughly 21 million rides per year.
- Current ridership on iXpress and Route 7 between Conestoga Mall and Fairview Park Mall is now 20,000 rides per day.
- Since 2006, cycling lanes have nearly doubled in the Region to 300 kilometres;
- In the 12 years since 2004, the Region has invested over $250 million in expansion of the Regional road network.
- The Province continues to invest in provincial highways in the Region, with $150 million invested between 2009 and 2014.
- The Region’s TravelWise transportation management association promotes shifting from driving alone to more sustainable modes of travel to about 10% of the workforce in the Region.
- All Grand River Transit buses are equipped with wheelchair ramps, priority seating and audio stop announcements.
- Stage 1 of the ION Light Rail Transit construction is underway from Waterloo to Kitchener, and is on schedule to open in 2018. ION bus rapid transit from Kitchener to Cambridge has been in operation since 2015. Stage 2 ION will replace bus rapid transit with LRT, creating a continuous LRT system between Cambridge and Waterloo.
- 5 of 8 iXpress lines approved in the GRT Business Plan have been implemented.
- Grand River Transit’s EasyGo electronic travel information system is accessed over 5 million times annually by users to find best routes, nearest bus stop, next bus times and required walking distances.

7. Recent Public Opinion Survey Highlights about Transportation

The Region conducted a survey of the general public (1,450 Regional residents) on issues related to transportation in early 2016. Some new local transportation trends identified in Waterloo Region include:

- Cambridge residents are four times more likely than other Regional residents to commute outside the Region.
- Residents of the City of Waterloo are significantly more likely than other Regional residents to live and work in the same city.
- About 60% of residents of the four townships commute to the Regions’ cities, especially the City of Waterloo.
- About 13% of commuters carpool at least once per month.
- Today there appears to be very strong satisfaction in the Region with walking facilities, some satisfaction with bike lanes and public transit, and dissatisfaction with road congestion, transit services, and traveling to the Greater Toronto Area.
The following summarizes respondent satisfaction with various aspects of the Region’s transportation system on a 7-point scale, with 7 being extremely satisfied and 1 being extremely dissatisfied.

- City of Waterloo respondents would prefer to have more bike lanes as an alternative to using their cars. Township respondents want more bus stops close to their homes.
- Respondents reported an increase in the usage of their cars in 2015 compared to the same period in 2010. The graphic here shows that car drivers are still the predominant mode of travel in the Region.
8. What emerging trends in transportation should we consider?

The project Steering Committee has identified the following emerging trends in transportation that are expected to be addressed in Moving Forward.

- **Climate Change** – Ontario’s greenhouse gas emissions from transportation have risen more than those from any other sector since 1990, and now represent 34 percent of all emissions in the Province. Over three-quarters of transportation emissions come from cars, trucks, buses and other on-road motor vehicles. The Province of Ontario has adopted ambitious goals for a 15 percent reduction in total GHG emissions from 1990 levels by 2020, a 37 percent reduction by 2030, and an 80 percent reduction by 2050. For Moving Forward to support a reduction in transportation-related emissions, it would have to pursue a significant reduction strategy. This is a substantial challenge.

- **Public Health** – Awareness has grown recently on the many connections between transportation systems, mobility, land use and public health. Road safety is the most visible health-related aspect of this issue, and air pollution’s connections to respiratory and cardiovascular ailments have been well documented. More recently, rising inactivity levels especially in children have been linked to a greater reliance on cars. Low-density, car-based neighbourhoods lead to less physical activity and more chronic disease, while pedestrian- and transit-friendly communities create more active transportation and other types of physical activity.

- **Social Equity** – The Region’s transportation system should equally serve the mobility needs of all residents. This includes providing transportation choices that meet their needs, affordable mobility for all residents, and making the system fully accessible.

- **Age-Friendly Transportation** – In 2011, about one in eight residents (i.e. 12%) of the Region was over 65 years old and this is growing. By 2031, this number is expected to be one in five (i.e. 20%). This will affect transit service, vehicle parking, the need for a more pedestrian-friendly environment, expanded facilities for the mobility impaired, and the need for more home deliveries.

- **Expanded Travel Choices** – New travel options are coming to Waterloo Region. They include the ION Light Rail Transit service, expanded GO Train service, carsharing and bike sharing services, and new transportation service providers such as Uber and RideCo.

- **New Technologies** – Three big technological changes coming to transportation involve Connected Vehicles, Autonomous Vehicles and Alternative Fuels. The question for Waterloo Region over the next 25 years is whether it will need to lead, and not follow, on these and other new technologies.
  
  - Connected Vehicles are linked with infrastructure and wireless devices to improve road safety, reduce congestion and emissions, and boost the capacity of existing roads.
  
  - Autonomous Vehicles can make “smart” decisions about their direction, speed and interaction with other road users, improving safety but also potentially changing the need to own personal vehicles.
  
  - Alternative Fuels currently focus on hybrid and fully electric vehicles and the special charging services they require.
• **Road Safety Vision Zero** – A movement attracting recent attention is Vision Zero, an international initiative based on the idea that no one should be killed or seriously injured within the transportation system. From its origin in Sweden, Vision Zero has been adopted by national and local governments across Europe and North America. It promotes safety while preserving the key functions of roads, and integrates strategies related to road design, vehicle technology, education and enforcement. Moving Forward will be evaluating this new philosophy and what it would mean for Waterloo Region.

9. **How can I get involved in Moving Forward?**

**Sign up for the study mailing list** – By signing the attendance registry for this Public Consultation Centre today, your name and contacts will be added to the Moving Forward mailing list. You will then be notified about further public consultation events and opportunities planned for the study in 2017.

**Complete the attached Comment Sheet**

**Go to the Study Web Site:**

www.regionofwaterloo.ca/en/gettingaround/MovingForward.asp

Here you will be able to view and download study updates, public meeting notices, frequently asked questions and final study reports.

**Contact the Study Representatives** – Moving Forward is expected to be completed in early 2018 when it will go to Regional Council for review and endorsement. Anytime during the study process from now until then, the Region will be open to any and all input from the public regarding questions, comments and ideas for the future of the Waterloo Region transportation system. Please contact:

<table>
<thead>
<tr>
<th>Geoffrey Keyworth</th>
<th>Don Drackley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region of Waterloo Project Manager</td>
<td>IBI Group Consultant Project Manager</td>
</tr>
<tr>
<td>Phone: 519-575-4089</td>
<td>Phone: 519-585-2255, ext. 1302</td>
</tr>
<tr>
<td><a href="mailto:gkeyworth@regionofwaterloo.ca">gkeyworth@regionofwaterloo.ca</a></td>
<td><a href="mailto:ddrackley@ibigroup.com">ddrackley@ibigroup.com</a></td>
</tr>
</tbody>
</table>
Comment Sheet
PUBLIC CONSULTATION CENTRE – September ##, 2016

Moving Forward

Please complete and hand in this sheet so that your views can be considered for this project. If you cannot complete your comments today, please visit engageregionofwaterloo.ca, or take this sheet home and mail, fax or email your comments by September ##, 2016 to:

Geoffrey Keyworth
Project Manager, Region of Waterloo
150 Frederick Street, 7th Floor, Kitchener, Ontario N2G 4J3
Tel: 519-575-4089 Fax: 519-575-4453
E-mail: gkeyworth@regionofwaterloo.ca

All comments and information received from individuals, stakeholder groups and agencies regarding this project are being collected to assist the Region of Waterloo in making a decision. Under the Municipal Act, personal information such as name, address, telephone number and property location included in a submission becomes part of the public record. Questions regarding the collection of this information should be referred to Geoffrey Keyworth at gkeyworth@regionofwaterloo.ca

Optimizing the transportation system: What considerations should direct the Region’s efforts to optimize the transportation system?

__________________________________________

__________________________________________

__________________________________________

Promoting transportation choice: How should the Region promote transportation choice? Can other transportation modes be affected?

__________________________________________

__________________________________________

__________________________________________

Turn Page Over

DOCS #2184822
**Fostering a strong economy:** Can the Region promote goods movement without sacrificing the other goals?

________________________________________________________________________________________
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**Supporting sustainable development:** How should the Region balance economic, environmental and social factors in developing its transportation system?

