



The Regional Municipality of Durham

Planning & Economic Development Committee Agenda

Council Chambers
Regional Headquarters Building
605 Rossland Road East, Whitby

Tuesday, April 6, 2021

9:30 AM

Please note: In an effort to help mitigate the spread of COVID-19, and to generally comply with the directions from the Government of Ontario, it is requested in the strongest terms that Members participate in the meeting electronically. Regional Headquarters is closed to the public, all members of the public may [view the Committee meeting](#) via live streaming, instead of attending the meeting in person. If you wish to register as a delegate regarding an agenda item, you may register in advance of the meeting by noon on the day prior to the meeting by emailing delegations@durham.ca and will be provided with the details to delegate electronically.

1. Roll Call

2. Declarations of Interest

3. Adoption of Minutes

- A) Planning & Economic Development Committee meeting
– March 2, 2021

Pages 4 - 11

4. Statutory Public Meetings

There are no statutory public meetings

5. Delegations

There are no delegations

6. Presentations

- 6.1 Ashley Yearwood, Project Planner, and Carla Acosta, Planner, re: Region of Durham Soil and Groundwater Assessment Protocol (2021-P-8) [Item 7.2 A)]
- 6.2 Aneesah Luqman, Project Planner, and Jay Cuthbertson, Durham Environmental Advisory Committee Member, re: Durham Environmental Advisory Committee “Residents’ Guide to Climate Resiliency” (2021-P-9) [Item 7.2 B)]

7. Planning

7.1 Correspondence

- A) Correspondence from Town of Ajax, re: Resolution passed at their Council meeting held on February 22, 2021, regarding Conservation Authorities Working Group 12 - 13

Pulled by Councillor Collier from the March 5, 2021 Council Information Package

Recommendation: Receive for Information

7.2 Reports

- A) Region of Durham Soil and Groundwater Assessment Protocol (2021-P-8) 14 - 95
- B) Durham Environmental Advisory Committee “Residents’ Guide to Climate Resiliency” (2021-P-9) 96 - 153

8. Economic Development

8.1 Correspondence

- A) Correspondence from Town of Ajax, re: Resolution passed at their Council meeting held on February 22, 2021, regarding In-store Alcohol Service at Convenience Stores 154 - 155

Pulled by Councillor Collier from the March 5, 2021 Council Information Package

Recommendation: Receive for Information

8.2 Reports

- A) Investment Attraction Metrics – Annual Activity Report 2020 (2021-EDT-2) 156 - 173

- B) Overview of Specialty Crops Workshop Series (2021-EDT-3) 174 - 177

9. Advisory Committee Resolutions

There are no advisory committee resolutions to be considered

10. Confidential Matters

There are no confidential matters to be considered

11. Other Business

12. Date of Next Meeting

Tuesday, May 4, 2021 at 9:30 AM

13. Adjournment

Notice regarding collection, use and disclosure of personal information:

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The Regional Municipality of Durham

MINUTES

PLANNING & ECONOMIC DEVELOPMENT COMMITTEE

Tuesday, March 2, 2021

A regular meeting of the Planning & Economic Development Committee was held on Tuesday, March 2, 2021 in the Council Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby, Ontario at 9:30 AM. Electronic participation was offered for this meeting.

1. Roll Call

Present: Councillor Ryan, Chair
Councillor Joe Neal, Vice-Chair
Councillor Highet
Councillor Kerr
Councillor Lee
Councillor Schummer
Councillor Yamada
Regional Chair Henry
*** all members of Committee participated electronically**

Also

Present: Councillor Barton
Councillor Dies attended for part of the meeting
Councillor Foster attended for part of the meeting
Councillor Smith
Councillor Wotten

Staff

Present: E. Baxter-Trahair, Chief Administrative Officer
B. Bridgeman, Commissioner of Planning and Economic Development
K. Allore-Engel, Senior Planner
B. Anderson, Principal Planner
A. Bathe, Senior Planner
M. Blake, Senior Planner
S. Gill, Director, Economic Development and Tourism
C. Goodchild, Manager, Policy Planning & Special Studies
R. Inacio, Systems Support Specialist, Corporate Services – IT
S. Jibb, Manager, Economic Development, Agriculture and Rural Affairs
J. Kelly, Principal Planner
C. Leitch, Principal Planner
G. Muller, Director of Planning
G. Pereira, Manager, Transportation Planning
B. Pickard, Manager, Tourism

K. Ryan, Senior Solicitor, Corporate Services – Legal Services
S. Salomone, Manager, Economic Development, Business Development
and Investment
J. Severs, Manager, Economic Development, Marketing and Cluster
Development
M. Stevenson, Manager, Administrative Services
L. Trombino, Manager, Plan Implementation
T. Fraser, Committee Clerk, Corporate Services – Legislative Services

2. Declarations of Interest

There were no declarations of interest.

3. Announcement

B. Bridgeman advised that Planning & Economic Development Department staff member Laurie Noland passed away on Saturday, February 27, 2021. He advised that Laurie was a Clerk-Steno and worked for the Region for 24 years, joining the Planning & Economic Development Department in 2003. He outlined some of her contributions to the Planning & Economic Development Department and the Region.

Chair Ryan requested that B. Bridgeman extend condolences to Laurie's family on behalf of the Committee.

4. Adoption of Minutes

Moved by Councillor Lee, Seconded by Councillor Highet,
(8) That the minutes of the regular Planning & Economic Development
Committee meeting held on Tuesday, February 2, 2021, be adopted.
CARRIED

5. Statutory Public Meetings

There were no statutory public meetings.

6. Delegations

6.1 Dennis Croft, Chief Executive Officer, 1855 Technology Accelerator, re: Update on 1855 Activities and Successes

Dennis Croft, participating electronically, provided a PowerPoint presentation with an update on the activities and successes of 1855. A copy of his presentation was distributed electronically to the Committee.

D. Croft advised that their mission is to support high-potential technology and innovative companies during the rapid revenue growth stages. He also advised

that 1855 was founded in November 2018 and their first operating year was 2019. He stated that they are a private/public partnership and a paid accelerator model. He explained that they focus on technology and innovation as the industry has high wealth generation, faster revenue growth, sustainability, and is industry agnostic.

D. Croft further advised that 1855 focuses on the growth stages including revenue attraction and customer growth. He also advised that 1855 offers a customized approach with a focus on investment funding attraction, executive advisory mentorship, business services specialization, innovation community navigation, and company office location. He displayed a list of 1855 feeders.

D. Croft outlined the economic impact of 1855. He noted that they have 17 member companies, have 3 industry tenants in their facility, and 144 jobs have been created. He also advised that their highest profile event is 1855 Masterclass and they have held 8 events with over 850 attendees.

D. Croft displayed a list of accelerator members and he provided information on IFTech. He stated that IFTech has been in Durham Region for over 10 years and has leveraged many different support structures for innovation companies. He also stated that IFTech has recently received its first customer worth \$4 million.

D. Croft outlined innovation community partners and he stated that they are the first and only accelerator company to have exclusive access to BDO Canada's 2021 VC Pitch Day.

D. Croft responded to questions from the Committee.

With the consensus of the Committee, the order of the agenda was altered to consider Report #2021-EDT-1 at this time.

9.2 Reports

A) 1855 Technology Accelerator – 1855 Masterclass Event Series (2021-EDT-1)

Report #2021-EDT-1 from B. Bridgeman, Commissioner of Planning and Economic Development, was received.

Moved by Regional Chair Henry, Seconded by Councillor Kerr,
(9) That Report #2021-EDT-1 of the Commissioner of Planning and Economic Development be received for information.

