



Media Release: Friday, January 29, 2016 4:30 p.m.

## **Regional Municipality of Waterloo**

### **Planning and Works Committee**

#### **Agenda**

Tuesday, February 2, 2016

9:30 A.M. (Time approximate, immediately following Closed Session)

Regional Council Chamber

150 Frederick Street, Kitchener

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#### **1. Motion to go into Closed Season**

That a closed meeting of the Planning and Works, Administration and Finance and Community Services Committees be held on Tuesday, February 2, 2016 at 9:00 a.m. in the Waterloo County Room in accordance with Section 239 of the “Municipal Act, 2001”, for the purposes of considering the following subject matters:

- a) potential litigation and receiving of advice that is subject to solicitor-client privilege related to an agreement
- b) receiving of advice subject to solicitor-client privilege and personal matters about identifiable individuals regarding financial matters
- c) a matter of labour relations
- d) personal matters about identifiable individuals regarding committee appointments

#### **2. Motion to Reconvene into Open Session**

#### **3. Declarations of Pecuniary Interest under the Municipal Conflict Of Interest Act**

#### **4. Delegations**

#### **4.1 [PDL-CPL-16-07](#), Balancing Environmental Protection and Transportation, the Laurel Creek Headwaters Environmentally**

Sensitive Landscape Case Study - Final Report

- i. Dr. Dianne Ensing

**Recommendation:**

That the Regional Municipality of Waterloo take the following actions with respect to the Report No. PDL-CPL-16-07, Balancing Environmental Protection and Transportation, the Laurel Creek Headwaters Environmentally Sensitive Landscape Case Study, dated February 2, 2016:

- a) Receive the report for information and endorse the recommendations as a best practice guide for the mitigation of impacts of roads and road upgrades within or contiguous to Environmentally Sensitive Landscapes (ESLs) as described in this report; and
- b) Distribute this report to all Area Municipalities for information and consideration of the recommendations as opportunities to balance environmental and transportation priorities within ESLs, including the Case Study Area.

**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.

**5. Request to Remove Items from Consent Agenda**

**6. Motion to Approve Items or Receive for Information**

- 6.1** [TES-WAS-16-02](#), Update on Canadian Council of Ministers of the Environment (CCME) Canada-Wide Strategy for the Management of Municipal Wastewater Effluent (Information) 17
- 6.2** [PDL-CPL-16-06](#), Monthly Report of Development Activity for December 2015 23

**Recommendation:**

That the Region of Waterloo accept PCL-CPL-16-06, Monthly Report of Development Activity for December 2015, dated February 2, 2016.

<b>Regular Agenda Resumes</b>
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**7. Reports – Transportation and Environmental Services**

- 7.1** [TES-TRP-16-05](#), Level 2 Pedestrian Crossover (PXO) Implementation Strategy (Presentation) 27

**Recommendation:**

That the Regional Municipality of Waterloo adopt installation warrants and an implementation strategy for the Level 2 Pedestrian Crossover as outlined in report TES-TRP-16-05, dated February 2, 2016.

**Interdepartmental Reports**

- 7.2** [TES-WAS-16-01/COR-FFM-16-01](#), Corporate Asset Management Policy 37

**Recommendation:**

That the Regional Municipality of Waterloo approve the Corporate Asset Management Policy, as set out in Appendix A to report TES-WAS-16-01/COR-FFM-16-01 dated February 2, 2016.

**8 Information/Correspondence**

- 8.1** Council Enquiries and Requests for [Information Tracking List](#)

**9 Other Business****10 Next Meeting – February 23, 2016****11 Adjourn**

<b>Next Meetings</b>			
<b>Date</b>	<b>Time</b>	<b>Description</b>	<b>Location</b>
<b>Planning and Works Committee</b>			
February 23, 2016	9:00 A.M.	Planning and Works Committee	Council Chamber 2 <sup>nd</sup> Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario
March 22, 2016	9:00 A.M.	Planning and Works Committee	Council Chamber 2 <sup>nd</sup> Floor, Regional Administration Building 150 Frederick Street Kitchener, Ontario



**Report:** PDL-CPL-16-07

## **Region of Waterloo**

### **Planning, Development and Legislative Services**

#### **Community Planning**

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

**Date:** February 2, 2016

**File Code:** D10-20

**Subject: Balancing Environmental Protection and Transportation, the Laurel Creek Headwaters Environmentally Sensitive Landscape Case Study - Final Report**

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#### **Recommendation:**

That the Regional Municipality of Waterloo take the following actions with respect to the Report No. PDL-CPL-16-07, Balancing Environmental Protection and Transportation, the Laurel Creek Headwaters Environmentally Sensitive Landscape Case Study, dated February 2, 2016:

- a) Receive the report for information and endorse the recommendations as a best practice guide for the mitigation of impacts of roads and road upgrades within or contiguous to Environmentally Sensitive Landscapes (ESLs) as described in this report; and
- b) Distribute this report to all Area Municipalities for information and consideration of the recommendations as opportunities to balance environmental and transportation priorities within ESLs, including the Case Study Area.

#### **Summary:**

In May 2013, Regional Council initiated a case study to identify opportunities to better balance transportation and environmental considerations in Environmentally Sensitive Landscapes (ESLs). In collaboration with a Project Team consisting of the affected Area Municipalities (Waterloo, Wellesley, Wilmot, and Woolwich) and the Laurel Creek Headwaters ESL Public Liaison Committee, Regional staff and a consulting team

carried out the case study focusing on the Wilmot Line - Kressler Road corridor near the eastern limit of the Laurel Creek Headwaters ESL. While ESLs are designated in the Regional Official Plan (ROP), Wilmot Line is a boundary line road located in the Township of Wilmot and the Township and the City of Waterloo share in its maintenance.

This study is not an Environmental Assessment with respect to any potential significant upgrades to roads within the study area. In addition, this study should not be considered an Environmental Impact Statement (EIS) under the ROP. The conclusions from this study would, however, help inform future study requirements where road projects are proposed within ESLs.

Two public open houses were held to obtain public input on the study on February 26, 2015 and October 27, 2015. Staff received 38 and 12 written submissions respectively, and these submissions were considered in preparing the final draft of the report. Preliminary findings and recommendations were also presented to the Councils of the Township of Wilmot (November 2, 2015), the City of Waterloo (November 9, 2015) and the Township of Wellesley (November 17, 2015). Feedback received at those meetings was incorporated into the final report.

With respect to transportation considerations, the case study concluded that:

- Current traffic volumes (1000 Average Annual Daily Traffic) are well below the typical traffic capacity of a paved two-lane rural road, but are high enough that hard surface treatment may become economically desirable from a maintenance perspective;
- Collisions are not a significant issue;
- Pedestrians and cyclists are sharing the road with motorists; and
- Within the unpaved portion of Wilmot Line, the 85<sup>th</sup> percentile speeds are generally much higher than the posted speed limit.

The study recommended potential measures to better balance environmental protection and transportation considerations without significant road upgrades being undertaken within the Case Study Area:

- Wildlife warning signage at potential wildlife crossing locations;
- Temporary road closure during spring breeding migrations of Blanding's Turtles and Snapping Turtles, if warranted by detailed amphibian breeding surveys;
- Modifications to road and ditch maintenance practices within the right-of-way;
- Improved stormwater management to reduce sedimentation to watercourses;
- Further traffic monitoring to better understand travel patterns and volumes; and
- Further monitoring of wildlife movement within the corridor.

If significant upgrades to Wilmot Line are proposed in the future, the study recommends that potential measures be considered as part of an Environmental Assessment such as operational modifications to the surrounding road network, installing new wildlife crossing structures, separating vehicular traffic from cyclists and pedestrians, traffic calming measures, and improved stormwater management.

### **Report:**

In May 2013, Regional Council approved commencement of a case study to identify opportunities to better balance transportation and environmental considerations in Environmentally Sensitive Landscapes (ESLs). This study originated with a recommendation by the Laurel Creek Headwaters ESL Public Liaison Committee about the future stewardship of Wilmot Line within the ESL. Regional staff subsequently hired Dougan & Associates environmental consultants and assembled a Project Team comprising staff from Waterloo, Wellesley, Wilmot, and Woolwich and a member of the Liaison Committee to carry out a case study focusing on the Laurel Creek Headwaters ESL. The overall goal of the study is to identify measures to address potential conflicts between transportation, environmental features and wildlife in areas where roads are located in ESLs or other environmentally significant areas.