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Should the Region pursue other goals than the ones listed above?
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What are the most important emerging or new trends in transportation that need to be addressed in *Moving Forward*?
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

Optional – Name: ____________________________________________________________

Street Address: ________________________________________________________________

City: __________________________  Postal Code: ____________________________

Email: __________________________

**Thank you for your time and input into Moving Forward.**
Report: PDL-CPL-16-40

Region of Waterloo
Planning, Development and Legislative Services
Community Planning

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

Date: September 13, 2016    File Code: D03-80

Subject: Conservation Authorities Act Review - Response to Conserving our Future: Proposed Priorities for Renewal

Recommendation:

That the Regional Municipality of Waterloo take the following actions with respect to the Ministry of Natural Resources and Forestry’s document “Conserving our Future: Proposed Priorities for Renewal” (EBR 012-7583):

a) Endorse the five identified priority areas as warranting further elaboration in draft legislation, regulation, policy and programs; and


Summary:

The Province, through the Ministry of Natural Resources and Forestry, recently released a document titled “Conserving our Future: Proposed Priorities for Renewal” (COF) as the second stage in the review of the Conservation Authorities Act. This builds upon the initial consultation process in which the Region submitted Report PDL-CPL-15-51 (dated October 6, 2015) as its formal response to a Discussion Paper posted on the Environmental Bill of Rights in the summer of 2015. The COF document summarizes the extensive comment submitted in response to the 2015 Discussion Paper and identifies the following five priority areas for further consideration:

1. Strengthening oversight and accountability in decision-making;
2. Increasing clarity and consistency in roles and responsibilities, processes and requirements;
3. Improving collaboration and engagement among all parties involved in resource management;
4. Modernizing funding mechanisms to support conservation authority operations; and
5. Enhancing flexibility for the province to update the Conservation Authorities Act framework in the future.

Under each heading, the document lists several actions for further discussion. Staff has prepared the following report in response. The Region has had a long-standing and excellent collaborative working relationship with the Grand River Conservation Authority (GRCA), and the comments made by staff are offered to the Province as suggestions that could potentially help the GRCA and other conservation authorities better fulfill their important role to the citizens of Ontario.

The COF document makes many recommendations intended to improve the functioning of conservation authorities, but an overriding concern for the authorities and their municipal partners is ensuring they have sufficient resources to fulfill their mandate and public expectations.

Report:

On July 20, 2015, the Province posted a Discussion Paper on the Environmental Registry to launch a review of the Conservation Authorities Act. The discussion paper focused on three main aspects of conservation authorities, (1) governance, (2) funding, and (3) roles and responsibilities. Regional staff prepared a review of that document based on our good experience working with the Grand River Conservation Authority (GRCA) over several decades. Council forwarded Report PDL-CPL-15-51 dated October 6, 2015 to the Province as the Region’s formal response. That report contained no substantive criticisms of the existing structure which has well served the Region, Area Municipalities, and the public.

The Discussion Paper generated 274 submissions comprising 2760 distinct comments from conservation authorities, municipalities, the development, agricultural, and environmental sectors and individuals. Drawing upon the consultation, the Province issued the following three documents:

- Conservation Authorities Act Review: Summary of Environmental Registry Feedback;
- Conservation Authorities Act Review: Summary of Stakeholder Engagement Sessions (Ogilvie, Ogilvie & Company, January, 2016); and
- Conserving our Future: Proposed Priorities for Renewal (EBR 012-7583) (Ministry of Natural Resources and Forestry, May, 2016).
As noted in “Conserving our Future” (COF), comments were generally supportive of the well-established model and underlying principles of conservation authorities. There is also a general understanding that watersheds are “an ecologically appropriate scale for many resource management activities, particularly water management, and allow for a balance in developing and implementing locally appropriate solutions and working across larger scales and political boundaries.” In addition, the conservation authorities’ roles in protecting against natural hazards, environmental education, stewardship programs, and accessible conservation areas are greatly valued.

As the next step in the Conservation Authorities Act review, the COF document has been posted to solicit more focused response on the Province’s five priority areas for updating the Conservation Authorities Act, as well as its regulatory and policy framework. This feedback may also inform the Ministry of Natural Resources and Forestry in its continuing support and oversight of conservation authorities.

Drawing upon the responses to the 2015 Discussion Paper, the Ministry of Natural Resources and Forestry has identified five priority areas warranting further consideration:

1. Strengthening oversight and accountability in decision-making;
2. Increasing clarity and consistency in roles and responsibilities, processes and requirements;
3. Improving collaboration and engagement among all parties involved in resource management;
4. Modernizing funding mechanisms to support conservation authority operations; and
5. Enhancing flexibility for the province to update the Conservation Authorities Act framework in the future.

The balance of this report will comment upon these areas.

1. **Strengthening oversight and accountability in decision-making**

Most members of conservation authority boards are councillors appointed by municipalities. As much of the authorities’ funding consists of levies from their respective municipalities, this provides a necessary degree of accountability to funders. Nevertheless, other funds are derived from fees for development approvals or access to recreational properties. In this case, accountability would be to the public at large. COF suggests that the following changes to the Act be considered:

- **Update the Act to reflect current legislative structures (i.e., purpose statements to the Act and its regulations) and accountability (defining the roles and responsibilities of parties involved in operations, programs and services).**

  **Comment:** This is supported for clarity and as a means of preventing gradual
“mandate-creep.”

- Ensure that governance and accountability provisions of the Act conform to recognized best practices for public sector organizations.
  \textbf{Comment:} Most conservation authorities have voluntarily subscribed to such standards, and there can be little argument with enshrining this in legislation or regulation.

- Enhance the authority of the Minister to ensure conservation authorities adhere to Provincial legislation and policy, including disclosure of information related to the efficiency and effectiveness of conservation authorities’ actions.
  \textbf{Comment:} This is supported as a means of establishing standards of service across conservation authorities. It can also help identify deficiencies where the Province may have to assist conservation authorities without the capacity to meet these requirements.

- Clarify the role of municipalities and the conservation authority board in determining, funding, directing, and overseeing programs and services undertaken to address local concerns and priorities.
  \textbf{Comment:} It is recommended that mandatory responsibilities be identified either in the Act or in the Regulation with guidance to inform the equitable distribution of associated operating and capital costs among constituent municipalities, the Province, and other income sources. These costs would need to be distinguished from those of additional programs or infrastructure which could be apportioned by subsequent contractual agreements between conservation authorities and the Province, municipalities, First Nations or other bodies.

- Develop or update processes and requirements for the establishment, amalgamation, enlargement and dissolution of conservation authorities.
  \textbf{Comment:} This may be relevant in areas served by multiple small conservation authorities where economies of scale could be secured by amalgamation, but would not be recommended for the Grand River Conservation Authority.

2. \textbf{Increasing clarity and consistency in roles and responsibilities, processes and requirements}

A good proportion of the response to the Discussion Paper focused on the need to clarify and confirm the mandate of conservation authorities in order to increase consistency in their roles and programs. Comments ranged from narrowing the focus to regulating natural hazards or broadened to encompass integrated watershed management (IWM) and natural heritage. COF suggests that the following be considered:

- Clearly distinguish Provincially-mandated programs and services that all conservation authorities must deliver on behalf of the Province and local communities from optional programs and services which may be carried out in consultation with and under the approval of their participating municipalities.
Comment: Distinguishing between mandated and optional programs is one of the most important recommendations in COF, and it is recommended that it be achieved through further consultation with municipalities and other stakeholders. If implemented, it would address many of the criticisms generated by the Discussion Paper. It would maintain sufficient flexibility to allow conservation authorities and municipalities to enter into contractual arrangements for such valuable programs as the Region’s Rural Water Quality Program. It is recommended that such listing be incorporated in regulation rather than in legislation in order to permit periodic updates necessitated by emerging issues.

- Establish clear policy direction on the roles and responsibilities that conservation authorities are expected to carry out on behalf of the Province that would also define the roles and responsibilities of relevant Provincial ministries developing and carrying them out.

Comment: A collaborative process of defining roles and responsibilities could develop an integrated policy framework across the Province to prevent duplication or policy vacuums. Although conservation authorities are under the jurisdiction of the Ministry of Natural Resources and Forestry, their areas of interest touch upon matters within the purview of the Ministry of Environment and Climate Change, Agriculture, Food, and Rural Affairs, and Municipal Affairs and Housing. A process of clarification would not only benefit conservation authorities and municipalities, but also the ministries themselves.

- Provide clarity in the application of the “Development, Interference with Wetlands and Alterations to Shorelines and Watercourses” regulations by consolidating and codifying regulatory requirements, defining undefined terms, and enhancing the authority of the Minister to establish, monitor and ensure compliance with Provincial policy direction and legislative requirements.

Comment: This direction is supported in order to provide a consistent level of protection across the Province.