CARRIED

7. Presentations

7.1 Brian Bridgeman, Commissioner of Planning and Economic Development, Gary Muller, Director of Planning, and Colleen Goodchild, Manager, Policy Planning & Special Studies, re: Envision Durham – Proposed Policy Directions

B. Bridgeman, G. Muller and C. Goodchild provided a PowerPoint presentation outlining the details of Report #2021-P-7 of the Commissioner of Planning and Economic Development. Highlights of their presentation included:

- Growth Opportunities and Challenges
- Growth Plan Forecasts
 - Comparing Durham Region Population Growth Forecast, 2016 to 2051
 - Durham Region Forecast Employment Scenarios, 2016 to 2051
- Uncertainty of Covid on Land Use Planning and Economic Development
- Economic Growth and Housing Choice
- Proposed Policy Directions Context and Overview
- Policy Review Approach
- Ongoing Engagement
- Consultation and Discussion Papers
- Envision Durham
- Proposed Policy Directions
 - Prosperous Economy
 - Healthy Communities
 - Supportive Infrastructure
 - Vibrant Urban System
 - Thriving Rural System
 - Protected Greenlands System
 - Connected Transportation System
- Online Survey
- Next Steps

Staff responded to questions with respect to the Growth Plan population and employment forecasts; planning for municipal infrastructure; completion of the Land Needs Assessment; consultation with area municipal staff; the potential impact on the Development Charges By-law; drivers for the proposed growth; and the Durham Region Competitiveness Study.

It was suggested that for future reports staff provide a memorandum in the Council Information Package with an explanation of the Growth Plan forecasts and actual population and employment growth.

8. Planning

8.1 Correspondence

There were no communications to consider.

8.2 Reports

A) CP Railway Traffic Information and Data (2021-P-6)

Report #2021-P-6 from B. Bridgeman, Commissioner of Planning and Economic Development, was received.

Staff responded to questions with respect to whether the CP Rail data included information on transportation of hazardous materials; the requirement to provide municipalities data on the transportation of dangerous goods; and proposed next steps.

It was requested that a copy of the resolution be sent to the Minister of Transport and Durham MPs and MPPs.

Moved by Councillor Schummer, Seconded by Councillor Lee,
(10) That we recommend to Council:

That Regional Council endorse the following draft resolution contained in Attachment #1 to Report #2021-P-6 of the Commissioner of Planning and Economic Development requesting that CP Rail reconsider its decision to stop providing railway traffic information and data to the public:

Whereas sound is considered by the Environmental Protection Act to be a contaminant which causes negative effects on human health;

Whereas the Provincial Policy Statement (PPS) states that planning for land uses in the vicinity of rail facilities should be undertaken in a manner that ensures that rail facilities and sensitive land uses are appropriately designed, buffered and/or separated from each other;

Whereas the PPS also directs municipalities to avoid land use patterns and development which may cause environmental or public health and safety concerns;

Whereas, Environmental Noise Assessment Studies, prepared in accordance with Ministry of Environment, Conservation and Parks guidelines require accurate and up-to-date data to accurately assess the impacts of railway noise on new development and identify appropriate mitigation measures;

Now therefore, be it resolved that the Region of Durham is requesting that CP Rail reconsider its decision to cease providing railway traffic information to the noise consultants; and

That a copy of this motion be forwarded to CP Rail; the area municipalities; the Minister of Transport; Durham MPs and MPPs; the Association of Municipalities Ontario (AMO); and the Federation of Canadian Municipalities (FCM).

CARRIED

B) Envision Durham – Proposed Policy Directions (2021-P-7)

Report #2021-P-7 from B. Bridgeman, Commissioner of Planning and Economic Development, was received.

Staff responded to questions with respect to proposed policies on downtowns; inclusionary zoning; Figure 11: Potential Employment Area Designation Refinements; Figure 15: Durham's Greenlands System; proposed consultation with landowners; the employment area conversion process; the Significant Woodlands Study; the Land Needs Assessment process and settlement area boundary expansion considerations; the proposed policy direction to prohibit large-scale commercial renewable energy facilities in Prime Agricultural Areas; the possibility of reducing minimum lot sizes for Hamlets in Rural Settlements; the policy for severance of non-abutting surplus farm dwellings; the process for allocating population and employment forecasts to area municipalities; the proposal to include the Darlington Nuclear Generating Station within the Urban Area Boundary; and the Land Needs Assessment process and evaluation of Employment Area conversion requests.

Moved by Councillor Kerr, Seconded by Councillor Schummer,
(11) That Report #2021-P-7 of the Commissioner of Planning and Economic Development be received for information.

CARRIED

9. Economic Development

9.1 Correspondence

There were no communications to consider.

9.2 Reports

A) 1855 Technology Accelerator – 1855 Masterclass Event Series (2021-EDT-1)

This item was considered earlier in the meeting. Refer to page 3 of these minutes.

10. Advisory Committee Resolutions

There were no advisory committee resolutions to be considered.

11. Confidential Matters

There were no confidential matters to be considered.

12. Other Business

12.1 Committee Appointments

Moved by Councillor Kerr, Seconded by Regional Chair Henry,
(12) That we recommend to Council:

- A) That Councillor Hight be appointed to the Durham Agricultural Advisory Committee; and
- B) That Councillor Hight be appointed to the Golden Horseshoe Food and Farming Alliance.

CARRIED

Moved by Councillor Lee, Seconded by Regional Chair Henry,
(13) That we recommend to Council:

- A) That Councillor Joe Neal be appointed as an alternate to the Durham Agricultural Advisory Committee; and
- B) That Councillor Yamada be appointed as an alternate to the Golden Horseshoe Food and Farming Alliance.

CARRIED

Moved by Councillor Joe Neal, Seconded by Councillor Kerr,
(14) That we recommend to Council:

That Councillor Lee be appointed to the Durham Regional Local Housing Corporation.

CARRIED

13. Date of Next Meeting

The next regularly scheduled Planning & Economic Development Committee meeting will be held on Tuesday, April 6, 2021 at 9:30 AM in the Council Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby.

14. Adjournment

Moved by Regional Chair Henry, Seconded by Councillor Joe Neal,
(15) That the meeting be adjourned.

CARRIED

The meeting adjourned at 11:42 AM

Respectfully submitted,

D. Ryan, Chair

T. Fraser, Committee Clerk



TOWN OF AJAX
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Hon. Jeff Yurek
Ministry of the Environment, Conservation and Parks
5th Floor
777 Bay St.
Toronto, ON M7A 2J3
jeff.yurek@pc.ola.org

 Corporate Services Department Legislative Services Division	
Date & Time Received:	February 24, 2021 4:08 pm
Original To:	CIP
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Take Appropriate Action	<input type="checkbox"/> File <input type="checkbox"/>
Notes/Comments:	

Sent by E-Mail

February 24, 2021

Re: Conservation Authorities Working Group

The following resolution was passed by Ajax Town Council at its meeting held February 22, 2021:

WHEREAS Significant, substantive legislative changes to conservation authorities' (CA) mandates, board responsibilities and enforcement authority were hastily pushed through the Province's fall budget, Bill 229 (Schedule 6), which received Royal Assent on December 8, 2020 in spite of widespread outcry from environmental experts, municipalities and municipal groups, NGOs and individuals;