ESLs are designations in the Regional Official Plan that contain concentrations of significant environmental features such as woodlands, wetlands, watercourses, small lakes, groundwater recharge areas and the habitat of endangered and threatened species as well as farms, aggregate operations and small settlements. The Laurel Creek Headwaters ESL is located within four Area Municipalities: the City of Waterloo and the Townships of Wellesley, Wilmot, and Woolwich (see Attachment A). This 2,043 hectare (5,048 acres) ESL was identified based on the concentration of Environmentally Sensitive Policy Areas (ESPAs) and Provincially Significant Wetlands (PSWs) comprising the headwaters of Laurel Creek and adjoining headwaters areas of Martin and Bamberg Creeks. It also contains three small kettle lakes: Bamberg Bog Lake, Paradise Lake and Sunfish Lake.

Significant features in the ESL include the Sunfish Lake – Laurel Creek Complex, seven ESPAs, 21 woodlands that meet the Significant Woodland criteria in the Regional Official Plan and one Regional Forest. These natural features sustain a rich array of significant plants and animals. A total of 56 wildlife species have been recorded in the ESL of which 22 are provincially and/or federally significant. Together, these features and wildlife species make the Laurel Creek Headwaters ESL one of the most important parts of the Region's Greenlands Network.

### **Objectives of the Study**

This study is not intended to fulfill the requirements of the Environmental Assessment Act with respect to any potential future upgrades to Wilmot Line or other local or

Regional roads. In addition, this study should not be considered an Environmental Impact Statement (EIS) under the ROP. If significant upgrades to Wilmot Line or other roads within the ESL are proposed in the future, a formal Environmental Impact Statement or equivalent study would have to be completed as part of the EA process depending on the nature of the project. However, staff expect that the recommendations from this study will help inform future environmental and transportation study requirements where ESLs are impacted by roads.

The objectives of the study as outlined in the Terms of Reference are to:

- Enhance and protect the social value of the ESL;
- Protect creeks, wetlands, threatened or endangered species as well as other wildlife species characteristic of the landscape from the effects of increased traffic and required road maintenance;
- Retain or potentially enhance the scenic quality and rural character of roads in accordance with the ESL policies in the Region's Official Plan; and
- Consider the environmental impacts of recreational uses such as hiking, jogging, horseback riding, cycling, and skiing on roads and adjacent publicly accessible lands.

As part of the Laurel Creek Headwaters ESL case study, issues and potential solutions associated with the above objectives are being addressed in the following study components:

- Transportation - potential conflicts between road users (e.g. cars, truck traffic, pedestrians, cyclists, joggers) along the Wilmot Line - Kressler Road corridor;
- Environmental Impacts - potential impacts on natural features, functions and species (e.g. sedimentation, pollutants caused by vehicles, snow clearing and road grading); and
- Wildlife Movement –identifying and assessing wildlife crossings (e.g. mammals, amphibians, reptiles) on Wilmot Line in the vicinity of Monastery Creek and Laurel Creek, and opportunities to reduce wildlife mortality at these locations (e.g. signage, eco-passages, reduced speed limits).

The Project Team refined the scope of the study to focus on the eastern part of the ESL where potential impacts on wildlife and environmental features could be more significant as a result of traffic entering and exiting the City of Waterloo and new residential development occurring on the western edge of the City (see Attachment A). The study area includes Kressler Road (Regional Road 16), Wilmot Line, and the following Regional and Area Municipal roads that intersect with them: Erbsville Road (Regional Road 70), Weimar Line (Regional Road 14), Cedar Grove Road, Conservation Drive, Berlett's Road, Wideman Road, and Carmel-Koch Road.

## **Public Consultation**

An initial public open house was held on February 26, 2015 to inform residents and other stakeholders of the study and obtain feedback. Approximately 100 members of the public attended the open house in addition to members of Regional and Area Municipal Councils. In addition, attendees were asked to fill out a questionnaire regarding environmental impacts that they have observed in the ESL and potential measures that could be used to address these impacts. As a result, staff received 38 written submissions that were reviewed and considered as part of the study's draft report.

Responses from the public were summarized into four themes: wildlife impacts, pollution, transportation concerns and potential mitigation measures.

## **Wildlife Impacts**

Many respondents described the value the community has for the natural features and diverse wildlife that the ESL supports. In addition, many of the responses discussed wildlife mortality along ESL roads. Comments included concerns for White-tailed Deer, frogs (including Spring Peepers), turtles (including Snapping Turtles), Monarch Butterflies, snakes (including Milksnakes), salamanders, and several other species. Other concerns included habitat loss/infringement; loss of wetland features; reduction in biodiversity; and loss of significant species. Respondents also spoke to loss of natural functions provided by the ESL such as pollination, erosion control, and carbon sequestration; reduced breeding success of reptiles and amphibians; and downstream effects to fish communities. Concerns were largely associated with the Wilmot Line but some people were also concerned about the impacts of the trails within the ESL in the Case Study Area.

## **Pollution**

Many responses noted that roads and vehicle use can result in pollution that alters environmental conditions as well as deteriorates the quality of natural features. Impacts may include the introduction of contaminants including oil, gas, salt, exhaust, washer fluid, and garbage; increased sedimentation into watercourses and wetlands; increased salinity of both water and soil; salt scalding of vegetation; increased dust and traffic noise.

## **Transportation Concerns**

Several transportation concerns related to road maintenance and safety. Safety concerns included the high occurrence of speeding vehicles, poor sightlines for vehicles, and the safety of cyclists and pedestrians sharing the road with cars. Several responses stated that there is poor road maintenance within the bounds of the Case Study Area as pot-holes, road wash-outs, and icy patches are frequent. The majority of

the questionnaires expressed concern about increasing traffic volumes in the near future due to increased residential and commercial development within north and west areas of Waterloo.

### **Potential Mitigation Measures**

Potential mitigation measures proposed by members of the public for the Case Study Area included:

- Implementing public education measures such as signage of significant species found within the area;
- Reducing speed limits and increasing enforcement;
- Constructing wider road shoulders to reduce conflicts between motorized and non-motorized users;
- Maintaining the scenic nature of the road profile (e.g. rolling hills);
- Closing Wilmot Line partially during known high wildlife road crossing periods;
- Closing part of Wilmot Line completely;
- Maintaining Wilmot Line as a gravel road;
- Avoiding additional lighting to reduce impacts to wildlife;
- Avoiding obstructions to wildlife crossings such as medians;
- Creating larger buffer zones between the road and environmental features;
- Installing wildlife passages above or below roadways;
- Reducing the use of trails within the ESL;
- Prohibiting any further trail development; and
- Improving the surrounding road network to reduce traffic backups that result in increased road use through non-arterial roads such as Wilmot Line.

A second public open house was held on October 27, 2015 to present the study's preliminary findings and recommendations. Approximately 40 members of the public attended the session. Attendees were encouraged to provide comments, and 12 written submissions were received. Key themes included:

- Local residents are not the only people who enjoy using the ESL as a scenic amenity for recreation and leisure. Many clubs and organizations use the Case Study Area on a weekly or bi-weekly basis.
- There is significant concern for the safety of road users, both motorized and non-motorized.
- Inclement weather often results in flooding, washouts, deep rutting, and icy conditions which periodically makes Wilmot Line unsafe.
- Residents commented that dust from Wilmot Line is spreading a large distance away from the road, thereby covering vegetation in adjacent natural areas.
- New residential development is likely to increase the traffic along Wilmot Line which could result in further degradation of the natural environment.

Preliminary findings and recommendations were also presented to the Councils of the

Township of Wilmot (November 2, 2015), the City of Waterloo (November 9, 2015), and Township of Wellesley (November 17, 2015). Feedback received was incorporated into the final report. Township of Woolwich staff was asked if a Council presentation would be desired but no response was received. Overall, feedback on the report from Area Municipal Councils was positive with several Councillors commending the Region for its work in designating the Laurel Creek Headwaters ESL for protection in the ROP.