- Provide sufficient tools to conservation authorities to ensure compliance with the “Development, Interference with Wetlands and Alterations to Shorelines and Watercourses” regulations by providing them with effective compliance mechanisms and sufficiently deterrent penalties that are comparable with those stipulated under similar pieces of legislation.

Comment: A number of the comments to the Discussion Paper recommended empowering conservation authorities to issue stop work orders and orders to comply which together could minimise impacts and accelerate remediation. Along with increasing fines for violations, it has been recommended that the fines be returned to the conservation authorities. As legal costs for prosecutions and OMB hearings can be high, it is recommended that consideration be given to establishing a centralized office of legal resources under Conservation Ontario that could be tapped by individual conservation authorities.
• Streamline planning and permitting processes by exploring opportunities to reduce burdens, improve service standards, enhance flexibility in approval requirements, and adopt a risk-based approach to the issuance of approvals.

**Comment:** It has been suggested that conservation authorities be authorized to require proponents of substantial undertakings to provide financial security (e.g. a letter of credit) when appropriate to defray unforeseen costs of site remediation in cases where municipalities do not or cannot do so.

3. **Improving collaboration and engagement among parties involved in resource management**

As environmental and resource management issues typically cut across jurisdictional lines and geographic scales, there was considerable comment on ways of improving collaboration and eliminating duplication among public sector agencies. The COF document reports that Conservation authorities are widely viewed as effective agencies for delivering Provincial and even federal programs in a manner best suited to local conditions. This could involve transferring increased resources from the upper levels of government to conservation authorities. There are other opportunities for collaboration and sharing of resources and knowledge among stakeholders that merit implementation. COF suggests other actions for consideration:

• Establish a "one-window" approach led by the Ministry of Natural Resources and Forestry for coordinating and reviewing initiatives undertaken at the watershed scale by conservation authorities in order to coordinate the delivery of Provincially-delegated programs and services and the collection and sharing of science and information among ministries, municipalities, conservation authorities and others.

**Comment:** A more coordinated approach is supported as it has the potential to ensure timely and appropriate Ministry involvement in watershed studies, the review, update, and designation of Special Policy Areas, and other projects initiated by conservation authorities and their municipal partners. Nevertheless, the one-window should not prevent municipalities or individual conservation authorities from directly contacting any Ministry when direct consultation is required.

• Develop an enhanced business relationship with Conservation Ontario and individual conservation authorities to promote greater communication and coordination in the development and implementation of policies, programs and services, the collection and sharing of science and information and the joint development of capacity-building projects and initiatives.

**Comment:** Improving communications is an obvious improvement, and can continue to build upon existing relationships.

• Enhance Indigenous Peoples’ participation in the development and delivery of stewardship, science and knowledge, and educational initiatives, and by
clarifying the process for Indigenous Peoples to join or establish a conservation authority.

Comment: This is supported in that it encourages information sharing and can build bridges between Indigenous communities and the general population.

- Ensure board decisions are informed by an appropriate diversity of views and perspectives reflective of local interests, including providing Indigenous Peoples, local residents and stakeholder groups opportunities to participate in the identification of local needs and priorities and conservation authority decision-making processes.

Comment: This recommendation is supported.

- Support efforts currently being made by conservation authorities to promote efficiency and effectiveness in the delivery of programs and services through the development of common policies and procedures, service specializations, and sharing of operational, administrative and technical resources on a regional or landscape basis.

Comment: A common set of policies and procedures developed by and for conservation authorities would have the potential to be a means of assisting smaller and less-resourced conservation authorities to improve the delivery of their services.

4. Modernizing funding mechanisms to support conservation authority operations

Conservation authorities used to receive substantial funding from the Provincial government. This funding was greatly reduced in the mid-1990s, and many conservation authorities had to find other sources of revenue. At present, the Grand River Conservation Authority receives about 35% of its annual operating costs from the municipal levy, about 50% from fees for services and other sources (user fees, planning fees, property rentals, and hydro generation), and only 10-15% from Federal, Provincial, and municipal grants for specific purposes. A number of respondents called for restoring some or all of the provincial funding. The COF document states, however, that current budgetary realities make that unlikely. In the meantime, respondents had recommendations intended to bring about greater consistency in some forms of funding mechanisms. Overall, conservation authority funding is one of the most significant issues of this review process which can be only partially addressed within the context of the Conservation Authorities Act. Ultimately, the Province will have to give consideration to providing new funding or transferring ministry resources to conservation authorities to carry out the suggested improvements.

- Enhance clarity, consistency and accountability in the development and use of municipal levies by defining eligibility criteria, reviewing apportionment criteria, and defining the process by which conservation authorities are to work with participating municipalities to monitor and report on the use of public funds.
Comment: This issue was widely identified by respondents, and warrants further discussion and the development of criteria and apportionment formulae in a new regulation.

- Promote clarity, consistency and accountability in the development and use of fees and generated revenue with the aim of ensuring fees are established in an open and transparent manner, are consistent with provincial direction on the use of fees, and adequately support the effective delivery of conservation authority operations, programs and services.
  
  Comment: This recommendation is supported.

- Improve fiscal oversight and transparency by clarifying the role of municipalities in overseeing conservation authority budget development and spending, and where appropriate, standardizing budget development, tracking and reporting processes, and ensuring information on revenue sources and expenditures is made publicly available.
  
  Comment: This recommendation is supported.

- Improve clarity in the use of Provincial funding processes by providing conservation authorities with greater clarity in eligibility criteria, reviewing the efficiency and effectiveness of Provincial funding processes, and updating requirements for reporting back on the use of Provincial funds.
  
  Comment: These are appropriate recommendations. It has also been recommended that conservation authorities be eligible to receive Trillium and potentially other sources of funding for appropriate projects.

5. **Enhancing flexibility for the Province to update the Conservation Authorities Act framework in the future**

The current review of the now seventy year old Conservation Authorities Act is a substantial undertaking encompassing three phases of public consultation. The breadth and openness of this process is commendable in that it has allowed a wide range of agencies and individuals to comment upon the potential reform of legislation that affects the community where most Ontarians live. COF has recommended that the review introduce measures to facilitate necessary updates of the matters covered by the Act.

- Give the Minister authority under the Act to develop additional natural resource conservation and management programs and services in the future, throughout the province.
  
  Comment: This recommendation is supported.

- Give the Minister the authority to formally delegate the delivery of current and additional natural resource conservation and management programs and services to conservation authorities in the future.
  
  Comment: This recommendation is supported provided Provincial funding is also transferred so that municipalities or fee-payers are not required to provide direct
support to these initiatives.

- Give the Minister the authority to formally delegate the delivery of current and additional natural resource conservation and management programs and services to other public bodies, not-for-profit organizations, municipalities and other Ministries.

  **Comment:** Delegation of functions should not be a continuation of the downloading without compensatory funding that has occurred since the mid-1990s. For example, the Province withdrew from the Agreement Forest program, and then more recently ended forestry advisory services in Southern Ontario. Reduction of services has required municipal governments to pick up some of these responsibilities.

- Give the Minister the authority to deliver additional natural resource conservation and management programs and services throughout the province.

  **Comment:** Climate change, invasive species, and other environmental stressors will no doubt require the Province to develop appropriate programs, some of which can be delivered by locally-based conservation authorities providing appropriate Provincial funding is made available.

6. **Other Comments**

- Consider including cultural heritage conservation as a mandatory responsibility under the jurisdiction of conservation authorities. Ontario’s waterways have been central to the historic development of the Province; in addition to providing water for basic survival, rivers and streams were the original transportation network and a source of industrial power. For generations people have lived and built settlements on the lands surrounding waterways. Now under the jurisdiction of Conservation Authorities, these lands contain high concentrations of cultural heritage resources, many owned by conservation authorities, and all subject to the impacts of the authorities’ planning approval. Heritage conservation is not referenced in the current Act as a conservation authority responsibility. It is therefore recommended that the ongoing review process explore the feasibility of making cultural heritage conservation part of the authorities’ mandate. This addition would require authorities to conserve the cultural heritage resources that they own, and work collaboratively with municipalities to support the conservation of significant cultural heritage resources within regulated lands. Such new responsibilities would require funding and technical support (i.e. training, information sharing). It would also require collaboration and innovation to find viable long-term uses and affordable technical solutions for conserving historic properties located within regulated areas.