AND WHEREAS on January 11, 2021 Minister Yurek sent an email to heads of Council across the province to inform them of the composition of a Conservation Authorities Working Group to examine and consult on the regulations that follow legislative changes made through Schedule 6, including: details about which programs and services CAs will deliver and how they may be funded, and how CAs will regulate development (with a lens of public safety), the requirement for CAs to establish community advisory boards, and further details about CA operation and management of lands owned by the authority;

AND WHEREAS both the Toronto and Region Conservation Authority (TRCA) and Central Lake Ontario Conservation Authority (CLOCA), as well as the agriculture sector and Association of Municipalities of Ontario (AMO) are represented as part of the working group; however, an additional list of advisors to the working group was also announced, which includes representatives from the development industry (Remington Group, Mattamy Homes and EQ Homes);

AND WHEREAS the working group does not consist of representatives from non-governmental agencies who have been very vocal about Schedule 6, including the implications on the mandate and future of CAs;

AND WHEREAS CAs should be able to have a fulsome discussion about regulatory issues, including appropriate limitations to development without the interference or lobbying potential of the development industry;

THEREFORE BE IT NOW RESOLVED THAT:

1. Ajax Council convey their concern to the Minister of the Environment, Conservation and Parks, requesting that the Province remove the influence of the development industry from the working group, instead having them provide their input as part of the public consultation process like other stakeholders and the general public; and
2. Ajax Council requests that the Minister of the Environment, Conservation and Parks consider adding environmental protection-focused non-governmental agencies onto the working group; and
3. This motion be distributed to the Hon. Jeff Yurek, Minister of the Environment, Conservation and Parks, MPP Rod Phillips, Region of Durham, Chair of the Working Group Hassaan Basit, CEO of Conservation Halton, Conservation Ontario, Toronto and Region Conservation Authority, Central Lake Ontario Conservation Authority, Association of Municipalities of Ontario, and Ontario's Big City Mayors.

If you require further information please contact me at 905-619-2529 ext. 3342 or alexander.harras@ajax.ca.

Sincerely,



Alexander Harras
Manager of Legislative Services/Deputy Clerk

Copy: Mayor S. Collier
Regional Councillor J. Dies
MPP Rod Phillips
Region of Durham
Chair of the Working Group Hassaan Basit
Conservation Ontario
Toronto and Region Conservation Authority
Central Lake Ontario Conservation Authority
Association of Municipalities of Ontario
Ontario's Big City Mayors



The Regional Municipality of Durham Report

To: Planning and Economic Development Committee
From: Commissioner of Planning and Economic Development
Report: #2021-P-8
Date: April 6, 2021

Subject:

Region of Durham Soil and Groundwater Assessment Protocol, Files L14-03-08 and D-04-27-02

Recommendation:

That the Planning and Economic Development Committee recommends to Regional Council:

- A) That the “Soil and Groundwater Assessment Protocol” included as Attachment #1 to Commissioner’s Report #2021-P-8 be endorsed, and that it replace the Region’s existing Site Contamination Protocol; and
 - B) That a copy of this Report #2021-P-8 be forwarded to: the Region’s area municipalities; conservation authorities; the Durham Environmental Advisory Committee (DEAC); the Durham Agricultural Advisory Committee (DAAC); the Ministry of the Environment, Conservation and Parks (MECP); the Building Industry and Land Development Association (BILD) - Durham Chapter; other stakeholders, and members of the public who have expressed interest.
-

Report:

1. Purpose

- 1.1 Section 2 of the *Planning Act* requires that Municipal Councils have regard to matters of provincial interest, including the protection of public health and safety and

the protection of ecological systems, including natural areas, features and functions. In addition, the Provincial Policy Statement (PPS) requires that sites with contaminants be assessed and remediated as necessary, prior to any activity occurring on the site to ensure there will be no adverse effects. As such, municipalities have a responsibility through their development approvals processes to ensure that matters relating to soil and groundwater contaminants are considered for all development applications.

- 1.2 This report recommends that Council endorse a new “Soil and Groundwater Assessment Protocol” (SGAP) to replace the Region’s existing Site Contamination Protocol. The new SGAP:
 - a. provides an updated framework for identifying lands throughout the Region that have the potential for soil and/or groundwater contamination; and
 - b. streamlines processes for reviewing development applications made under the *Planning Act* on sites where contamination is identified.
- 1.3 Ontario’s *Environmental Protection Act (EPA)* prohibits the discharge of any contaminants into the environment which cause, or are likely to cause, negative effects to human health and the natural environment.
- 1.4 The intent of the SGAP is to ensure that protection of human health and the natural environment remains paramount. The SGAP has been developed in accordance with the updated regulations for Records of Site Condition (Ontario Regulation 153/04) under Part XV.1 of the EPA.
- 1.5 This report contains several technical terms and acronyms. To assist the reader, the key terms and their acronyms are listed below:
 - SGAP – Soil and Groundwater Assessment Protocol;
 - *EPA – Environmental Protection Act*;
 - MECP – Ministry of the Environment, Conservation and Parks;
 - RSC – Record of Site Condition;
 - QP – Qualified Person;
 - SSQ – Site Screening Questionnaire;
 - ESA – Environmental Site Assessment;
 - EIP – Enhanced Investigation Property(ies); and

- CPU – Certificate of Property Use.

2. Background

- 2.1 In 1996, the Province of Ontario assigned certain Provincial Plan Review Responsibilities to upper-tier municipalities including the Region of Durham. This delegation included the responsibility to ensure that human health and the natural environment are adequately protected through the planning process. To fulfil this responsibility, a Regional Site Contamination Protocol was first developed in 1997 to address the protection of public health and safety for site contamination issues. This Protocol was last updated in October 2014.

3. Previous Reports and Decisions

- 3.1 At its September 8, 2020 meeting, the Planning and Economic Development Committee received a report and staff presentation on the draft SGAP ([Report #2020-P-19](#)).
- 3.2 Following the meeting, the draft SGAP was circulated to a variety of stakeholders. Meetings were held with the Durham Agricultural Advisory Committee (DAAC), the Durham Environmental Advisory Committee (DEAC), area municipal staff; conservation authority staff; MECP staff; representatives from the Building Industry and Land Development Association (BILD); environmental consultants; and other stakeholders from the soil and groundwater remediation industry. All comments raised were considered and refinements to the SGAP were made where appropriate.

4. Soil and Groundwater Assessment Protocol

- 4.1 The proposed SGAP would apply to all *Planning Act* development applications within the Region. Planning decisions must consider soil, and where applicable, groundwater conditions associated with lands subject to a development application. This requirement is especially critical for “sensitive” land uses such as residential, parkland and institutional uses, where human habitation, public assembly and outdoor recreation is intended to take place.
- 4.2 Soil and groundwater standards for land use classifications are established by the Province. All development must be screened for sources of soil and groundwater contamination prior to approval under the *Planning Act*.