## Findings for the Case Study Area

### Transportation Considerations

Findings related to transportation within the Case Study Area include the following:

- Wilmot Line is a minor part of the Township road network and is classified as a “rural local township road.”
- Based on Transportation Association of Canada and Regional guidelines, the travelled portion of the road allowance is acceptable to permit the safe passage of two travel lanes of traffic at the current traffic volumes.
- Grades on segments of the gravel portion of Wilmot Line are close to the acceptable 8% range for minor facilities such as this.
- Current traffic volumes are less than 1000 Average Annual Daily Traffic (AADT) along the unpaved section, a level well below the typical traffic capacity of a paved two-lane rural road. However, current traffic volumes are high enough in some portions of the Case Study Area that hard surface treatment might become economically desirable from a maintenance perspective.
- Trucks account for about 2-4% of the total traffic volume in the Case Study Area; this is within the expected range for Regional and Township roads.
- Collisions are not a significant issue as there is less than one collision per million vehicle kilometres (MVKM).
- Cyclists and pedestrians are using the roads within the Case Study Area and conflicts between motor vehicles and these users have been identified by the public as an issue that requires attention.
- The majority of reported collisions in the Case Study Area involved single vehicles leaving the travelled portion of the roadway.
- The posted speed limit within the Case Study Area is 60 km/h and all roads leading to Wilmot Line are hard-surfaced. In terms of traffic control, all side street approaches to the Case Study Area have stop control but there is no stop control on Wilmot Line itself.
- Within the unpaved portion of Wilmot Line, the 85<sup>th</sup> percentile speeds are generally much higher than the posted speed limit indicating that vehicles are excessively speeding. and

- The Terms of Reference for this study did not include analysis of potential future development impacts on traffic patterns and/or volumes in the Case Study Area and therefore no conclusions have been made in this regard.

### **Environmental Features and Functions**

Findings related to environmental features and functions include the following:

- The Laurel Creek ESL contains many significant features including but not limited to the Sunfish Lake-Laurel Creek Provincially Significant Wetland Complex, seven (7) ESPAs, one (1) Regional Forest, 21 woodlands that meet the Significant Woodland criteria in the ROP, and two (2) regionally significant Areas of Natural and Scientific Interest (ANSIs).
- The ESL has a rich diversity of species as a total of 56 wildlife species have been recorded within the ESL of which 22 are provincially and/or federally significant.
- Groundwater quality in the ESL is generally good and chloride levels in groundwater are generally lower than other groundwater features in the Region.
- Surface water quality in Laurel Creek and Monastery Creek within the Case Study Area is generally good compared to downstream reaches of these creeks outside the ESL. Monastery Creek exhibits somewhat poorer water quality due to agricultural activities and severe channel erosion in its headwaters.
- Chloride concentrations in Laurel Creek and Monastery Creek are the lowest in the watershed and are well below guidelines. This indicates that road runoff is not leading to elevated chloride concentrations under current conditions.
- The presence of Brown Trout spawning sites within and downstream of the ESL represent highly sensitive habitat locations that may be impacted by sources of sediment and other contaminants entering streams from within the ESL.

### **Wildlife Movement**

Findings related to wildlife movement within the Case Study Area include the following:

- Based on current traffic volumes (average 40 vehicles per hour at certain locations on Wilmot Line) turtles have about a 20-25% chance of mortality and frogs have about a 15-20% chance of mortality if they cross the road.
- Four locations, known as Wildlife & Hydrological Crossing Locations, within the Case Study Area were identified as having the highest likelihood of wildlife road crossings:
  1. North of the Cedar Grove Road and Wilmot Line intersection;
  2. Laurel Creek crossing at Wilmot Line;
  3. Southeast of Wideman Road and Wilmot Line intersection; and
  4. Monastery Creek crossing at Wilmot Line.

- The Terms of Reference for this study did not include road mortality surveys, habitat assessments or species specific breeding studies within the Case Study Area and therefore no conclusions have been made in this regard.

### **Recommendations for the Case Study Area**

In recent years, the Township of Wilmot has expressed interest in upgrading the surface of Wilmot Line within the ESL from gravel to a hard surface (tar/chip or pavement). The Project Team has given careful consideration to the Township's concerns and Township staff has been actively involved throughout the study process. It was not within the scope of the study to determine whether or not Wilmot Line should be upgraded, as this decision rests with the Township and would be subject to Environmental Assessment requirements. The study did conclude, however, that current traffic volumes are less than 1000 Average Annual Daily Traffic (AADT) along the unpaved section of Wilmot Line, well below the typical traffic capacity of a paved two-lane rural road. However, in portions of the Case Study Area current traffic volumes are high enough that hard surface treatment may become economically desirable from a maintenance perspective.

The Project Team is of the opinion that hard surfacing gravel roads could help mitigate the following impacts:

- Dust generated by vehicles;
- Sedimentation in watercourses;
- Frequency of ditch cleanouts; and
- Operational/maintenance costs related to all of the above.

However, hard surfacing of gravel roads in the absence of other mitigation can create impacts to residents and the environment such as:

- Higher traffic speeds (and potentially increased traffic volumes);
- More conflicts between motorized and non-motorized users;
- Increased wildlife road mortality;
- Ditch and stream channel erosion resulting from increased stormwater runoff volumes and velocities; and
- Contamination of watercourses as a result of road salting. (since gravel roads are not salted)

Based on public input received to date and technical information gathered as part of the study process, recommendations for potential measures that could help better balance environmental protection and transportation considerations without road upgrades within the Wilmot Line – Kressler Road corridor Case Study Area are listed below. These potential measures would not only apply to the Case Study Area but could also be considered for roads in other ESLs:

- Wildlife warning signage at significant wildlife crossing locations along the length of the Case Study Area;
- Temporary road closure, similar to Stauffer Drive in Kitchener, during spring breeding migrations, if warranted, following completion of detailed amphibian breeding surveys;
- Modifications to road maintenance practices such as regular inspections, conducting maintenance practices outside breeding seasons and ditch vegetation management at crossing locations 2, 3, and 4;
- Improved stormwater management measures to control runoff and reduce sedimentation to watercourses such as ditch block controls, rock check dams and/or sediment traps;
- Further monitoring of traffic in the area to better understand travel patterns and volumes; and
- Further monitoring of wildlife movement including conducting specific road mortality surveys, habitat assessments, and breeding call surveys.

In the event that the Township wishes to consider upgrades to Wilmot Line, some potential measures that should be evaluated through an Environmental Assessment process or Environmental Impact Statement include:

- Investigating operational modifications to the surrounding road network including improving alternative routes or considering road closures;
- Installing new wildlife crossing structures and exclusionary fencing at sites 2, 3, and 4 listed above;
- Developing measures to separate vehicular traffic from cyclists and pedestrians;
- Investigating traffic calming measures such as reducing or narrowing the travelled portion of the road at certain locations; and
- Developing a stormwater management strategy including techniques such as ditch maintenance practices/ditch treatments, bioswales and sediment traps or ponds adjacent to watercourses.

Comments received from the public and at presentations to Area Municipal Councils attach a high social value to the Laurel Creek Headwaters ESL. Residents from within and outside the ESL, recreational user groups, and other members of the community all attest to the environmental and recreational benefits the ESL has to offer. As such, it is recommended that the social value of this and other ESLs be further explored to better understand the areas and any potential impacts that may occur should road upgrades be proposed the future.

In addition, the final study report has been made available on the Regional website and in the Regional Councillors' library.

**Area Municipal Consultation/Coordination**

Staff from the Townships of Wellesley, Wilmot, and Woolwich and the City of Waterloo served on the study Project Team. Preliminary findings and recommendations were also presented to the Councils of the City of Waterloo, Township of Wellesley and Township of Wilmot. This staff report was also circulated to Area Municipal staff for comments.

Regional staff would also like to thank Area Municipal staff and the Laurel Creek Headwaters ESL Public Liaison Committee for their collaboration on the Project Team and participation in the public consultation process.

**Corporate Strategic Plan:**

This study supports Strategic Objective 3.5 – Preserve, protect and enhance green space, agricultural and environmentally sensitive lands, and Regionally owned forests.

**Financial Implications:**

The total budget for this study is \$78,000 (plus applicable taxes) and is being funded by the Community Environmental Fund (as noted in Report P-13-055) through the approved 10-year Transportation Capital Program.

**Other Department Consultations/Concurrence:**

Staff from Transportation and Environmental Services participated throughout this study.