- Make the definition of “wetland” in section 28 (25) of the Act consistent with that in the Provincial Policy Statement (PPS). The definition in the Act stipulates that a “wetland” must meet four criteria:
a) is seasonally or permanently covered by shallow water or has a water table close to or at its surface,
b) directly contributes to the hydrological function of a watershed through connection with a surface watercourse,
c) has hydric soils, the formation of which has been caused by the presence of abundant water, and
d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which has been favoured by the presence of abundant water.

The PPS definition does not contain an equivalent to item b) which allows for consideration of kettle wetlands dependent on sheet flow or wetlands sustained by groundwater discharge neither of which may be associated with a watercourse. Removal of item b) will bring such wetlands under the definition of wetland under the Act consistent with the PPS.

The COF document identified a number of potential housekeeping amendments that could be considered to facilitate the operation of conservation authorities:

- Align conservation authority board terms from the maximum three years in section 14(4) of the Act to four.
  **Comment:** Increasing the maximum term length is supported in that it would reflect the change from a three-year to a four-year municipal council term that started with the 2006 elections.
- Develop an orientation and training program for board members.
  **Comment:** A number of respondents raised this issue. Board members are called upon to consider a range of technical, legal, and financial matters. Such training would help new board members fulfill their role with more confidence.
- Develop a coordinated communications plan outlining any changes to conservation authority operations, programs and services resulting from the review in partnership with municipalities and conservation authorities.
  **Comment:** While larger conservation authorities may have communications staff, a coordinated approach would benefit small authorities without such resources.

7. **Conclusion**

Input received from this second phase of the consultation process will be used by Ministry staff to inform potential amendments to the Conservation Authorities Act, its regulations, and associated policy. The Province has committed to circulating any such changes for further consultation through subsequent Environmental Registry postings. Regional staff will continue to stay involved in the process and provide additional reports to Regional Council at a future time.
Area Municipal Consultation/Coordination:

A preliminary draft of this report was provided to the Area Municipalities for review, and staff has endeavoured to reflect comments received from Cambridge and Waterloo staff. North Dumfries Township staff endorse the principles and comments made in the report.

Corporate Strategic Plan:

Promoting improvements to the legislation and regulations under which the Grand River Conservation Authority operates will help achieve Action 3.5.1 to work with community partners to conserve the natural and cultural heritage to realise the recreational and tourism potential of the Grand River system.

Financial Implications:

Nil.

Other Department Consultations/Concurrence:

Council and Administrative Services would forward the response document to the Ministry of Natural Resources and Forestry.

Attachments:

Nil.

Prepared By: Chris Gosselin, Manager of Environmental Planning and Stewardship

Approved By: Debra Arnold, Acting Commissioner of Planning, Development and Legislative Services
Region of Waterloo

Transportation and Environmental Services

Corporate Services

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

Date: September 13, 2016  
File Code: F06-80

Subject: Corporate Asset Management Plan

Recommendation:


Summary:

The data in the Asset Management Plan demonstrates that assets are managed well and the Region's infrastructure is in reasonable condition.

Long term forecasts indicate that further investment is needed in the future to maintain assets in the current condition. Further data and analysis is required to support that conclusion before making changes to the capital forecast.

As directed by Council, existing asset renewal should not be funded through long term borrowing but rather through reserves and current year revenues from property tax and user rate sources. Further incremental budget changes will be required to achieve this goal.

Report:

Asset Management Plan and Purpose

The Asset Management Plan (AM Plan) is a long range planning document, intended to improve the Region’s ability to meet its corporate goals and objectives in a way that best serves its customers. It outlines the asset activities for each service area and
provides a guide to understanding key items such as:

- Alignment with the Region’s strategic goals
- The Region’s asset portfolio
- Levels of service and performance measures
- Management techniques to assist in making long term funding decisions
- Lifecycle activities to operate, maintain, renew, develop and dispose of assets
- Budget forecasts for growth and renewal to sustain the Region’s asset portfolio

The AM Plan relies on input from strategic and master plans, and forms the base framework or tool to assist the Region in developing appropriate direction and inputs to budget forecasts, annual 10-year capital and 1-year operating programs, and long range financial plans.

While the Region has a long history of implementing advanced asset management practices that incorporate both asset renewal, enhanced operation and maintenance practices, policies, and programs, there has also been a legislative and regulatory push for the development of formal asset management plans which formalize these strategies. Legislative and regulatory requirements for Asset Management Plans include the following:

- Province of Ontario – Water Opportunities and Water Conservation Act
- Province of Ontario - Municipal Infrastructure Strategy
- Province of Ontario - Development Charges Act
- Province of Ontario - Infrastructure for Jobs and Prosperity Act
- Federal Gas Tax Funding
- Transport Canada – Airports

This legislation stipulates that an Asset Management Plan must be completed, approved by Council, and made available publicly by December 2016 in order to be eligible to apply for grants. This plan has been developed closely following the Provincial guidelines to ensure that it meets the requirements for funding applications.

**State of Infrastructure**

The AM Plan describes the Region’s asset portfolio by service area, asset type, condition, and replacement value. The Region owns assets with a total replacement value of approximately $5.3 billion covering a wide range of different asset types. In 2015, the Region invested approximately **$125 million** to renew assets to enable the Region to meet current service levels. The breakdown of asset valuation for each division is outlined in the table below.
Service Area | Replacement Cost ($2015)
--- | ---
Transportation | $1,629,000,000
Water Services | $1,970,000,000
Waste Management | $133,000,000
Airport | $49,000,000
Grand River Transit | $154,000,000
Facilities (including Waterloo Region Housing) | $1,342,000,000
Fleet | $43,000,000
**TOTALS** | **$5,320,000,000**

The AM Plan identifies that the Region’s assets are well managed and currently in reasonable condition with approximately 88% of the Region’s assets in fair or better condition. The chart below illustrates the distribution of assets, by condition and by asset value. There are a significant number of assets in fair condition (approximately $1.729 billion), which identifies a significant need for future renewal before those assets drop to poor or very poor condition.

The AM Plan also identifies approximately $645 million in assets that are in poor or very poor condition. There are always some assets that are safely and economically run to failure and then replaced. These assets can be quickly and easily replaced or have redundancy so the failure and subsequent replacement does not impact safety or service delivery. There are also assets that are scheduled for repair or replacement in the first years of the 10-year capital program. All of the assets that are in the poor or very poor condition fall into one of these two categories.

Legislative and technical levels of service have been identified in the AM Plan. Performance indicators and targets have been stated to describe, quantify, and
communicate the services that regulators expect and customers want based on community input to the Corporate Strategic Plan. The measures noted in the plan confirm the Region is meeting or approaching these target service levels.

Asset Management Strategy

The Region’s ability to deliver the levels of service outlined in the AM Plan are impacted by future population growth, resulting in a need for additional infrastructure and addressing the aging infrastructure, which will increase future renewal, operation and maintenance needs.

Asset condition, performance and relative importance are identified through risk assessments. Required work can then be prioritized based on the relative risks of the assets. Consistent maintenance and renewal strategies are required and must be followed to minimize those risks.

The current strategies that are being applied include:

- Investment in demand reduction solutions such as education and conservation programs, smoothing peaks and balancing asset use.
- Optimising management costs through sharing of assets and coordinating work between internal service areas and local municipalities.
- Identification of expansion and investment needs through increased and comprehensive master planning for all service areas and asset types as discussed in the Long-term Financial Sustainability Initiatives Report (COR-FSD-16-04, dated Feb 2, 2016).
- Identification of renewals needs and investment through the development of comprehensive asset inventories and condition assessments, which are used to develop medium and long term capital plans.
- Maintenance and operations needs and investment which are assessed and prioritized based on criticality and reliability. Routine preventative maintenance activities are completed to ensure preservation of existing assets. Operational and maintenance requirements are considered when planning new infrastructure.

By applying these strategies, the Region is currently meeting identified legislated and customer levels of service, however some internal performance targets are not being met, specifically the delivery of work within the anticipated timeframes. All necessary work is being completed, but often not in the year that was planned. This can result in increased operation and maintenance costs. Deferring renewal work can also lead to earlier deterioration of assets, increasing costs faster than inflation.
Financial Strategy

The financial strategy integrates asset management planning with financial planning and budgeting. Financial management principles for asset intensive organizations include recognizing the consumption of asset service potential (degradation of assets), categorizing expenditure by lifecycle activity, allocating costs to assets as far as practical, preparing long term forecasts, cost-effective financing, and effective reporting of financial performance.