4.3 The SGAP builds upon the existing Site Contamination Protocol, while incorporating legislative and regulatory updates, informed by practices in other jurisdictions and through stakeholder consultation. The SGAP streamlines the existing Protocol, while providing clarification and greater flexibility. An overview of the main areas of improvement is provided in the paragraphs below:

Protocol Improvements

- 4.4 **Updates to Record of Site Condition Requirements** – The SGAP incorporates recent legislative and regulatory updates to Record of Site Condition (RSC)¹ requirements. Provincial requirements for the remediation of sites containing various exceedances, such as road salt, would be exempt from the requirement for an RSC.
- 4.5 **Updates to the Region’s Reliance Letter** – The Region’s Reliance Letter has been contemporized. Significant changes include the removal of an audit requirement clause, and an update to the Region’s insurance requirements. These changes clarify how to address development applications not subject to the provincial RSC process, and ensure that sufficient insurance is provided to allow the Region to rely on reports prepared by a Qualified Person (QP).
- 4.6 **Improvements to the Use of the Non-Potable Groundwater Standard** – Currently, when the Region approves requests to use the Non-Potable Groundwater Standard², it is conditional for a period of 15 days, which is inadequate to obtain and review the supporting documentation filed with an RSC. The SGAP extends this period to one year, consistent with recent updates made by the Province to O.Reg.153/04. This change is viewed as essential by proponents, given that RSC filing requirements are quite onerous and cannot normally be achieved within 15 days.
- 4.7 **Simplification of the Site Screening Questionnaire** – Enhanced Investigation Properties (EIPs) are sites with activities that are associated with a high potential for contamination (i.e. industrial uses, service stations, dry cleaning establishments,

1 An RSC summarizes the environmental condition of a property taken from a snapshot in time and consists of environmental site assessment report(s) and other supporting documents typically prepared by a professional Engineer or Geoscientist (known as a Qualified Person under O.Reg. 153/04, as amended). Once MECP confirms that the contents of the RSC meet its regulatory requirements, the RSC is then filed in the Ministry’s Environmental Site Registry.

2 Non-Potable Groundwater Standards are groundwater standards described under O.Reg. 153/04, as amended, that typically apply to lands where the predominant drinking water source is from a municipal (piped) water supply.

and bulk liquid dispensing facilities). Regional requirements for the completion of a Site Screening Questionnaire (SSQ) associated with an EIP were viewed as unclear, often requiring the services of a QP, and the preparation of Environmental Site Assessment (ESA) reports and/or an RSC. In some cases, EIP sites would need be remediated, and would become re-contaminated shortly after development is complete (e.g. in the case of the modernization of an existing gas station). The SGAP permits the completion of an SSQ by an Authorized Officer/Owner for minor development proposals (e.g. for small accessory buildings, or development within an existing building). In the case of major development proposals (e.g. gas stations, automobile wrecking yards or bulk liquid dispensing facilities) where sub-surface contamination exists and where significant site alteration is slated to occur, a QP will still need to complete the necessary due diligence review. Under these circumstances, the Region's Peer Review Consultant will review the proposal to ensure that human health and the environment will not be adversely affected.

- 4.8 Unnecessary questions were removed from the Region's SSQ that are not consistent with O.Reg. 153/04, reducing the number of questions from 18 to 8. These changes save time and minimize the potential for ambiguity.
- 4.9 **Flexibility and Streamlining** – In accordance with O.Reg. 153/04, an applicant is required to file an RSC and/or a Risk Assessment (RA) with the MECP if a proposal would introduce a use that is more sensitive in nature (e.g. from an industrial use to a residential use). The existing Protocol requires applicants to submit evidence that an RSC was filed and/or that an RA was accepted by the Ministry. At present, when an applicant submits an area municipal zoning by-law amendment without satisfactory evidence of an RSC or RA having been filed, Regional clearance of the zoning by-law amendment would need to be postponed, or the zoning by-law amendment would need to include a Holding Provision ("H"). The ("H") would only be lifted once the applicant provides evidence that all site contamination matters had been addressed to MECP's satisfaction. New SGAP will allow the applicant to delay the Region's requirement for MECP documentation to a later stage of development, provided that building permits are not issued for above grade construction. This process provides greater flexibility, and in consultation with the area municipality, the applicant and their QP would be able to address this requirement as a condition of an executed site plan/development agreement.
- 4.10 **Greater Flexibility in the Preparation of ESAs** –The Region will accept ESA reports prepared by QPs that are generally consistent with O.Reg. 153/04, but if the ESA report has deviated in some way from the Ministry's Regulation, the QP must identify the nature of the deviation. This is also expected to result in cost and time

savings for proponents, and will improve flexibility for the Region's Peer Review Consultants who review ESA reports.

4.11 **Greater Communication Between QPs and Regional Peer Review Consultants**

– Reviewing site contamination documents occasionally requires the services of a peer review consultant. In cases where a peer review consultant requires additional information from the applicant's QP to formulate their recommendations, the SGAP allows the Region's Peer Review Consultants to directly request supplementary information directly from the QP. This change reduces potential delays or unnecessary meetings where only minor details may be required.

5. **Stakeholder Consultation**

5.1 The SGAP was developed with input from a variety of stakeholders as summarized below:

- a. MECP – The Ministry made a number of technical suggestions and confirmed that the SGAP is consistent with current legislation under the *EPA*.
- b. Area Municipalities – The Region's area municipalities were generally supportive, noting that the SGAP represents a streamlined approach to existing practices.
- c. Conservation Authorities – The Region's conservation authorities, (Toronto and Region Conservation Authority; Central Lake Ontario Conservation Authority; Lake Simcoe Region Conservation Authority; Kawartha Region Conservation Authority; Ganaraska Region Conservation Authority); and Otonabee Region Conservation Authority) were supportive. Comments generally focussed on streamlining initiatives which were implemented into the SGAP where appropriate.
- d. DEAC – DEAC considered the draft SGAP at its meeting of September 17, 2020 and did not express any concerns.
- e. DAAC – DAAC considered the draft SGAP at its meeting on December 8, 2020 and did not express any concerns.
- f. BILD – BILD Durham Chapter noted their appreciation of being actively consulted on the SGAP and confirmed that it had not received any comments from its members.
- g. Environmental Consultants – QPs from various Environmental Consulting firms, including firms from the Region's Peer Review Consultant roster were supportive. Comments raised pertained to clarification, and consistency with

Ontario Regulation 153/04 (RSC requirements), and requests for amendments to the Region's Reliance Letter. These comments have been addressed in the updated SGAP where appropriate.

- h. Other Stakeholders – Stakeholder comments received were generally supportive. Comments primarily pertained to lack of clarity with the Region's existing SSQ requirements and have been addressed in the SGAP where appropriate.

6. Responses to Key Issues Raised

- 6.1 **Updated Reliance Letter** – Prior to the Region providing its formal acceptance of the environmental condition of a development property (where approval from the MECP is not required), the Region requires that the QP complete a "Reliance Letter" to ensure that the Region can rely on the findings of the Consultant. QP's have noted the Region's previous Reliance Letter format made it difficult for their insurance companies to insure their work/reports prepared for a proposed development. The updated Reliance Letter addresses QP's concerns, while ensuring that Regional interests are protected.
- 6.2 **Land Dedication** – Where Regional planning staff are requested to attend pre-consultation meetings, agencies have asked that lands required to be conveyed to a municipality or a government agency (including conservation authorities) be identified upfront. The SGAP outlines the expectations of any required land conveyance and ensures transparency amongst all stakeholders. The SGAP includes provisions to ensure that lands are assessed and/or remediated prior to any land conveyance to the benefitting agency's satisfaction.
- 6.3 **Pre-Consultation Meetings** – The SGAP provides applicants with an opportunity to request a pre-consultation meeting with the Region's Peer Review Consultant to discuss requirements and expectations of the ESA reports and related materials in advance, to help streamline the review process.

7. Relationship to Strategic Plan

- 7.1 This report aligns with/addresses the following strategic goals and priorities in the Durham region Strategic Plan:
 - a. Environmental Sustainability – where a development application under the *Planning Act* is submitted, the SGAP is intended to protect, preserve, enhance and restore (through site remediation where appropriate) human health and the environment.