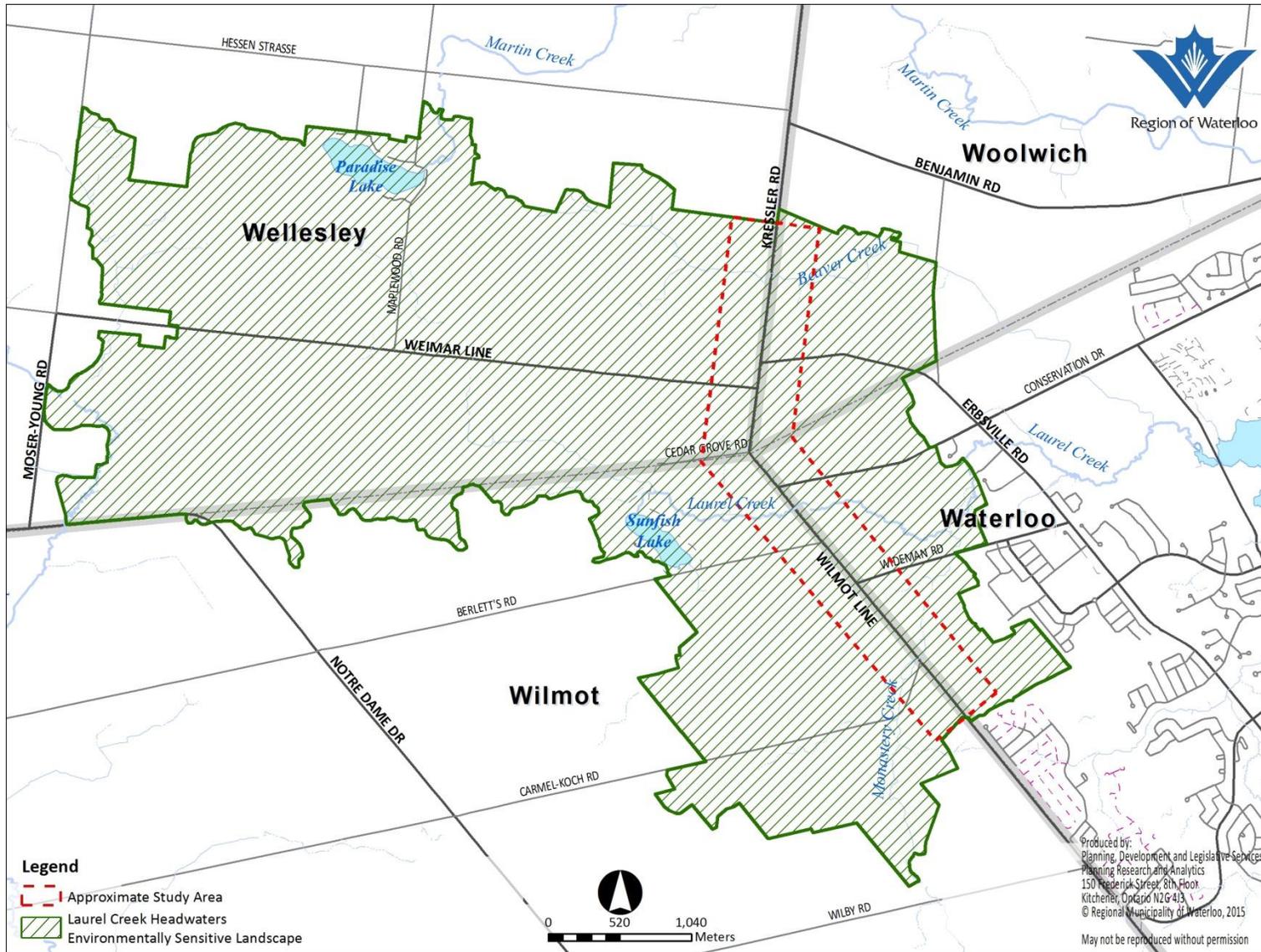
**Attachments:**

Attachment A - Location of Laurel Creek Headwaters Environmentally Sensitive Landscape and Study Area

**Prepared By:** Tim Van Hinte, Principal Planner

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

Attachment A - Location of Laurel Creek Headwaters Environmentally Sensitive Landscape and Study Area





**Report:** TES-WAS-16-02

## **Region of Waterloo**

### **Transportation and Environmental Services**

#### **Water Services**

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

**Date:** February 2, 2016                      **File Code:** E12-01; C04-30/P&W/WS.08

**Subject: Update on Canadian Council of Ministers of the Environment (CCME)  
Canada-Wide Strategy for the Management of Municipal Wastewater  
Effluent**

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#### **Recommendation:**

For information only.

#### **Summary:**

In July 2013, the Region has implemented reporting and sampling programs to comply with new federal regulations under the Fisheries Act. These requirements include quarterly reports to be submitted to the federal government and sampling for specific parameters such as acute toxicity. Acute toxicity measures the chemicals in the effluent and their impact on a specific species of fish. On January 1, 2015 these new federal regulations officially came into force.

All Regional wastewater treatment plants (WWTP) are required to meet provincial standards as part of the individual plant's Environmental Compliance Approval (ECA), as well as those established in the federal legislation. The Region's WWTPs routinely achieve effluent quality that is well within the requirements of both Federal and Provincial legislation requirements. Under the new federal requirements, acute toxicity testing was initiated in January 2015 and the majority of results from the Region's WWTPs were within the criteria with the exception of results from May and June. In response to the results, adjustments were made to the test methodology and operations.

Financial impacts related to the new federal requirements are associated with additional effluent sampling, which is typically not part of each WWTP's provincial requirements.

These additional sampling costs have been allocated within the council approved wastewater operating budget.

## **Report:**

### **Background**

#### **The New Wastewater Systems Effluent Regulations**

The Canadian Council of Ministers of the Environment (CCME) completed a Canada-wide Strategy for the Management of Municipal Wastewater Effluent (Strategy) in 2009. This Strategy addressed issues related to governance, wastewater facility performance, effluent quality and quantity, infrastructure needs, and funding issues. The federal government adopted the national effluent quality identified in the strategy and this legislation was published in November 2012.

The objective of this new regulation is to reduce the risks to ecosystem health, fisheries resources, and human health by decreasing the level of potentially harmful substances discharged from WWTPs. In addition to specifying environmental monitoring and reporting requirements, specific effluent compliance limits were established for the following parameters:

- Carbonaceous biochemical oxygen demand (CBOD);
- Total suspended solids (TSS);
- Total residual chlorine (TRC); and
- Un-ionized ammonia (NH<sub>3</sub>).

#### **Implementation Timeline**

The objective of this legislation is expected to be achieved through risk-based implementation timelines that extend over 30 years. The Region followed the timeline established starting January 1, 2013 that included monitoring, submission of reports, and application of Transitional Authorizations. On January 1, 2015 the effluent quality standards and limits came into force. Attachment A indicates the dates and actions that are (were) relevant to the Region of Waterloo.

#### **Federal Effluent Quality Standards and Compliance**

All Regional WWTPs are required to meet provincial standards as part of the individual plant's ECA issued, as well as those established in the federal legislation. The Region's

WWTPs routinely achieve effluent quality that's well within the requirements of both Federal and Provincial legislation requirements.

Attachment B outlines the federal criteria for the effluent quality standards established by this legislation. WWTPs that have an annual average daily discharge of less than 100 m<sup>3</sup>/d are not currently subject to this legislation.

### **Testing for Acute Toxicity**

Testing for acute toxicity was initiated in January 2015 on a quarterly cycle for all wastewater treatment plants (less than 50,000 cubic meters per day) and Kitchener WWTP on a monthly cycle. All the 2015 acute toxicity test results were within the criteria with the exception of two test results in May and in June. In response to the May result, a change in testing method was implemented to include a pH adjustment at all treatment plants. In response to the June result, a change in the operations at the Kitchener WWTP Ultra Violet Disinfection building was made. It appears that the wastewater sample may have contained some of the spray used in the building to control insects and a change has been made to the operations so that the spray is no longer used in Regional wastewater treatment plants. The Region has been in communication with Environment Canada as they have sent a letter to the Region specific to these two events and the Region has provided a response related to the actions taken.

### **Total Residual Chlorine (TRC) Standard**

All Regional WWTPs are currently compliant with the TRC Standard.

The Foxboro WWTP is the only Regional facility that is not subject to this standard as it discharges to leaching beds and not a receiving water body.

### **Combined Sewer Overflow (CSO) Requirements**

Since the Region has a separate sewer system (separate stormwater and sewage pipes), the Region's WWTPs currently do not receive any CSOs and therefore are not subject to the WSER CSO requirements.

### **Source Control Activities**

Another important aspect of the CCME Strategy (2009) was reduction of potentially harmful substances at the source. The Region continues to implement an advanced water conservation program and regulates source control activities through the Sewer Use By-Law, which is currently in the process of being updated.

## **Environmental Monitoring**

The CCME Strategy states that environmental monitoring at a watershed level is important because the results provide confirmation that the environment is protected. Although the nature and extent of environmental monitoring has not been determined by CCME yet, the Region has proactively implemented a surface water quality monitoring upstream and downstream of WWTPs that discharge to the Grand, Speed, and Nith Rivers since 2009. This program was initiated based on the recommendations of the 2007 Wastewater Treatment Master Plan. More recently, monitoring at the Conestogo River and Canagagigue Creek has been added to the program.