The AM Plan identifies long-term funding needs by service area. It forecasts that the long-term (100-year) average investment needed to maintain current assets is $185.4 million. It also indicates that an annual average of $139.8 million is included in the 10-year capital program. While it is clear that there is some gap between the long-term forecast and what is being budgeted, at this point it is difficult to accurately determine that gap. This is for a number of reasons. Part of this is in the timing of asset lifecycle replacements. Some 10-year periods may be significantly higher than the 100-year average while others may be significantly lower. Also, more work is needed to develop complete asset inventories and comprehensive condition assessments. Every asset should have a planned replacement date and financing strategy. As more information is gathered and analysis done, a better assessment of the gap can be completed and then reported to Council. Through a future budget process staff would present a budget addressing the gap and Council can approve that budget as appropriate.

Regional Council ultimately controls the financial aspect of the AM Plan by approving the strategy included in the Plan, approving service levels and approving the budget to support the plan and service levels.

Corporate Strategic Plan:

Approval of the Asset Management Plan aligns with the 2015-2018 Corporate Strategic Plan Objective to plan for and provide the infrastructure and services necessary to create the foundation for economic success under Strategic Focus Area 1, Thriving Economy. This includes continuing to implement and improve an asset management plan to optimize the use and availability of existing and new infrastructure.

Financial Implications:

There is no direct financial commitment from the approval of this AM Plan. Approval of the plan allows the Region to apply for Federal and Provincial funding. Many funding opportunities are only available to municipalities with Council approved AM Plans.

Regional Council has approved the capital financing principle that asset renewal projects should be financed through reserves and current year revenues from property
tax and user rate sources, and not through long term borrowing, as set out in the Corporate Financing Principles Report (COR-FSD-16-16, dated June 14, 2016). The AM Plan clearly identifies these current and long term funding needs.

Other Department Consultations/Concurrence:

Staff representatives from Divisions within Transportation and Environmental Services, Corporate Services and Planning Development and Legislative Services Departments are involved in the Corporate Asset Management Program and have been consulted in the preparation of this report.

Attachments:

Asset Management Plan (available at the meeting and in Councillor’s Library)

Prepared By: Richard Pinder, Senior Project Engineer - Asset Management

Charles Allen, Facilities Planning & Performance Manager

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

Craig Dyer, Commissioner, Corporate Services/Chief Financial Officer
Region of Waterloo
Planning Development and Legislative Services
Legal Services

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

Date: September 13, 2016 File Code: L07-90, 5633, 7042, 5489

Subject: Authorization To Expropriate Lands (1st Report) for Improvements to King Street (Regional Road 15) and Weber Street (Regional Road 8), City of Waterloo

Recommendation:

That The Regional Municipality of Waterloo direct and authorize the Regional Solicitor to take the following actions with respect to the expropriation of lands for the improvements on King Street (Regional Road 15) from Weber Street to Highway 85, and on Weber Street (Regional Road 8) from Forwell Creek Road to Blythwood Road, in the City of Waterloo, in the Region of Waterloo as detailed in report PDL-LEG-16-56 dated September 13, 2016:

1. Complete application(s) to the Council of the Regional Municipality of Waterloo, as may be required from time to time, for approval to expropriate land, which is required for the improvements to King Street (Regional Road 15) from Weber Street to Highway 85, and on Weber Street (Regional Road 8) from Forwell Creek Road to Blythwood Road and described as follows:

Fee Simple Partial Taking:

a) Part Lots 7 and 12, German Company Tract and Part 1’ Reserve E, Registered Plan 1155, being Parts 15, 16 and 17, on Reference Plan 58R-18950, part of PIN 22280-0047 (LT)(410-420 Weber Street North, City of Waterloo);

b) Part Lot 7, German Company Tract, being Part 11, on Reference Plan 58R-18950, part of PIN 22280-0286 (LT)(421-425 King Street North, City of Waterloo);
c) Part Lot 7, German Company Tract, being Part 3, on Reference Plan 58R-18948, part of PIN 22279-0037 (LT)(428 King Street North, City of Waterloo);

d) Part Lot 7, German Company Tract, being Part 12, on Reference Plan 58R-18949, part of PIN 22280-0050 (LT)(435 King Street North, City of Waterloo);

e) Part Lot 7, German Company Tract, being Part 2, on Reference Plan 58R-18948, part of PIN 22279-0038 (LT)(24 Forwell Creek Drive, City of Waterloo);

Hydro Easement:

a) Part Lots 7 and 12, German Company Tract, being Parts 13, 14, 18 and 19, on Reference Plan 58R-18950, part of PIN 22280-0047 (LT)(410-420 King Street North, City of Waterloo);

b) Part Lot 7, German Company Tract, being Part 2, on Reference Plan 58R-18949, part of PIN 22280-0048 (LT)(417 King Street North, City of Waterloo);

c) Part Lot 7, German Company Tract, being Part 8, on Reference Plan 58R-18949 and Part 12, on Reference Plan 58R-18950, part of PIN 22280-0286 (LT)(421-425 King Street North, City of Waterloo);

d) Part Lot 7, German Company Tract, being Parts 4 and 5, on Reference Plan 58R-18948, part of PIN 22279-0037 (LT)(428 King Street North, City of Waterloo);

e) Part Lot 7, German Company Tract, being Part 1, on Reference Plan 58R-18948, part of PIN 22279-0038 (LT)(24 Forwell Creek Drive, City of Waterloo);

2. Serve notices of the above application(s) required by the Expropriations Act;

3. Forward to the Chief Inquiry Officer any requests for a hearing that may be received;

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

5. 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 determined by the Commissioner of Transportation and Environmental Services that such lands, or any part or interest thereof, are not required for the subject project; and

6. Do all things necessary and proper to be done, and report thereon to Regional Council in due course.
Summary: NIL

Report:

Regional Council approved roadway improvements to King Street (Weber Street to Highway 85) and Weber Street (Forwell Creek Road to Blythwood Road) on February 5, 2014 as detailed in Report E-14-010. The project improvements include replacement of underground infrastructure, new cycling lanes on Weber Street, new multi-use trails on King Street, as well as a number of turning lane improvements at the intersections within the project limits.

Land acquisitions as outlined in the Recommendation will be required from seven (7) property owners. The acquisitions include fee simple partial takings and permanent easements for relocation of Waterloo North Hydro Inc. utilities.

All of the affected property owners, or their representatives, have been contacted by Legal Services Real Estate staff by one or more of the following means: in-person meeting, telephone, written correspondence and/or e-mail, to discuss the required acquisitions and have been informed of the Region’s intention to commence the expropriation process, including this Report going forward, to ensure project time lines are met. All property owners have been provided with the Region’s Expropriation Information Sheet explaining the expropriation process. A copy of the Expropriation Information Sheet is attached as Appendix “C”. The owners have further been advised it is the Region’s intent to seek a negotiated settlement prior to completion of the expropriation process and that the process has been commenced only to ensure possession of the required lands by the date set by Project staff in order to keep the project timeline in place. There is also a permanent easement for relocation of Waterloo North Hydro utilities required from Waterloo Region District School Board that has not been included in the expropriation as a negotiated agreement is expected. Should a negotiated settlement be reached with property owners and a conveyance of the required acquisition be completed before the Expropriation process is complete, that property will be dropped from the Expropriation process by the Regional Solicitor.

The expropriation of the lands is on an “as is” basis and upon acquisition the Region assumes all responsibility for the lands.

The Project Area is shown attached as Appendix “A”.