- b. Community Vitality – the SGAP facilitates the revitalization of existing neighbourhoods by ensuring consistency with Ontario Regulation 153/04; while streamlining the RSC and/or a Risk Assessment process.
- c. Economic Prosperity and Service Excellence – the SGAP helps to reduce review times where the Region is the approval authority.

8. Conclusion

- 8.1 The SGAP provides a more streamlined and nimble process to reviewing soil and groundwater quality consistent with Ontario Regulation 153/04 and current industry practices. Where the potential for site contamination exists, the SGAP ensures that risks that could adversely affect human health and the environment are addressed and minimized.
- 8.2 The SGAP addresses stakeholder comments, and balances streamlining initiatives while continuing to protect Regional interests.
- 8.3 It is recommended that the Region of Durham Soil and Groundwater Assessment Protocol, as contained in Attachment #1 to this Report be endorsed. Immediately following Council's endorsement, the existing Site Contamination Protocol will no longer be in use.
- 8.4 The SGAP was prepared in consultation with Regional staff from Corporate Services-Legal; Works – Development Approvals; Finance – Risk Management, and the Health Protection Division.

9. Attachments

Attachment #1: Final Soil and Groundwater Assessment Protocol

Respectfully submitted,

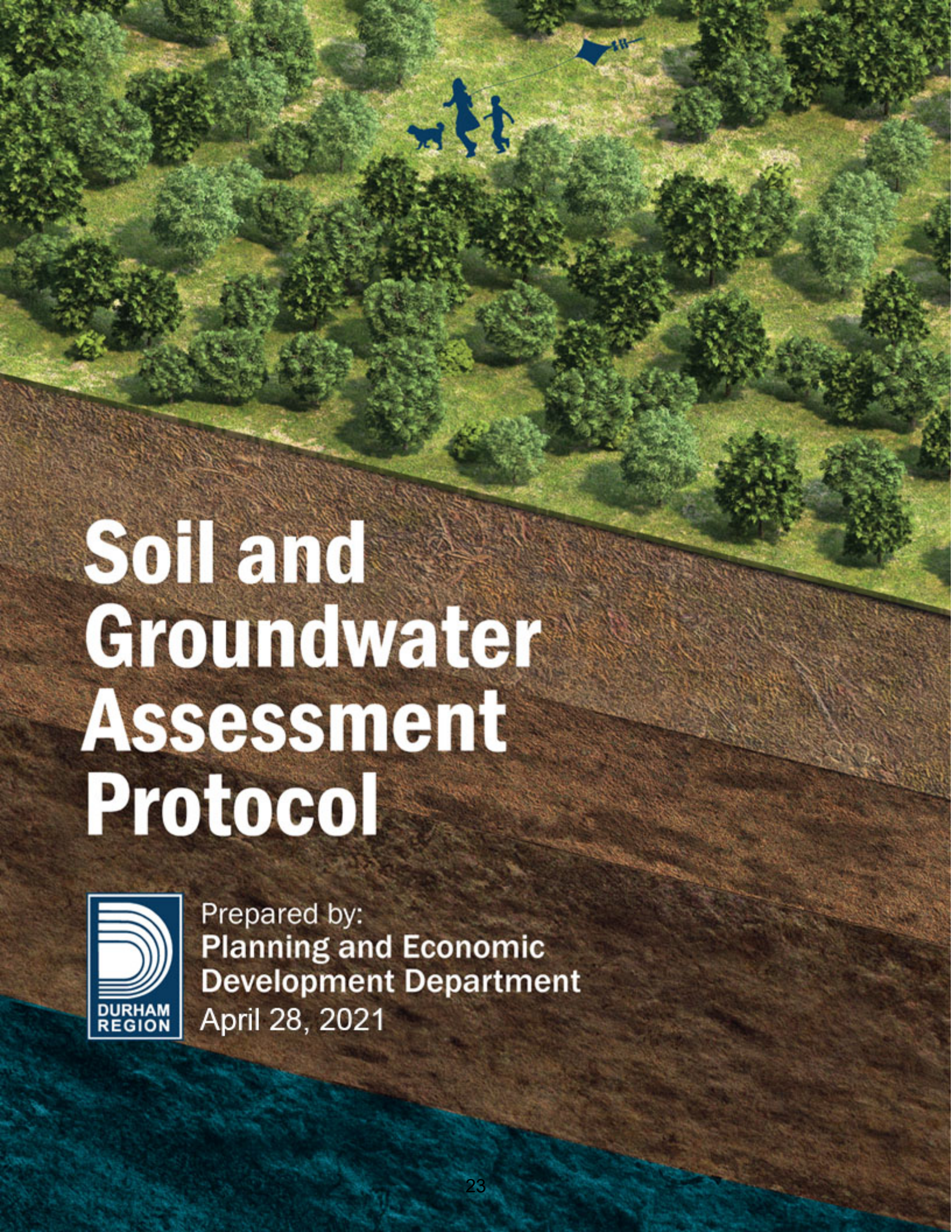
Original signed by

Brian Bridgeman, MCIP, RPP
Commissioner of Planning and
Economic Development

Recommended for Presentation to Committee

Original signed by

Elaine C. Baxter-Trahair
Chief Administrative Officer



Soil and Groundwater Assessment Protocol



Prepared by:
**Planning and Economic
Development Department**
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1. Introduction

The *Planning Act* recognizes that the protection of public health, safety and ecological systems (e.g. the natural environment) is matters of provincial interest. Matters of provincial interest must be integrated with municipal planning decisions. The Ontario Provincial Policy Statement (PPS) requires that contaminated sites, either in land and/or, water be assessed and remediated, as necessary, prior to any activity on a site associated with a proposed use, such that there will be no adverse effects on human health and the natural environment.

In 1996, the Province of Ontario assigned certain Provincial plan review responsibilities to the Regional Municipality of Durham (**Region¹**), including the responsibility of ensuring compliance with Ontario Regulation 153/04 made under the *Environmental Protection Act*, as amended in relation to site contamination issues to adequately protect human health and the natural environment through the planning process.

In support of its mandate, the **Region** adopted its first Soil and Groundwater Assessment Protocol² (Protocol) in 1997, which is periodically updated to reflect changes to legislation, policies and **development** practices.

¹ Words that are in 14-point **blue**, bold calibri font are defined terms in the Glossary of Terms in **Appendix Q**.

² The Soil and Groundwater Assessment Protocol was originally called the Site Contamination Protocol.

2. Purpose

The purpose of this Protocol is to ensure that:

- planning applications submitted for approval anywhere in the **Region** are screened to confirm that site contamination issues are appropriately addressed in accordance with O.Reg. 153/04, as amended;
- the protection of human health and the natural environment are kept to the highest standard through Regional and Area Municipal review of **development** approval processes under the *Planning Act*;
- an effective **development** review and approval process that balances the need for due diligence and process efficiencies;
- meaningful guidance to Regional and Area Municipal staff is provided when reviewing and commenting on planning applications, in relation to potential site contamination matters;
- industry stakeholders are made aware of the **Region's** requirements when submitting a **Site Screening Questionnaire** and/or **Environmental Site Assessment (ESA)** and related reports that support planning applications, which may be impacted by site contamination; and
- a framework for processing requests to use non-potable groundwater standards as set out by the Ministry of the Environment, Conservation and Parks (**MECP**) is provided for sites in the **Region**.

This Protocol must be read in its entirety to ensure that relevant sections are appropriately applied. This Protocol is not intended to make decisions on matters relating to excess soil management even though there could be some overlap within the *Environmental Protection Act*. In these instances, Applicants should consult local fill and site alteration by-laws of the **Area Municipality**.