One of the main objectives of this program is to develop a water quality database to track changes in water quality over time. This allows the Region to continuously monitor and assess the impacts of planned wastewater treatment upgrades on the local rivers. The surface water quality monitoring program has successfully demonstrated that completed upgrades to Plants 1 and 2 at the Kitchener WWTP have resulted in significant improvements in the Grand River water quality downstream from the plant.

### **Corporate Strategic Plan:**

Planning for the transition of the CCME Strategy to the WSER is a desirable step in supporting the vision, mission, and values of the Corporate Strategic Plan, and is consistent with Focus Area 3: Environment and Sustainable Growth; Strategic Objective 3.2 - Protect the quality and quantity of our water sources.

### **Financial Implications:**

The transition of the CCME Strategy will not cause any significant financial impact to the Region. The cost associated with the additional effluent sampling requirements have been accommodated in the Council approved 2016 wastewater operating budget.

### **Other Department Consultations/Concurrence:**

Nil

## **Attachments**

**Attachment A:** Timeline for the implementation of the WSER

**Attachment B:** Effluent quality standards

**Prepared By:** José Bicudo, Senior Project Engineer, Wastewater Engineering, Water Services

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

**Table 1. Timeline for the Implementation of the Federal Standards**

Date	Action
January 1, 2013	<ul style="list-style-type: none"> <li>• Monitoring of effluent quality and quantity;</li> <li>• Recording of combined sewer overflows (CSO);</li> <li>• Submission of applications for ammonia temporary authorizations;</li> <li>• Record-keeping and reporting requirements in force.</li> </ul>
May 15, 2013	<ul style="list-style-type: none"> <li>• Submission of identification report for wastewater systems in operation on January 1, 2013;</li> <li>• Submission of first quarterly monitoring report (if subject to quarterly reporting); quarterly reports are due within 45 days after the end of each quarter.</li> </ul>
February 14, 2014	<ul style="list-style-type: none"> <li>• Submission of the first annual monitoring report (if subject to annual reporting); annual reports are due by February 14 of each subsequent calendar year.</li> </ul>
June 30, 2014	<ul style="list-style-type: none"> <li>• Deadline to apply for transitional authorization (TA);</li> <li>• Ammonia monitoring ends except for those with temporary authorizations for ammonia.</li> </ul>
January 1, 2015	<ul style="list-style-type: none"> <li>• Effluent quality standards and limits in transitional authorizations are in force;</li> <li>• Applications for temporary by-pass authorizations may be submitted;</li> <li>• Acute lethality monitoring begins for wastewater systems that already meet the effluent quality standards.</li> </ul>
January 1, 2021	<ul style="list-style-type: none"> <li>• TRC standard for wastewater systems with capacity of 5,000 m<sup>3</sup>/d or less comes into force.</li> </ul>

**Table 2. Federal Criteria for Effluent Quality Standards**

WWTP	Volume deposited (m <sup>3</sup> /d)	CBOD (mg/L)	TSS (mg/L)	TRC (mg/L)	NH <sub>3</sub> (mg/L)	Acute Lethality
Foxboro St. Jacobs Wellesley Ayr	100 – 2,500	Quarterly average ≤ 25	Quarterly average ≤ 25	Quarterly average ≤ 0.02	Maximum in the quarter < 1.25	Pass
Elmira Hespeler New Hamburg Preston	2,500 – 17,500	Quarterly average ≤ 25	Quarterly average ≤ 25	Quarterly average ≤ 0.02	Maximum in the quarter < 1.25	
Galt Waterloo	17,500 – 50,000	Monthly average ≤ 25	Monthly average ≤ 25	Monthly average ≤ 0.02	Maximum in the month < 1.25	
Kitchener	> 50,000	Monthly average ≤ 25	Monthly average ≤ 25	Monthly average ≤ 0.02	Maximum in the month < 1.25	



**Report:** PDL-CPL-16-06

## **Region of Waterloo**

### **Planning, Development and Legislative Services**

#### **Community Planning**

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

**Date:** February 2, 2016

**File Code:** D18-01

**Subject:** **Monthly Report of Development Activity for December 2015**

#### **Recommendation:**

That the Region of Waterloo accept PCL-CPL-16-06, Monthly Report of Development Activity for December 2015, dated February 2, 2016.

#### **Summary:**

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

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

#### **Report:**

#### **City of Cambridge**

#### **Registration of Draft Plan of Condominium 30CDM-12102**

Draft Approval Date:	December 20, 2012
Phase:	Phase 7
Applicant:	Deerfield Homes Limited
Location:	750 Lawrence Street
Proposal:	To permit the development of 7 residential condominium townhouse units.

**Registration of Draft Plan of Condominium 30CDM-12102**

Regional Processing Fee: Paid October 5, 2015.

Commissioner's Release: December 7, 2015.

**City of Waterloo****Part Lot Control Exemption By-law 2015-076**

Applicant: Carey Homes

Location: 618 Montpellier Drive

Proposal: To permit the creation of 2 semi-detached residential units.

Regional Processing Fee: Paid December 9, 2015.

Commissioner's Approval: December 9, 2015.

**Part Lot Control Exemption By-law 2015-15077**

Applicant: Carey Homes

Location: 609 Montpellier Drive

Proposal: To permit the creation of 2 semi-detached residential units.

Regional Processing Fee: Paid December 9, 2015.

Commissioner's Approval: December 9, 2015.

**Registration of Draft Plan of Condominium 30CDM-14403**

Date Draft Approved: November 12, 2014

Phase: Entire Plan

Applicant: 2260695 Ontario Inc.

Location: 150-238 Westcourt Place

Proposal: To permit the development of 45 residential condominium townhouse units.

Regional Processing Fee: Paid December 4, 2015.

Commissioner's Release: December 14, 2015

**Modification of Draft Plan of Condominium 30CDM-14403**

Draft Approval Date: November 12, 2014

Applicant: 2260695 Ontario Inc.

Location: 150-238 Westcourt Place

Proposal: To delete one parking unit, adjust the boundaries of two Exclusive Use Areas, and identify an existing easement.

Regional Processing Fee: Paid November 12, 2015.

Commissioner's Approval: December 4, 2015

Came Into Effect: Immediately.

**Modification of Draft Plan of Condominium 30CDM-14404**

Draft Approval Date: November 12, 2014  
 Applicant: 2260698 Ontario Inc.  
 Location: 240-346 Westcourt Place  
 Proposal: To modify the number of parking units, adjust the rear boundaries of several townhouse units, and identify an existing easement.  
 Regional Processing Fee: Paid November 12, 2015  
 Commissioner's Approval: December 4, 2015  
 Came Into Effect: Immediately.

**Township of Wilmot****Plan of Condominium Application 30CDM-15602**

Date Accepted: December 9, 2015  
 Applicant: The Imperial in New Hamburg Ltd.  
 Location: 60 Huron Street, New Hamburg  
 Proposal: To permit the conversion of the existing building to 12 residential condominium apartment units, 4 commercial units and 2 amenity spaces.  
 Regional Processing Fee: Paid November 30, 2015.

**Plan of Condominium Application 30CDM-15603**

Date Accepted: December 24, 2015  
 Applicant: Riverbend Brownstones  
 Location: 368 Fairview Street, New Hamburg  
 Proposal: To permit the development of 14 residential condominium townhouse units, and common elements including drive aisles, 14 parking spaces and common area.  
 Regional Processing Fee: Paid December 23, 2015.

**Township of Wellesley****Modification of Draft Plan of Subdivision 30T-14501**

Draft Approval Date: May 6, 2015  
 Applicant: Wm. J. Gies Construction Limited  
 Location: Gerber Road and Greenwood Hill Road  
 Proposal: To modify the orientation of Lots 15 and 16, and to require noise warning clauses and mitigation measures to Lots 9, 10 and 11.

**Modification of Draft Plan of Subdivision 30T-14501**

Regional Processing Fee: Paid December 3, 2015

Commissioner's Approval: December 22, 2015

Came Into Effect Date: January 12, 2016

**Area Municipal Consultation/Coordination:**

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

**Corporate Strategic Plan:**

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

**Financial Implications:**

Nil.

**Other Department Consultations/Concurrence:**

Nil.

**Prepared By:** Andrea Banks, Program Assistant

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



**Report:** TES-TRP-16-05

## **Region of Waterloo**

### **Transportation and Environmental Services**

#### **Transportation**

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

**Date:** February 2, 2016

**File Code:** T14-01

**Subject:** **Level 2 Pedestrian Crossover (PXO) Implementation Strategy**

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#### **Recommendation:**

That the Regional Municipality of Waterloo adopt installation warrants and an implementation strategy for the Level 2 Pedestrian Crossover as outlined in report TES-TRP-16-05, dated February 2, 2016.