Corporate Strategic Plan:

This Project supports the following two strategic objectives of the Corporate Strategic Plan: to optimize existing and new road capacity to safely manage traffic throughout Waterloo Region, and to develop, promote and integrate active forms of transportation (cycling and walking).
Financial Implications:

The Region’s revised 2016 Transportation Capital Budget approved as part of Report TES-TRP-16-15 includes $120,000 in 2016 for improvements on King Street (project 05633) and Weber Street (Project 05489). The Region’s approved 2016 Ten-year Transportation Capital Program includes $2,865,000 in 2017-2018 for these projects. All budgets are funded from the Roads Rehabilitation Reserve 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” – Key Map
Appendix “B” – Corporate Profiles
Appendix “C” – Copy of Expropriation Information Sheet

Prepared By:  Fiona McCrea, Solicitor, Property
Approved By: Richard Brookes, Acting Regional Solicitor, Director of Legal Services
1. 410-420 Weber Street North, Waterloo  
   Owner: 1101610 Ontario Limited  
   Annual Return: January 11, 2014  
   Directors/Officers: Helmut Krause, Richard Krause, Richard Paul Krause,  
                     Tabea Helga Reinhardt  
   Fee Simple Partial Taking and Hydro Easement

2. 421-425 King Street North, Waterloo  
   Owner: 2048499 Ontario Incorporated  
   Annual Return: July 18, 2014  
   Directors/Officers: Richard S. Boyer, John R. Whitney, Larry Williamson  
   Fee Simple Partial Taking and Hydro Easement

3. 428 King Street North, Waterloo  
   Owner: Capital City Shopping Centre Limited  
   Annual Return: July 12, 2013  
   Directors/Officers: Kuy-Ly Ang, Mark Banting, George Buckles, Marv Holmen,  
                     Rafael Kalach Atri, Jose Kalach Atri, Rafael Moises Kalach Mizrahi, Thomas Murphy,  
                     Randall M. Scharfe  
   Fee Simple Partial Taking and Hydro Easement

4. 435 King Street North, Waterloo  
   Owner: 2439675 Ontario Inc.  
   Annual Return: December 1, 2014  
   Directors/Officers: Lianting Chen,  
                     Fee Simple Partial Taking

5. 24 Forwell Creek Drive, Waterloo  
   Owner: CP REIT Ontario Properties Limited  
   Annual Return: July 30, 2015  
   Directors/Officers: John Morrison, Bart Munn, Adam Walsh  
                     Fee Simple Partial Taking and Hydro Easement

6. 417 King Street North, Waterloo  
   Owner: Golden Triangle Oils Limited  
   Annual Return: April 4, 2014  
   Directors/Officers: Stephen J. McCrory, Brian McCrory  
                     Hydro Easement
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.
Region of Waterloo
Planning Development and Legislative Services
Legal Services

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

Date: September 13, 2016

File Code: L07-90

Subject: Surplus Declaration and Conveyance of Easement Interest in Favour of Waterloo North Hydro Inc. - 1-5 High Street, Waterloo

Recommendation:

That the Regional Municipality of Waterloo:

a) declare an easement interest in the lands described as Part Lot 12, German Company Tract, part of PIN 22276-0037 (LT) as shown as Part 1, on Reference Plan 58R-18950, in the City of Waterloo surplus to the needs of the Region, as detailed in Report No. PDL-LEG-16-62 dated September 13, 2016, and provide the standard public notification as required by the Region’s property disposition by-law; and

b) approve, enter into an Agreement for, and execute all documentation related to, the conveyance of a permanent easement to Waterloo North Hydro Inc. for the sum of $1.00, for the installation and maintenance of hydro equipment, on, over and under the lands described Part Lot 12, German Company Tract, part of PIN 22276-0037 (LT) as shown as Part 1, on Reference Plan 58R-18950, in the City of Waterloo, as detailed in Report No. PDL-LEG-16-62 dated September 13, 2016 pursuant to the Region’s property disposition by-law and the satisfaction of the Regional Solicitor.

Summary: Nil.
Report:

Regional Council approved roadway improvements to King Street (Weber Street to Highway 85) and Weber Street (Forwell Creek Road to Blythwood Road) on February 5, 2014 as detailed in Report E-14-010. The project improvements include replacement of underground infrastructure, new cycling lanes on Weber Street, new multi-use trails on King Street, as well as a number of turning lane improvements at the intersections within the project limits.

Waterloo North Hydro Inc. have advised that as part of this project relocation of hydro utilities onto the Regional property identified as 1-5 High Street will be required. There are townhouses on the property which are part of community housing operated by Waterloo Region Housing.

The total easement area is 116.87 square feet. The permanent easement will give Waterloo North Hydro Inc. the right to enter on the easement area to construct, lay down and install hydro and communication wires, cables, anchors, fixtures and equipment and appurtenances. The Region cannot erect any buildings or structures or otherwise obstruct access to the easement area. Housing staff has no concern with this requirement as the subject lands are not required for any Regional purpose.

The Region’s property disposition by-law requires advertising of any proposed conveyance of an interest in Regional land in a local newspaper. When the requirements of the Region’s property disposition by-law have been met, the subject easement will be conveyed to Waterloo North Hydro Inc.

The Project Area is shown attached as Appendix “A”.

Corporate Strategic Plan:

This Project supports the following two strategic objectives of the Corporate Strategic Plan: to optimize existing and new road capacity to safely manage traffic throughout Waterloo Region, and to develop, promote and integrate active forms of transportation (cycling and walking).

Financial Implications:

The estimated cost related to the conveyance of the easement to Waterloo North Hydro is $3000. The 2016 Roads Rehabilitation Reserve Fund includes sufficient funding for this.
Other Department Consultations/Concurrence:

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

Attachments

Appendix “A” – Key Map

Prepared By:  Fiona McCrea, Solicitor, Property

Approved By: Richard Brookes, Acting Regional Solicitor, Director of Legal Services
Region of Waterloo
Transportation and Environmental Services
Water Services

To: Chair Tom Galloway and Members of the Planning and Works Committee
Date: September 13, 2016
File Code: E03-20/4160
Subject: William Street – Strange Street Water Supply Class Environmental Assessment: Notice of Completion

Recommendation:
That the Regional Municipality of Waterloo accept the “Environmental Study Report, William Street – Strange Street Water Supply Class Environmental Assessment Study,” summarized in this Report TES-WAS-16-16 dated September 13, 2016;

And that the Regional Municipality of Waterloo publish the Notice of Completion for the Environmental Assessment 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 Region’s Water Supply and Distribution Operations Master Plan (WSDOMP) completed in 2014 examined options for optimizing water distribution in the cities of Cambridge, Kitchener and Waterloo. One recommendation was the concept of combining water from the William Street Water Supply System (WSS) in Waterloo with the Strange Street WSS in Kitchener. These two systems have similar water treatment requirements (iron and manganese), and combining them would centralize treatment at one single location. The combined system will also increase flexibility to transfer water to the Cities of Kitchener and Waterloo.

The following three points were the main focus of the Class Environmental Assessment (Class EA) Study:
A. water treatment plant location

B. water main route connecting both WSS’s

C. layout of the water treatment plant

The Class EA phase of the consulting assignment has now been completed by the Consultant, including the required Environmental Study Report.

The recommended alternative for the William Street and Strange Street WSS’s is a single treatment facility located at the site of the Strange Street WSS. Water from the William Street WSS will be pumped to the common WTP at the Strange Street WSS by a watermain along Herbert Street, John Street, the Iron Horse Train and Glasgow Street. At the intersection of Glasgow Street and Belmont Avenue, a connection will be made to the existing watermain that leads to the Strange Street WSS. The layout of the WTP at Strange Street involves building the WTP connected to and in behind the existing pumping station building, thereby preserving heritage attributes while maintaining the original purpose of the building.

Based on the public consultation conducted during the Class EA, feedback received was generally supportive of the implementation of the WTP. In addition, there were comments reflecting the understanding of the need to balance various priorities and interests involved at the Strange Street WSS and William Street WSS sites.

Report:

Master Planning Context of this Study

The Region’s Water Supply and Distribution Operations Master Plan (WSDOMP) completed in 2014 examined options for optimizing water distribution throughout the Integrated Urban System (IUS) service area, consisting of the Cities of Cambridge, Kitchener, and Waterloo, as well as the communities of St. Jacobs, Elmira, St. Agatha, and Lloyd Brown.

One alternative developed through the WSDOMP was the concept of combining water from the William Street Water Supply System (WSS) in Waterloo with the Strange Street WSS in Kitchener. These two systems have similar water treatment requirements (iron and manganese), and combining them would centralize treatment at one single location. The combined system will also increase flexibility to transfer water to the Cities of Kitchener and Waterloo.

In April, 2014, the Region retained XCG Consultants Ltd (Consultant) to carry out a Municipal Engineers Association’s Schedule C Class Environmental Assessment (Class EA) for the William Street and Strange Street WSS’s (see Report E-14-035 dated April 1, 2014).
Background and Rationale

The William Street WSS is located at 17-23 William Street East (across from the Waterloo City Centre and the Region’s Public Health & Social Sciences building) in the City of Waterloo. The supply consists of five production wells (W1B, W1C, W2, W2A, and W3) all situated on-site along with a storage reservoir and a pumping station. The Strange Street WSS is located at 25 Strange Street in the City of Kitchener. The supply consists of five production wells (K10A, K11A, K13, K18, and K19), all remotely situated, and connected via a common raw water transmission main to an on-site storage reservoir and a pumping station.

The pumping station buildings on both sites are regarded as having important cultural heritage value in the community. The William Street pumping station is designated as a culturally significant building by the City of Waterloo, while the Strange Street pumping station is listed on the heritage registry by the City of Kitchener.