3. Administration

This Protocol applies to any **development** application submitted under the *Planning Act* within the **Region** regardless of the municipal approval authority. The Regional Planning and Economic Development Department is responsible for reviewing site contamination matters for various planning applications. Where planning decisions are not reviewed by the **Region** but are made by the **Area Municipality**, the **Region** and Regional Council expects that such decisions will also be consistent with this Protocol.

Area Municipal Chief Building Officials are also responsible for reviewing matters pertaining to brownfield redevelopment proposals where a **Record of Site Condition (RSC)** is required subject to applicable law under the *Building Code Act, 1992*, as amended.

This Protocol is not intended to regulate fill operations relating to its importation and/or exportation. These operations are regulated by the governing **Area Municipality**. For more information on fill operations, please contact the applicable **Area Municipality**.

Regional and Area Municipal staff will administer this Protocol to ensure the protection of human health and the natural environment through the development review and planning approval processes.

Appendices A through Q form part of this Protocol.

4. Development Application Requirements

Development applications located within the **Region** made under the *Planning Act* are required to comply with this Protocol. Application types include the following:

4.1 Lot Creation

Where an Applicant submits an application to divide land (e.g. subdivision, condominium, land division (i.e. consent and/or part lot control), the **Region** will require compliance with the protocol and may impose conditions to ensure compliance with this Protocol. Regional clearance of conditions will only be granted once an Applicant satisfies the requirements of this Protocol.

4.2 Land Use Approvals

Where an Applicant submits a development application to amend an official plan and/or zoning by-law not involving the division of land, the **Region** may request that the **Area Municipality** include policies or requirements regarding the use of a Holding (H) provision on the property through a zoning by-law amendment. The (H) provision may be lifted upon the Applicant satisfying all Regional requirements, including the requirements of this Protocol. Where an **Area Municipality** circulates a concurrent Site Plan application with any of the above-noted development applications, soil and groundwater matters may be deferred at an appropriate stage of the development on a case-by-case basis.

4.3 Other Site-Specific Applications

All other site-specific planning applications, regardless of the authority approving the application (excluding Minor Variances), must be accompanied by either a completed “Regional **Site Screening Questionnaire**” (**SSQ**) as set out in **Appendix B** or the **Environmental Site Assessment (ESA)** work as set out in **Section 5.2** and **Appendix E**.

4.4 Pre-Consultation

Where a pre-consultation meeting is held, depending on the nature of the **development** proposal, the **Region** at its sole discretion may provide the Applicant with the option to submit an **SSQ** or an **ESA**. However, where an **SSQ** identifies the potential for site contamination and the need for further environmental investigation, this Protocol will require the Applicant to submit (at a minimum) a **Phase One ESA** with their planning application.

Lands required to be conveyed to a municipality and/or a government agency (including Conservation Authorities) should be identified during the pre-consultation process. Prior to such conveyance, these lands must be assessed and/or remediated in accordance with this Protocol to the benefitting agency’s satisfaction.

5. Documentation Requirements

The following documentation may be required to achieve compliance with this Protocol.

5.1 Site Screening Questionnaire (SSQ)

An **SSQ** is a screening tool that provides a series of questions to determine whether a subject property and/or lands in proximity to it (at least within 250 metres) may be or is considered potentially contaminated (see **Appendix D** for a list of **Potentially Contaminating Activities**).

SSQs are intended for **development** applications which do not require significant analysis or the completion of an **ESA**. **SSQs** are completed by either the Owner or an Authorized Agent for most planning applications. **Appendix B** outlines the requirements for an **SSQ**. The **Region's** determination of whether **SSQs** need to be signed by a **Qualified Person (QP)** and affixed with their seal depends on the complexity of the proposal. A copy of the **SSQ** is provided in **Appendix C**.

5.2 Environmental Site Assessments (ESA)

ESAs are environmental investigation reports prepared by a **QP** and are required when site contamination is suspected on, and/or in proximity to a subject property. Where **ESA** documents exceed 18 months, and in accordance with provincial requirements, a **QP** must submit updated materials or **Updated ESA Documents** (e.g. Phase One and/or Two) which validates that no significant changes to the site or its soil/groundwater/sediment conditions have occurred following the completion of the original **ESA** work.

All ESAs must include documentation indicating they have been prepared by a **QP** in accordance with all the requirements of O. Reg 153/04. Alternatively, if a **QP** cannot prepare an **ESA** report in accordance with all the requirements of O. Reg 153/04, the **ESA** must include a section in the report or a cover letter stating what are the deviations or limitations that do not make the **ESA** compliant with O. Reg 153/04 and the **QP's** opinion about whether the deviations or limitation affect the conclusions of the report. The **Region's** Protocol will not allow for the consideration of **ESAs** that are prepared in accordance with the Canadian Standards Association (e.g. CSA Z768-01, CSA Z769-00). Any such reports will be deemed unsatisfactory and deemed not to satisfy the requirements of this Protocol.

5.2.1 Phase One Environmental Site Assessment (ESA)

A **Phase One ESA** is required where an **SSQ** identifies the potential for site contamination or where an **SSQ** is not provided.

A **Phase One ESA** requires a **QP** to conduct background research (e.g. aerial/orthophotography, title searches, site visits, interviews, zoning reviews, database searches etc.) to determine whether **Potentially Contaminating Activities (PCAs)** previously occurred and are currently located on the subject property and/or neighbouring properties.

Depending on factors such as current site conditions, topography, surface and groundwater flow etc., a **QP** will recommend whether any identified **PCAs** should be further investigated in soil, groundwater and/or sediments to identify **Areas of Potential Environmental Concern (APECs)** on the subject property. The following three scenarios provide further direction with respect to **APECs**:

1. *No APECs Identified*

If the **Phase One ESA** does not identify any **APECs** on the subject property, the **QP** must complete and submit a Regional **Reliance Letter** and **Certificate of Insurance** to ensure that the **Region** can rely on the **QP's** findings and recommendations (see **Appendices F** and **G**).

2. *APECs Identified On-Site (the Phase One Property)*

If one or more **APECs** are identified on the subject property (also known as the **Phase One Property**), a **Phase Two ESA** is required.

3. *APECs Identified Off-Site*

If one or more **APECs** are identified in the Phase One Study Area, but not on the **Phase One Property**, a **Phase Two ESA** is required, but may be waived provided that the **QP** can demonstrate to the **Region's** satisfaction that the **APECs** do not adversely impact the **Phase One Property**.

5.2.2 Phase Two Environmental Site Assessment (ESA)

A **Phase Two ESA** consists of a detailed site investigation arranged by a **QP**. Samples of soil, groundwater and/or sediment are analyzed and compared to the applicable **MECP Site Condition Standards (SCS)** – Tables 1 to 9. The test results determine whether soil, groundwater and sediment exceedances (through horizontal and vertical delineation testing) exist on a site (see **Appendix E**). The following scenarios provide direction with respect to the **Phase Two ESAs**

1. *No Exceedances Identified in Phase Two ESA*

Where the **Phase Two ESA** does not identify any exceedances and the proposed use on the subject lands is not going to a more sensitive land use, it must also be accompanied by a Regional **Reliance Letter** and **Certificate of Insurance** completed by the Applicant's **QP** (see **Appendices F** and **G**).

However, where the **Reliance Letter** and **Certificate of Insurance** are not submitted to the satisfaction of the **Region** with the application(s), the **Region** may require that a condition be imposed on the approval of an application (e.g. land division, subdivision and/or condominium) or may request that a (H) Holding Provision be included in a zoning by-law to ensure that the documents are completed to the **Region's** satisfaction prior to **development**.