#### **Summary:**

The Ministry of Transportation, Ontario (MTO) issued a new regulation (402/15) under the Highway Traffic Act, effective January 1, 2016, which established a new traffic-control device called a Level 2 Pedestrian Crossover. This new traffic-control device consists of new roadside signs and pavement markings and serves to enhance the mobility of pedestrians at mid-block locations and at intersections, including roundabouts. This new traffic-control device is an alternative to the traditional pedestrian crossover (PXO), now called a Level 1 Pedestrian Crossover. Please refer to Appendices A and B for graphic depictions of the Level 1 and Level 2 Pedestrian Crossovers. This new device is intended for locations where pedestrian volumes are insufficient to meet the warrants for a traffic signal.

According to the Highway Traffic Act, drivers approaching a Level 2 Pedestrian Crossover are required to stop when a pedestrian is crossing the roadway within the crossover. Accordingly, the new legislation also requires that pedestrians share the responsibility of safety by not entering the crossover when a vehicle is so close that it cannot stop.

Regional staff recommends introducing the Level 2 Pedestrian Crossovers to the public using a sequential/multi-phased approach as follows:

1. Education Outreach;
2. Implementation at all existing roundabouts;
3. Develop a priority list for mid-block and other non-roundabout intersection locations;
4. Monitor compliance and pedestrian safety; and
5. Begin implementing at mid-block and non-roundabout intersection locations.

Staff recommends the installation of the Level 2 Pedestrian Crossover at all existing roundabouts in 2016 and recommends installation at non-roundabout locations starting in 2017. The cost to implement Phases 1 and 2 in 2016 is estimated to be \$250,000. No funding for this work is currently allocated in the 2016 Transportation Capital Program. Subject to Council approval of the implementation strategy, staff will allocate sufficient funds for this work in 2016 as part of the 2016 Mid-Year Review of Transportation Capital Program.

## **Report:**

### 1.0 Background

The Ministry of Transportation, Ontario (MTO) issued a new regulation (402/15) under the Highway Traffic Act, effective January 1, 2016, which established a new traffic control device called a Level 2 Pedestrian Crossover. This report serves to provide some background on the development and intent of this new traffic control device, recommended installation warrants and an implementation strategy on Regional roads.

In Waterloo Region and in many other municipal road networks, many long stretches of roadway exist today without convenient pedestrian crossing control points. This deficiency is primarily created by a lack of pedestrian traffic control devices to serve the various ranges of pedestrian crossing demand seen throughout the road network.

Prior to January 1, 2016, only a traffic signal (and sub-versions of a traffic signal), a crossing guard and the traditional Pedestrian Crossover (PXO) were available for roadway agencies in Ontario to provide pedestrian crossing control. A traffic signal may seem like an obvious choice to enhance pedestrian mobility; however, in many cases, it may not be appropriate as there may not be sufficient pedestrian crossing demand or traffic volume to justify the installation of a traffic signal. Negative impacts of a traffic signal are not always obvious to the public. For example, a traffic signal may unduly delay both pedestrians and/or motorists, is expensive to install and requires funds to operate and maintain, and in almost all cases, results in an undesirable increase in motor vehicle collisions. In addition, roadway agencies are expected to provide efficient uninterrupted motor vehicle traffic flows along major corridors and are also expected to reduce the number of collisions and injuries occurring on roadways. Roadway agencies therefore need to carefully balance the convenience afforded to pedestrians against an expected increase in collisions following the installation of a traffic signal. To help

balance all the needs, roadway agencies rely on guidelines and warrants to help strike a fair and reasonable balance for all users.

In the 1990's, to address the need to enhance pedestrian mobility, roadway agencies requested that the MTO modify traffic signal standards and warrant methodologies to allow for the adoption of new sub-versions of the traffic signal. These new sub-versions that were adopted were Intersection Pedestrian Signals (IPS) and Midblock Pedestrian Signals (MPS). In addition there was a need to provide an alternative to the traditional Pedestrian Crossover (PXO) sign, now legally named the Level 1 Pedestrian Crossover. Please refer to Appendix A for an illustration of a Level 1 Pedestrian Crossover in operation. Similar to all other traffic control devices, warrant criteria were established to help manage the implementation of these new devices and to strike a balance between motorists and pedestrian needs. The IPS and MPS adopted PXO warrant guidelines that suggested that these devices would be appropriate when 200 or more pedestrians (or equivalent, e.g. 100 children or mobility challenged pedestrians or more) crossed a road over 8 hours in a typical day and where approximately 38% of the pedestrians or more experienced a minimum of 10 seconds of delay.

## 2.0 New Traffic Control Device (Level 2 Pedestrian Crossover)

Despite the introduction of new traffic control devices in the 1990's to enhance pedestrian mobility, there was still a need to address locations of crossing demand with low pedestrian volumes. In technical terms, the need can be described as locations that experience between 0 and 200 crossing pedestrians over an 8-hour period of a typical weekday; or the pedestrian demand that traffic signals, IPS or MPS are not appropriate to address. To partially address this "gap" in facility types, the Region of Waterloo for several years now has been installing pedestrian refuge and or median islands which are proven to enhance pedestrian mobility and safety. Where present on Regional roads, however, pedestrians are required to yield the right-of-way to motorists.

Since 2009 the Region of Waterloo and other roadway agencies have been lobbying the Ministry of Transportation to modify Ontario regulations that are seen by transportation professionals as failing to effectively enhance pedestrian mobility in Ontario. In response to this lobbying, the Ontario Traffic Manual (OTM) Book 15 Committee was formed that included staff from the Region and other municipalities across the province and staff from the Ministry of Transportation. The OTM Book 15 Committee worked collaboratively to develop new proposed guidelines and regulations for the use of a new pedestrian traffic control device now referenced in the Highway Traffic Act as a Level 2 Pedestrian Crossover. A typical layout copied from the applicable Regulation governing the configuration of the Level 2 Pedestrian Crossover is attached as Appendix B. The Level 2 Pedestrian Crossover may be used on roads up to 4-lanes wide, at intersections including roundabouts and at right-turn channels.

### 3.0 Statutory Requirements

The Highway Traffic Act regulates the use of the Level 2 Pedestrian Crossover to roadways posted at 60 km/h and under. Drivers approaching a Level 2 Pedestrian Crossover shall stop before entering a crossover when a pedestrian is crossing on the roadway within a pedestrian crossover, shall not overtake another vehicle already stopped at a crossover, and shall not proceed into the crossover until the pedestrian is no longer on the roadway. The driver of any vehicle approaching another vehicle from the rear shall not pass another vehicle within 30 metres of a crossover. A pedestrian shall not leave the curb or other place of safety at a pedestrian crossover and walk, run or move into the path if a vehicle that is so close that it is impractical for the driver to stop. In summary, the legislation has been set up so that legal responsibility is assigned to both the motorist and pedestrian.

### 4.0 Installation Warrants

#### 4.1 Intersection and Midblock Locations

Similar to all other traffic control devices, installation guidelines will be followed to determine when and where Level 2 Pedestrian Crossovers may be considered. The following guidelines from the yet-to-be published update of the Ontario Traffic Manual Book 15 are intended to be used to assist staff in considering appropriate Level 2 Pedestrian Crossover locations for intersection and midblock locations.

- 100 or more pedestrians (or equivalent) observed crossing over an 8 hour period;
- No other controlled crossing within 200m;
- Adherence to Ontario Traffic Manual Book 15 lane configuration and traffic volume conditions;
- Posted Speed  $\leq$  60km/h; and
- All above subject to an assessment using engineering judgement.

#### 4.2 Roundabout Locations

Since the Region and local municipalities opted in 2009 to provide pedestrians the right-of-way at roundabouts as a standard using “Yield to Pedestrian” signs, staff intends to replace all existing “Yield to Pedestrian” signs with Level 2 Pedestrian Crossover signs to stay consistent with past practices. Posted speed limits that exceed 60 km/h would have to be reduced to 60 km/h on approaches to roundabouts in order to legally operate a Level 2 Pedestrian Crossover.

## 5.0 Optional Level 2 Pedestrian Crossover Treatments

Level 2 Pedestrian Crossovers may be supplemented with optional treatments that include:

- Overhead sign; and
- Rapid Rectangular Flashing Beacon (RRFB)

Guidelines yet to be published have been drafted by the Ontario Traffic Manual Book 15 Committee to provide practitioners guidance regarding when an overhead sign or an RRFB is suggested to be used at a Level 2 Pedestrian Crossover. An RRFB is illustrated in Appendix B and flashes at a high frequency similar to a police or ambulance strobe light.