The concept to join the two WSS’s arose for the following reasons:

1) recognition that the WSS’s will continue to play an integral part of the Region’s long-term water supply,
2) the two WSS’s are in relative close proximity to each other, and
3) the two WSS’s have similar water quality characteristics requiring treatment for iron and manganese.

The following three points were the main focus of the Class EA.

A. water treatment plant location
B. water main route connecting both systems
C. layout of the water treatment plant

A. Water Treatment Plant Location

A number of alternatives were developed for the possible location of the Water Treatment Plant (WTP). They included:

- one combined treatment facility at the Strange Street WSS site
- one combined treatment facility at the William Street WSS site
- one separate treatment facility at each site with storage and pumping at one single site
- one combined treatment facility at a third site
Based on the evaluation undertaken, the preferred alternative was construction of a combined WTP at the Strange Street WSS site.

**B. Water Main Route to Connect Both Systems**

The process used to develop and evaluate potential water main alignments that connect the two WSS’s involved a detailed review of available corridors between the William Street WSS and the Strange Street WSS.

All alignments considered the use of an existing watermain at the intersection of Glasgow Street and Belmont Avenue to the Strange Street WSS. Sixteen possible route alternatives were identified. This long list of route alternatives was analyzed and four preferred routes were short-listed for further analysis. All routes start at the above existing water main on Belmont Avenue. The final section is also common to all routes and follow along Herbert Street to the William Street WSS. The four short-listed routes were:

1. Up Belmont Avenue with crossing of King Street S. along Union Street West to Herbert Street;
2. Up Belmont Avenue with crossing of King Street S. along John Street West to Herbert Street;
3. Slightly east on Glasgow Street and up Iron Horse Trail with crossing of King Street S. along Union Street West to Herbert Street; and
4. Slightly east on Glasgow Street and up Iron Horse Trail with crossing of King Street S. along John Street West to Herbert Street.

Based on the evaluation that was undertaken, the preferred route was route 4: Slightly east on Glasgow Street and up Iron Horse Trail with crossing of King Street S. along John Street West to Herbert Street.

A crossing of the LRT tracks will be necessary at the King Street S. and John Street intersection. This crossing will use non-destructive construction methods and will have no impact on the recently constructed tracks.

**C. Layout of the Water Treatment Plant**

Based on the preferred WTP location described above, alternative plant layouts for the combined facility on the Strange Street site were developed and analyzed. These layouts included:

1. Demolish existing pump station building and build new WTP and pump station building;
2. Build a new WTP building parallel to existing pump station building and maintain existing pump station building;

3. Build a new WTP perpendicular to existing pump station and maintain existing pump station building;

4. Merge new WTP building in line with existing pumping station building;

5. Build new WTP building connected behind exiting pump station building.

Factors considered for evaluating these alternatives included treatment requirements, operational flexibility, coordination with City of Kitchener regarding an existing trunk sewer on the site, coordination with GRCA, construction impacts, conserving heritage features and cost.

Attachment 1 is the handout from the last public consultation center. The handout documents the alternatives that were considered and the evaluation that was done for each alternative leading to the preferred alternative. The preferred design concept for the new Strange Street WTP was Alternative 5 and includes the following components:

- Construction of a new WTP building connected behind the existing Strange Street PS, including new low lift and high lift pumps, chemical storage and feed equipment, disinfection, backwash and treated water storage, and other ancillary equipment. The addition would not interfere with heritage attributes of the existing building as viewed from Strange Street.

- Installation of an iron and manganese removal process, consisting of pre-oxidation followed by filtration.

- Slight relocation of City of Kitchener’s existing wastewater pipe to the west of the Strange Street property with sufficient cover to avoid exposure.

- Removal of existing reservoir and replace with new underground reservoir under the new WTP.

Figures 1 and 2 presents the conceptual rendering drawing of the preferred design concept, showing the existing pump station building and the connection to the new WTP. Details for the exterior finishings of the new WTP will be determined during the detailed design stage.

Although the WTP will be at Strange Street, a number of work items will also be required at the William Street PS, including:

- Decommission existing reservoir
- Remove existing booster pumps and related equipment from the existing
heritage building
- Improve existing well houses
- Further examine and rehabilitate wells W2, W2A and W3
- Replace well pumps and associated yard piping
- Rearrange and upgrade electrical equipment
- Ascertain and construct optimal route of discharge header main to Herbert Street

As the William Street pump station building is a designated heritage structure by the City of Waterloo, the Region will ensure that the property is not damaged during the work. Furthermore, the Region will continue to engage in discussion with the City of Waterloo for the potential future use of the building and site area.

Public Consultation

Public Consultation during the Class EA involved the following:

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Commencement</td>
<td>May/June, 2014</td>
<td>Notice on the commencement of the Class EA; establishment of a project mailing list.</td>
</tr>
<tr>
<td>Public Consultation Center #1</td>
<td>September 16, 18, 2014</td>
<td>Invitation to view background information on the two WSS’s.</td>
</tr>
<tr>
<td>Public Consultation Center #2</td>
<td>October 20, 22, 2015</td>
<td>Invitation to view alternatives on location of WTP and watermain route.</td>
</tr>
<tr>
<td>Public Consultation Center #3</td>
<td>May 17, 18, 2016</td>
<td>Invitation to view conceptual layout of WTP at Strange St. location.</td>
</tr>
<tr>
<td>Project Completion</td>
<td>Fall 2016</td>
<td>Notice of the filing of the final Class EA report and request for comments.</td>
</tr>
</tbody>
</table>

All notices for events above were advertised in local newspapers, sent by mail out sent to agencies and stakeholders, and hand delivered to neighbouring property owners. All notices, PCC material, comments sheets and staff contacts were also made available on the Region’s Project website.

Based on the public consultation conducted during the Class EA, feedback received was generally supportive of the implementation of the WTP. In addition, there were comments reflecting the understanding of the need to balance various priorities and interests involved at the Strange Street WSS and William Street WSS sites.

Recommended Alternative and Municipal Class EA Filing
The Class EA phase of the consulting assignment has now been completed by the Consultant, including the required Environmental Study Report.

The recommended alternative for the William Street and Strange Street WSS’s is a single treatment facility located at the site of the Strange Street WSS. Water from the William Street WSS will be pumped to the common WTP at the Strange Street WSS by a watermain along Herbert Street, John Street, the Iron Horse Train and Glasgow Street. At the intersection of Glasgow Street and Belmont Avenue, connection will be made to the existing watermain. The layout of the WTP at Strange Street involves building the WTP connected to and in behind the existing pumping station building, thereby preserving heritage attributes while maintaining the original purpose of the building.

The Municipal Class EA process requires public advertisement of a Notice of Completion for the EA, and availability of the Environmental Study Report for public 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 Environmental Study Report for public review at the Regional Clerk’s office, City of Kitchener’s Clerk’s office, City of Waterloo’s Clerk’s office and on the Region’s web site, tentatively starting from September 15, 2016.

After the public comment period has expired and any comments received on the report are addressed, preliminary design and detailed design of this project will be initiated by 2017. It is possible that construction of the works could take place in three separate contracts between 2017-2020. The contracts could be the construction of the Strange Street WTP, the water main connecting the two WSS’s, and upgrades at the William Street WSS site. The actual number of contracts for this project will be defined during the detailed design. The anticipated timing of each component is included in Table 1, attached.

Corporate Strategic Plan:

The William Street – Strange Street Water Supply Class EA supports the Corporate Strategic Focus Area: Thriving Economy, Section 1.2: “Plan for and provide the infrastructure and services necessary to create the foundation for economic success”.

Financial Implications:

The 2016 Ten Year Water Capital Forecast includes $25.8 million between 2017 and 2020 for the William Street – Strange Street Water Supply System. Upon completion of the Class EA study for the preferred alternative, the cost of the required work has been revised to $22.3 million, and will be used in the preparation of the 2017 water capital forecast. 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:
The Planning, Development and Legislative Services Department has been consulted during the Class EA on the heritage aspects of the Strange Street PS.

The Rapid Transit Division has been consulted during the Class EA on possible water main crossings of the LRT tracks.