2. *Exceedances Identified in Phase Two ESA*

If a **Phase Two ESA** identifies exceedances, the following four options are available to achieve conformity with the Protocol:

a. Site Remediation – Option 1

Where the proposal involves site remediation and the site is not being developed for a **Prescribed Change in Use**, the **QP** will be required to prepare an updated **Phase Two ESA** report in accordance with O.Reg. 153/04. The updated report must demonstrate that the subject property has been remediated and tested to ensure that it does not contain any exceedances, and that it has met the applicable **MECP SCS**. Where applicable, the **QP** may also retest the exceedances or remediate the site to a lesser (Non-Potable Groundwater) standard (e.g. **MECP** Tables 3, 7 or 9 SCS), in accordance with **Appendices K, L** and **O** of this Protocol.

b. Record of Site Condition (RSC) – Option 2

An **RSC** is mandatory under the *Environmental Protection Act*, when a **development** proposes a **Prescribed Change in Use**, regardless whether the site contains any exceedances.

Depending on the circumstance (see **Appendix H**), if a **QP** submits an **RSC** to be filed on the Environmental Site Registry, prior to Regional sign-off on a **development** application, the **QP** will only be required to provide the **Region** with the following:

- **MECP's** acknowledgement letter, noting that the **RSC** was filed on the Environmental Site Registry; and
- Any associated new or updated documents that were revised and requested by **MECP**.

Where significant soil removal is proposed in support of a complex **development** application (e.g. where below-grade parking or significant below-grade infrastructure and excavation/removals is proposed), the **Region's** requirement for an **RSC** may be deferred until prior to the issuance of a building permit for any above-ground construction work, subject to a condition that Area Municipal staff (e.g. Planning and Building), the Applicant and the Applicant's **QP** provide implementation strategy for soil removal in consultation with the **Region's** Planning Division, for inclusion within an appropriate Area Municipal **development** agreement.

Once the **Region** receives the **RSC**, Regional clearances may be granted, and Area Municipal building permits may be issued for above-groundwork.

If the **MECP's** acknowledgement letter for the **RSC** was issued more than 18 months prior to the submission date of the planning application, the **Region** will require the **QP** to prepare an updated environmental letter/report identifying the property's current condition, and provide a recommendation whether site conditions have changed and whether any further environmental site investigation is required.

c. Risk Assessment – Option 3

If the Applicant and their **QP** determines that it is not feasible to remediate some or all of the subject property, a **Risk Assessment (RA)** must be prepared by a **QP** and submitted to the **MECP** for review and acceptance.

MECP may also require a **Certificate of Property Use (CPU)** in accordance with the *Environmental Protection Act* and O.Reg. 153/04 to ensure risk management mitigation measures detailed in the **RA** are complied with and are registered on title. **RAs** typically include an **RSC** but may include a Risk Management Plan and a Public Communication Plan.

Should the Applicant pursue an **RA**, the **Region** and its **Area Municipalities** must receive confirmation that **MECP** has processed a [Risk Assessment Pre-Submission form](#).

All **Risk Assessment** work prepared for the subject lands must be approved by the **MECP** and provided to the **Region** prior to final Regional approval or sign-off. However, like Option 2 above (**RSC**), the **Region's** acknowledgement of receipt of an RA may be deferred until prior to the issuance of a building permit for above-ground construction work subject to the same conditions. Additional information on the **Region's RA** process is provided within **Appendix H**.

The **MECP** will issue its notice of a **CPU** to the Regional and Area Municipal Clerks. Once processed, the **MECP** will require the Owner to incorporate property-specific risk management conditions/measurements on-title for the subject property.

d. Peer Review – Option 4

Where minor exceedances have been identified on the subject property through the **Phase Two ESA**, the **Region** may undertake a **peer review** as an alternative to **site remediation** where the exceedances are not deemed to present any risk to human health or the natural environment

The **Region** has established a roster of consultants to provide **peer review** services qualified to review **ESAs** under O.Reg. 153/04.

The **Peer Review Consultant** may request supplementary supporting information to assist in their review of **ESA** reports in order to determine the appropriateness of the Applicant's **QP's** recommendations.

Provided that the proposal does not propose a **Prescribed Change in Use**, the **Region** may consider a **peer review** option to review **ESAs** and any supplementary information at the owner's expense under the following circumstances:

- If the Applicant’s **QP** determines that minor soil, groundwater and sediment exceedances on a property pose little or no risk to human health and the environment; or
- If Area Municipal staff disputes the **QP’s** findings and the recommendations of an **SSQ** or any **ESA** work.

Upon the findings of the **peer review** being satisfactory to the **Region** the **QP** will also be required to complete and submit to the **Region** a **Regional Reliance Letter** and a **Certificate of Insurance**.

For planning applications with a Regional Interest, **Area Municipalities** may circulate **ESA** materials to the **Region** for **peer review**. **Area Municipalities** also have the option to undertake their own **peer review** process using a suitably qualified environmental consulting firm, if matters surrounding human health and the natural environment are not compromised. Additional information on the **Region’s Peer Review Consultants** Roster and related procedures are provided in **Appendix J**.

Qualified Person Summary Results of Phase Two ESA Scenarios

Development Scenario	No Exceedances	Exceedances
Development does not propose a Prescribed Change in Property Use	No Options Required <ul style="list-style-type: none"> • No further investigation required • Application may proceed 	Options 1 to 4 <ol style="list-style-type: none"> Site Remediation RSC RA (if remediation is not feasible) Peer Review at the owner’s sole expense (only if exceedance is deemed minor)
Development proposes a Prescribed Change in Property Use	Option 2 <ul style="list-style-type: none"> • RSC Required pursuant to O.Reg 153/04 	Option 2 <ul style="list-style-type: none"> • RSC Required pursuant to O.Reg 153/04

5.2.3 Non-Potable Requests

If a **development** is within the **Region's** serviced urban area, a **QP** may request to use non-potable groundwater **MECP Site Condition Standards (SCS)**, where water is provided from a municipal drinking water supply. The **Region** may approve the use of groundwater standards in Tables 3, 7 and 9 of the **MECP SCS** for a site, subject to the process and criteria outlined in **Appendix L** of this Protocol on a case-by-case basis. Where a **development** proposal considers using Stratified Site Condition Standards in a Non-Potable Ground Water Condition (i.e Table 5 **SCS**), the **Region** will require that the **ESA** work be peer reviewed at the owner's expense. Additional information on non-potable requests are provided in **Appendix K**.

This Protocol and the Provincial Brownfield Regulation require **QP's** to submit non-potable requests to both the Regional and Area Municipal Clerks. This request must be filed with the applicable supporting environmental documents and fees. A non-potable request will trigger one of the following two actions by the **Region**:

1. *Regional Acceptance to use Non-Potable Site Condition Standards*

Where the Applicant meets the **Region's** non-potable request criteria (as identified under **Appendix L**), the **Region** may agree to use a non-potable standard and issue a non-objection letter. This letter should also be provided by the applicant to **MECP** along with the supporting environmental reports and materials if the **development** proposal requires an **RSC** or an **RA**.

2. *Regional Objection to the Non-Potable Site Condition Standards*

Where a proposed **development** proposal cannot meet the **Region's** criteria for a non-potable request or is within the rural area not serviced by municipal drinking water systems, the **Region** will issue a letter objecting to the request and will require the Applicant to use the potable groundwater **MECP SCS**.