Staff has been meeting with local area municipal staff to develop Regional/area municipal guidelines related to the implementation of Level 2 Crossovers at roundabouts. Staff has also been discussing these optional treatments with other municipalities in Ontario with roundabouts in operation.

Staff will consider overhead signs and RRFB's at roundabouts at a later date following discussions with Area Municipal staff, compliance studies and a safety assessment of Level 2 Pedestrian Crossovers at roundabouts.

## 6.0 Jurisdictional Responsibilities

The Region of Waterloo will be responsible for the installation, operation and maintenance of all Level 2 Pedestrian Crossovers installed on Regional roads and Regional / Area Municipal roadway intersections.

Each respective Area Municipality will be responsible for installation, operation and maintenance of all Level 2 Pedestrian Crossovers installed on Area Municipal roadways and related intersections.

Each respective agency including the Region shall obtain approval from any and all potentially impacted agencies prior to installing any Level 2 Pedestrian Crossing on its respective roadways.

Each respective agency shall ensure appropriate By-laws are enacted prior to installing any Level 2 Pedestrian Crossover on its roadway.

## 7.0 Educational Outreach

Regional staff believes adequate public education and the development of an implementation strategy is integral to the success of the new Level 2 Pedestrian Crossover device. At this time, the Ministry of Transportation has only updated its website to advise the public of the new Level 2 Pedestrian Crossover. Regional staff

has also updated the Region's website to include similar information. Staff has already developed a conceptual educational pamphlet to educate motorists and pedestrians. The pamphlet will provide clear instructions to motorists regarding what to do when approaching a Level 2 Pedestrian Crossover and how pedestrians are to cross at it. The pamphlet, once finalized, will be sent to all households in the Region.

Regional staff has asked Ministry of Transportation staff whether they intend to provide more explicit information to the public as this device is anticipated to be widely used across Ontario. Ministry of Transportation staff have acknowledged the Region's request but have not committed to any additional public education at this time. It is Regional staff's understanding that other municipalities and organizations, including the Regional Public Works Commissioners of Ontario have also requested the Ministry to provide more information to the public about Level 2 Pedestrian Crossovers.

## 8.0 Implementation Strategy

Regional staff recommends introducing the Level 2 Pedestrian Crossover to the public using a sequential / multi-phased implementation strategy as follows:

1. Education Outreach (Website, Region News, and pamphlet to households) – 2016;
2. Implementation at all existing roundabouts - 2016;
3. Develop an implementation priority list for midblock and non-roundabout intersection related locations - 2016; and
4. Monitor compliance and pedestrian safety - 2017;
5. Begin implementing midblock and non-roundabout intersection priority locations based on funding availability – 2017 and beyond.

## 9.0 Consultation with Area Municipalities and Police Services

Staff has presented the recommended implementation strategy to the Traffic Coordinating Committee which includes staff from the Waterloo Regional Police Services and Area Municipalities. All Traffic Coordinating Committee members (excluding members from the Townships of Woolwich and North Dumfries who were not present) are in agreement with the implementation strategy as presented in this report.

## 10.0 Summary of Pedestrian Traffic Control Devices

The introduction of the new Level 2 Pedestrian Crossover Device helps to provide municipalities the ability to enhance pedestrian mobility in Ontario. This new device now provides municipalities the opportunity to provide pedestrians right-of-way on roadways where other devices are not suitable. A general summary and hierarchy of

the typical pedestrian crossing devices applicable to Regional roads, including the new Level 2 Pedestrian Crossover are included in Appendix C.

**Corporate Strategic Plan:**

This report addresses the Region's goal to build infrastructure for, and increase participation in, active forms of transportation (cycling and walking) (Strategic Objective 2.3) and to optimize road capacity to safely manage traffic and congestion (Strategic Objective 2.4).

**Financial Implications:**

The cost to implement Phases 1 and 2 of the recommended implementation strategy in 2016 is approximately \$250,000. No funding for this work is currently allocated in the 2016 Transportation Capital Program. Subject to Council approval of the implementation strategy, sufficient funds will be allocated as part of the 2016 Mid-Year Review of the Transportation Capital Program, funded from Regional Development Charge Reserve Fund (50%) and Roads Capital Levy Reserve Fund (50%).

**Other Department Consultations/Concurrence:**

Nil

**Attachments**

Appendix A – Traditional Pedestrian Crossover Sign/Level 1 Pedestrian Crossover

Appendix B – Level 2 Pedestrian Crossover

Appendix C – Summary of Pedestrian Crossing Devices

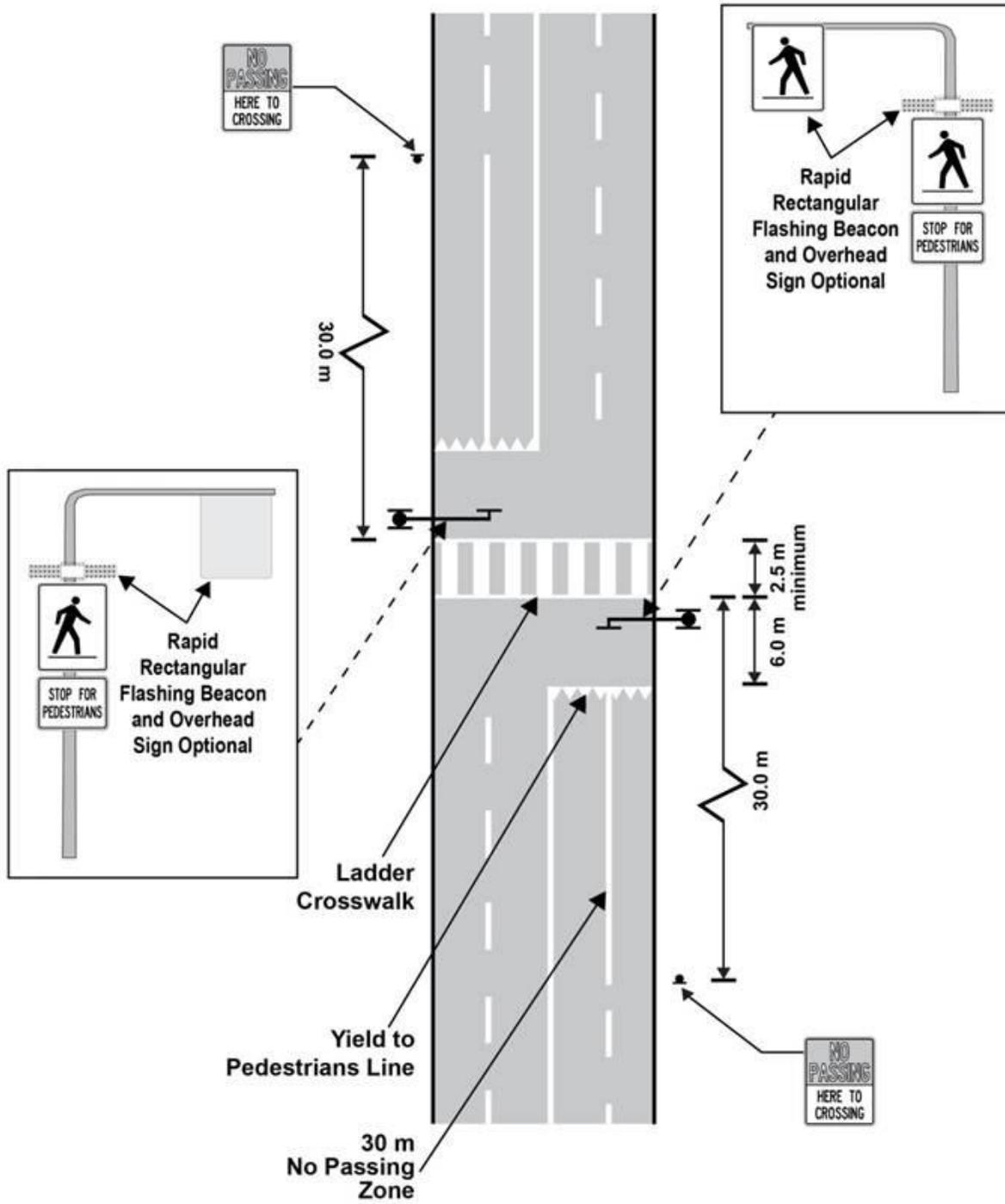
**Prepared By:** Bob Henderson, Manager, Transportation Engineering