Attachments
Figure 1 and 2 – Conceptual Mass Drawing of New Strange Street WTP
Table 1 – Proposed Construction Schedule
Attachment 1 – Alternatives Evaluation

Prepared By: Kaoru Yajima, Senior Project Engineer, Water Services
Approved By: Thomas Schmidt, Commissioner, Transportation and Environmental Services
Figure 1 - Conceptual Mass Drawing of New Strange Street WTP (from south)
Figure 2 - Conceptual Mass Drawing of New Strange Street WTP (from north)
Table 1: Proposed Construction Schedule

<table>
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<tr>
<th>Construction Phase</th>
<th>Work Included</th>
<th>Anticipated Schedule</th>
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<tbody>
<tr>
<td>1</td>
<td>Construction of Strange Street WTP.</td>
<td>2018/19</td>
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<tr>
<td>2</td>
<td>Construction of watermain from William Street to Strange Street, via John Street/Iron Horse Trail.</td>
<td>2018</td>
</tr>
<tr>
<td>3</td>
<td>Upgrades and modifications at William Street pump station.</td>
<td>2019/20</td>
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<tr>
<td>4</td>
<td>Overall completion</td>
<td>End 2020</td>
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Attachment 1: Alternatives Evaluation

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<tr>
<th>Category</th>
<th>Alternative 1 Demolish Existing Pump Station and Build New WTP</th>
<th>Alternative 2 Build New WTP Parallel to Existing Pump Station</th>
<th>Alternative 3 Build New WTP Perpendicular to Existing Pump Station</th>
<th>Alternative 4 Merge New WTP In-Line with Existing Pump Station</th>
<th>Alternative 5 Build New WTP Connected Behind Existing Pump Station</th>
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<td>Heritage Features Maintained</td>
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<td>●</td>
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<td>Sewer / Water Main Re-Routing</td>
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<td>Required</td>
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<td>Due to Floodway</td>
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<tr>
<td>Ranking of Alternatives</td>
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<td>5</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Alternative 5 is preferred due to:

- key heritage features preserved
- maintains purpose of existing pump station
- maximizes use of available land
- small building footprint results in lower cost
- lowest capital cost of all alternatives
Region of Waterloo
Transportation and Environmental Services
Water Services

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

Date: September 13, 2016

File Code: E13-20/8270

Subject: Biosolids Strategy – Project Update

Recommendation:

For information only.

Summary:

The development of the Biosolids Strategy commenced in June 2015 using these key communications and engagement approaches:

- Provide more information to the public throughout the process
- Use traditional and new ways to provide information to the public
- Explain the complex technical information in an easy to understand manner

This report is an update on the communication and engagement activities that have taken place to date as part of the Strategy.

Report:

Introduction

In June 2015, the Region commenced with development of a long-term Biosolids Strategy (Strategy) for the Region (see TES-WAS-15-17 dated June 24, 2015).

The Strategy will satisfy the minimum requirements of the Municipal Class Environmental Assessment process for Master Plans, and also increase communications and public engagement opportunities as the study progresses. Through these opportunities, the public will have more opportunities to provide input.
The Strategy development process includes the use of the following key communication and engagement approaches:

- Provide more information to the public throughout the process
- Use both traditional and new ways to provide information to the public
- Explain the complex technical information in an easy to understand manner

This report is an update on the communication and engagement activity that has taken place to date as part of the Strategy, based on these key approaches.

**Biosolids Strategy Launch Event**

On November 17, 2015, a Launch Event was held at the Region Museum to increase public interest in biosolids and the Strategy. A guest speaker spoke about the global and historical aspects of biosolids. The speaker also explained that the Strategy is being developed to create a new master plan for the Region, and emphasized that the public is encouraged to comment and participate during its development. Over 100 members of the public attended the Launch Event.

Project team members were available during the event to answer questions using large panels that introduced the Strategy. Feedback was generally positive with the desire for continued information.

**Project Charter**

To explain the process of the Strategy development, a Project Charter was developed (see TES-WAS-16-08 dated March 22, 2016). This is a living document which can be updated, based on new information and input. As an example, the Charter’s biosolids definition was modified at the suggestion of Project Stakeholders to be unbiased towards any future solution. The modified definition of biosolids is now: “Biosolids are created by processing the organic material that remains after we treat our wastewater”. The Charter can be found on the Region’s Biosolids Strategy website (www.regionofwaterloo.ca/biosolids).

**Engineering and Science Fair Biosolids Student Activity**

On April 5, 2016, the Project Team spoke to over 200 grade 7 and 8 students who were representing their schools at the Waterloo-Wellington Engineering and Science Fair.

Recognizing that young minds will someday be responsible for the future for biosolids management, the Project Team had the students form small groups of eight to ten and in 15 minutes, were given a range of processing options and asked to think about how our biosolids should be managed. Most groups developed solutions related to land application or burning of biosolids. Students were then given an explanation of how
biosolids are managed in the Region today. As a result of this activity, students left with
greater awareness of biosolids, better understanding that we all contribute to its
production, and that we require long-term solutions for its management.

**Webinar**

On June 15 and 16, 2016, consultation was conducted by casting a webinar entitled
“Follow the Drain: The Journey of Biosolids in Waterloo Region”. The webinar
explained how biosolids are created in the Region today, and some regulatory aspects
to biosolids management. Webinar participants were shown feedback received
previously from the public and were provided an opportunity to comment on what
aspects of biosolids management were most important to them.

The webinar format was chosen to try different ways of providing information. A total of
15 people attended the live sessions. For those who missed the webinar, a link to the
recording is provided on the Region’s biosolids website.

**Environews**

Environews is a quarterly Region publication that reaches all households in the Region.
Brief Biosolids Strategy updates have been provided in the fall 2015, winter 2016,
spring 2016 editions.

**Community Pop-up Events and Colouring Books**

Throughout the summer, education materials including biosolids colour books and
postcards were distributed at the following events:

- Saturday May 28th - EcoFest
- Saturday June 4th - Cambridge Farmers Market
- Thursday June 9th - Conestoga Mall
- Friday June 10th - Cambridge Centre
- Saturday June 18 - St. Agatha Strawberry Festival
- Saturday June 18 - Kitchener Market
- Saturday June 25th - KW Multicultural Fest
- Tuesday, August 2nd - St. Jacob's Farmer's Market
- Thursday August 25th - North Dumfries Township Office
- Friday August 26th - Waterloo Busker Carnival
To date, approximately 450 colouring books have been distributed through these events and there have been approximately 300 face to face discussions with interested members of the public.

**Work with Committees**

In June 2016, the first stakeholder meeting, representing the industrial sector, agricultural sector, academics, public interest groups and public-at-large, was held. An outline of the Strategy development process was presented and how biosolids in the Region are created was reviewed. A key recommendation adopted from the meeting was a modification to the Project’s definition of biosolids.

Apart from the Stakeholder Committee, the Planning and Technical Advisory Committee met in January 2016 to provide input into the draft Project Charter. The Committee supported the Charter with an adjusted timeline of spring 2018.

The Steering Committee met twice in October 2015 and April 2016. The first meeting was held to assist with the Launch Event. The second meeting was held to discuss upcoming engagement including the webinar content.

**On-line Survey**

Throughout the spring and summer this year, the Region’s on-line engagement portal was used to better understand the issues that mean most to the public when it comes to biosolids management. Over 300 respondents have filled out the survey and the top issues to the public to date are preserving the environment, ensuring public health and safety, and odour issues. The results of the survey will be used as a guide to help develop the evaluation criteria and to help focus education and communication efforts.

**On-line Educational Videos**

In February 2015, a short educational video to introduce the Biosolids Strategy was created. This video has been shown at various public events, in school visits and on the website. Feedback on the video has been generally positive and helped the public better understand biosolids.

In recognition of the value of the video, a second educational video has been created which focuses on the process of creating biosolids. It explains the journey as it starts from one’s home, through the municipal collection system, into the treatment processes, and final end use of biosolids.

**Next Steps**

The next steps of the Strategy include development of the draft evaluation criteria, a Expression of Interest for biosolids technologies, and assessment of future biosolids quantities.
The education portion of the Strategy will continue as part of the above work.

**Corporate Strategic Plan:**

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

**Financial Implications:**

Nil

**Other Department Consultations/Concurrence:**

Nil

**Attachments**

Nil

**Prepared By:** Kaoru Yajima, Senior Project Engineer, Water Services

**Approved By:** Thomas Schmidt, Commissioner, Transportation and Environmental Services
<table>
<thead>
<tr>
<th>Meeting date</th>
<th>Requestor</th>
<th>Request</th>
<th>Assigned Department</th>
<th>Anticipated Response Date</th>
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<tr>
<td>09-Aug-16</td>
<td>J. Nowak</td>
<td>Report on installing Roundabouts at rural intersections (Ament Line/Herrgott Road)</td>
<td>TES</td>
<td>Nov-2016</td>
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