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

Appendix A – Traditional Pedestrian Crossover/Level 1 Pedestrian Crossover



Appendix B – Level 2 Pedestrian Crossover



Appendix C – Summary of Pedestrian Crossing Devices

Traffic Control Device	Figure	Controlled Crossing	Uncontrolled Crossing	When to Consider	Comments
Pedestrian Refuge Island				Consider when pedestrian crossing volumes range between 0 and 99	Motorists have the right-of-way at all times. Pedestrian refuge islands are proven to enhance pedestrian safety.
Crossing Guard				Area Municipality consideration / jurisdiction	Crossing guards are legally authorized to display a stop sign and when used affords pedestrians the right-of-way.
Level 2 Pedestrian Crossover (PXO)				Consider when pedestrian crossing volumes exceed 99	New Highway Traffic Act regulations provide pedestrians right-of-way at locations displaying appropriate signs and markings
Pedestrian Traffic Control Signals (IPS and MPS)				Consider when pedestrian crossing volumes exceed 199 and when pedestrians experience sufficient delay as per OTM	Traffic signal control automatically affords pedestrians right-of-way.
Stop/Yield Control				Consider when OTM Book 5 Stop Control Warrant is met	Stop control automatically affords pedestrians right-of-way.
Full Traffic Control Signals				Consider when OTM Book 12 Traffic Signal Warrant is met	Traffic signal control automatically affords pedestrians right-of-way.
Roundabout				Consider when an Intersection Control Study (ICS) deems a roundabout as the preferred traffic control	Roundabout control automatically affords pedestrians right-of-way.
<p>Note: All controls are subject to appropriate engineering reviews to ensure the control can operate effectively (e.g. Appropriate traffic volume conditions and geometric conditions).</p>					



**Report:** TES-WAS-16-01

COR-FFM-16-01

## **Region of Waterloo**

### **Transportation and Environmental Services**

### **Corporate Services**

### **Facilities Management & Fleet Services**

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

**Date:** February 2, 2016                      **File Code:** F06-80

**Subject:** **Corporate Asset Management Policy**

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#### **Recommendation:**

That the Regional Municipality of Waterloo approve the Corporate Asset Management Policy, as set out in Appendix A to report TES-WAS-16-01/COR-FFM-16-01 dated February 2, 2016.

**Summary:** Nil

#### **Report:**

On October 6, 2015, report TES-15-03/COR-15-02 informed Council of the status of the Corporate Asset Management (AM) Strategy Project and provided information relating to the Corporate Asset Management Governance Structure, Asset Management Plan, and the procurement and implementation of a Corporate Asset Management System that would include a Work Management System, Decision Support System(s) and Professional Services support.

As part of the Corporate AM Strategy, a Corporate AM Policy was developed by Regional staff to ensure consistency in the application of AM best practices (Appendix A). This Policy provides staff with direction and guidance for decision making in the management of airport, transportation, transit, solid waste management systems, water and wastewater treatment and distribution systems, and facilities and fleet assets with a total replacement value of approximately \$5.5 billion.

This Policy will support staff in the ongoing development of the AM Program and Plans (required for some provincial and federal capital infrastructure funding), ensuring compliance with legislation and providing direction as it pertains to the acquisition and implementation of AM software including the Work Management System (WMS) and Decision Support Systems (DSS). Currently WMS proposals have been submitted by vendors and are being reviewed by the Asset Management Steering Committee and System Selection Committee. A recommendation for the award of the preferred WMS will be submitted to Committee on February 23, 2016.

In conjunction with the ongoing effort to select a preferred WMS, staff are preparing the second Request for Proposal (RFP) which Includes the Professional Support Services to implement the WMS. This second RFP also includes the purchase and implementation of software to meet necessary requirements for a Decision Support System(s). Staff anticipate a report to Regional Council with a recommendation on the preferred Professional Support Services in the June of 2016.

The Asset Management Plan (AM Plan) is a long range planning document that is used to provide a rational framework for managing the Region's assets and long term funding forecast. The AM Plan is intended to improve the Region's ability to meet its corporate goals and objectives in a way that best services its customers. The completion of the Corporate AM Plan and State of the infrastructure Report is currently in progress and will be presented to Regional Council in the spring of 2016.

**Corporate Strategic Plan:**

The implementation of best practice asset management principles, reinforced by a Corporate Asset Management Policy supports the 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. It specifically addresses strategic action 1.2.2 to continue to implement and improve an asset management plan to optimize the use and availability of existing and new infrastructure.

**Financial Implications:** Nil

**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:**

Appendix A – Regional Municipality of Waterloo Asset Management Policy

**Prepared By:** **Charles Allen**, Manager, Planning and Performance Management  
**Richard Pinder**, Senior Project Engineer - Asset Management

**Approved By:** **Craig Dyer**, Commissioner, Corporate Services/Chief Financial Officer  
**Thomas Schmidt**, Commissioner, Transportation and Environmental Services

 Region of Waterloo Corporate Policy		Section #	Policy #
		1	1
		Approval Date: 2016	Revision Date: 24 November 2015
Title:	CORPORATE ASSET MANAGEMENT POLICY		
Responsibility:	Corporate Asset Management Steering Committee	Approval Level:	Council
Applies to:	All Staff		

**Policy Statement:**

The Region will formalize practices and responsibilities associated with the management of assets, communicate relevant policies and programs to internal and external stakeholders and review this policy regularly to ensure that it continues to be appropriate for the Region’s asset management program.

**Operating Principles:**

This Corporate Asset Management (AM) Policy provides direction and guidance for decision making in the management of assets in the airport, transportation, transit, solid waste management systems, water and wastewater treatment and distribution systems, and facilities and fleet owned and operated by the Region.

**Vision**

Regional staff and our partners will work together to continuously improve infrastructure services with comprehensive asset management practices that ensure that the right work is done at the right time, for the right reasons and at the right price.

**Goals**

Best practice asset management principles will be embedded into all Regional operations to:

- Provide documented and accepted levels of service,
- Ensure assets are sustainable and appropriate for use,
- Minimize costs of asset ownership and service delivery,
- Monitor and address risk associated with asset failure,
- Communicate a common purpose, gaining the support and trust of the staff and external stakeholders,
- Ensure the collection and use of current and accurate asset information that is available to all that need it, and
- Facilitate prioritization and optimization of capital investment in the Region’s assets.



**Application:**

To meet the goals of this policy:

1. An Asset Management Governance Structure has been established to lead the development of AM tools and practices and to oversee their application across the organization.
2. A Strategic Asset Management Plan document will be developed, adopted and updated with each new term of Council following the approval of the new Corporate Strategic Plan.
3. State of the Asset Reports will be prepared periodically to update Council on progress and asset performance.
4. Lifecycle costing and risk analysis processes will be consistently applied when evaluating competing asset investment needs across asset types.
5. Where practical, programs will strive to go beyond minimum legislative solutions to help ensure assets are more resilient to changing social, climate, environmental and economic conditions.
6. Asset management knowledge, skills and training programs will be identified and developed, aligning with corporate competency frameworks;
7. Comprehensive financial planning strategies and processes will be applied across all asset types to ensure long-term affordability. Funding and service delivery opportunities to achieve cost savings will be explored where appropriate.

**Key Asset Management Documents:**

The following key strategic asset management documents form part of the Region's overall approach to asset management:

- Strategic Asset Management Plan – Defines Senior Management's commitment and approach to achieving this Policy. It establishes best asset management practices and identifies recommended actions to be taken to improve or enhance the asset management capability and achieve strategic objectives. It will summarize the characteristics, condition, and risk exposure of assets. It will outline activities for each asset type with input from all Regional functional areas with recommended financing strategies to provide a defined level of service in the most cost effective way.
- State of the Asset Report – Provides an update of the current condition of Regional assets, forecasted trends and asset performance, reporting on key performance indicators against set targets. It will identify any recommended changes to the approved strategy and can be referenced when making infrastructure investment decisions as part of financial planning processes.
- Master Plans – A long range plan which integrates infrastructure requirements for existing and future needs as defined by levels of service.

<b>Council Enquiries and Requests for Information</b>				
<b>Planning and Works Committee</b>				
<b>Meeting date</b>	<b>Requestor</b>	<b>Request</b>	<b>Assigned Department</b>	<b>Anticipated Response Date</b>
08-Dec-15	H. Jowett	Report on Delegation of Authority for Subdivision Application Approvals to interested Area Municipalities	PD&LS	Feb-2016
08-Dec-15	G. Lorentz	Report on Construction Updates	TES	Feb-2016
08-Dec-15	J. Mitchell	Report on using Renewable Energy for LRT	TES	Fall 2016