5.3 Enhanced Investigation Properties (EIPs)

This Protocol assesses the appropriateness of evaluating **developments** impacted by **EIPs** as defined under O.Reg. 153/04. **EIP** uses consist of **industrial** uses and the following **commercial** uses:

- A **garage** (i.e. an automotive repair facility);
- A **bulk liquid dispensing facility** (including **gasoline outlets**); or
- A **dry-cleaning equipment operation**.

Following the submission of a **Phase One** and **Two ESA**, **EIP development** proposals are evaluated under two scenarios:

5.3.1 Scenario 1: A Major Development Proposal

A **development** proposal may be considered a **Major Development Proposal** where site contamination exists, or where significant site alteration is required. Depending on the levels of contamination, the Applicant or their **QP** may apply to use the above-noted Options (1 to 4) as described in **Section 5.2.2.2** of this Protocol in addition to the criteria provided in **Appendix M**.

5.3.2 Scenario 2: A Minor Development Proposal

Minor Development Proposals are proposals where the **EIP development** proposes minor or no site alteration (e.g. small accessory buildings; **development** within an existing building; Consent applications (for easements, leases, mortgages or title corrections); Minor Variances for EIP sites that do not request a **Prescribed Change in Property Use** etc.). Under these circumstances, the requirement for an **ESA** associated with an **EIP** (in whole or in part) may be waived at the **Region's** discretion on a case-by-case basis, provided that the Applicant can provide information to the satisfaction of the **Region** to demonstrate how the proposed **development** is considered minor.

5.3.3 Prescribed Change of Use Properties Previously Identified as an EIP

Where a property in whole or in part that was previously used as an **EIP** and where an **RSC** was filed on the Environmental Site Registry for a sensitive property use (e.g. **residential, institutional, parkland** etc.) the site is no longer considered an EIP.

See **Appendix M** for more information on **EIP's**.

5.4 Multiple Consulting Firms Conducting Various ESA Work

This Protocol does not regulate an Applicant's ability to select an environmental consulting firm. Should an Applicant select multiple consulting firms to conduct ESA work for the same site (e.g. one firm prepares a **Phase One ESA**, whereas the other firm prepares a **Phase Two ESA**), the following is required:

1. That each environmental consulting firm involved in any environmental work on the subject property complete and submit a **Reliance Letter** and **Certificate of Insurance** in accordance with this Protocol; or
2. That the Applicant's preferred environmental consulting firm prepares and submits all supporting environmental work along with the associated **Reliance Letter** and **Certificate of Insurance** in accordance with this Protocol.

5.5 Regional Land Acquisition

All **development** applications that result in the transfer of land to the **Region** (e.g. **road** widenings, infrastructure improvements etc.) must ensure that the lands proposed to be conveyed to the **Region** are remediated or kept to a condition satisfactory for the **Region's** purposes. This may require the Applicant to enter into an indemnity agreement with the Region to demonstrate compliance in accordance with one of the following options on a case-by-case basis identified below:

1. That the acquired lands are remediated to the applicable **MECP SCS** through a **QP** submitting an **RSC** to be filed on the Environmental Site Registry and that a receipt of the **MECP's** acknowledgement of the filing of the **RSC** in accordance with **Section 5.2.2.2 (b)** of this Protocol; or
2. That the Owner enters into an Indemnity Agreement with the **Region** (which may be subject to Regional Council approval) provided that the subject lands are left in a satisfactory state as determined by the **Region**.

See **Appendix E** for more information on the Regional **ESA** process.

5.6 Miscellaneous Inquiries

All other inquiries relating to potential site contamination that are not specifically described within this Protocol will be reviewed by Regional staff on a case-by-case basis, in keeping with the intent of this Protocol and in accordance with O.Reg. 153/04.

Appendix A: Category of Sensitive Property Uses

Category of Sensitive Property Uses

The *Environmental Protection Act* prohibits **Prescribed Changes in Property Use** subject to an **RSC** being filed on the Environmental Site Registry for the property, which includes the proposed property use (**Prescribed Change in Property Use**). Generally, an **RSC** is required where an Applicant proposes to change the property use to a more sensitive use. Where a property consists of **mixed-uses** between two or more different categories, the most sensitive **Site Condition Standards (SCS)** applies. Applicants should refer to the *Environmental Protection Act* and O.Reg. 153/04 for a complete list of the **Prescribed Changes in Property Use** that require an **RSC** under the Act.

In accordance with Section 3 of O.Reg. 153/04, the following categories illustrate property uses from least to most sensitive (please see **Appendix Q**, which defines each use listed below).

Categories of Property Uses		
Least Sensitive	Most Sensitive	
Category 1	Category 2	Category 3
Industrial	Residential	Agricultural
Commercial	Parkland	Other
Community	Institutional	-

Appendix B: Site Screening Questionnaire (SSQ) Requirements

Prior to the submission of a **development** application, the Applicant must assess a property's surface and sub-surface conditions to determine if it is potentially contaminated. This initial assessment will be undertaken as set out below.

All site-specific planning applications regardless of the approval authority that requires Regional concurrence, must complete (at a minimum) a Site Screening Questionnaire (**SSQ**) form.

The following provides the **Region's SSQ** requirements for **development** proposals requiring a planning application(s):

Planning Applications that Require Owner/Agent Signature

- Minor Official Plan Amendments that propose limited **physical development** and/or not requiring a **Record of Site Condition (RSC)** under O.Reg. 153/04, including the following;
 - Temporary sales trailers;
 - Uses within an existing **residential** building or accessory buildings (e.g. secondary dwelling units; duplexes; triplexes; rental housing conversions; and home-based businesses etc.) not proposing a **Prescribed Change in Property Use**;
 - Proposals within existing **industrial, commercial** and/or **community** buildings not proposing a prescribed change of use, which only recommends broadening the range of permitted uses on a property;
- Minor Zoning By-law Amendments that propose limited **physical development** (as noted above) and not requiring an **RSC** under O.Reg. 153/04;
- Consent/Land Division:
 - Easements (for more than 21 years);
 - Leases;
 - Mortgages;
 - Title corrections;
 - Re-establishment of lot lines that have inadvertently merged; and
 - Minor lot line adjustments (to the **Region's** discretion), affecting both the severed and retained parcels;
- Site Plan Review (where approved **SSQ/ESA** reports were completed within 18 months of a complete application being received and the **Regional Reliance Letter** and **Certificate of Insurance** have been received, where appropriate); and

- Part Lot Control Exemption (where approved **SSQ/ESA** reports were completed within 18 months of a complete application being received and the **Regional Reliance Letter** and **Certificate of Insurance** have been received, where appropriate).

Planning Applications that Require Both Owner/Agent and QP Signatures

- Major Official Plan Amendments (not introducing a land use designation that will create a **Prescribed Change in Property Use** and requires **physical development**);
- Major Zoning By-law Amendments (not going to a **Prescribed Change in Property Use** and requires **physical development**);
- Draft Plans of Subdivision;
- Draft Plans of Condominium;
- Consent – both severed and retained parcels for:
 - New lot creation;
 - Major lot line adjustments (at the discretion of the **Region**); and
- Any other **development** application at the **Region’s** discretion not listed above, such as, but not limited to the following: Minister’s Zoning Orders; Environmental Compliance Approvals; Class Environmental Assessments; or comments on a **development** proposal requested by any other external agency.

If the Applicant or the **QP** answers “Yes” to any question on the **SSQ**, a **Phase One ESA** (at a minimum) will be required.

Environmental Site Assessment Exemptions for Consent Applications

Where an Owner/Agent answers “Yes” on the **SSQ**, on Consent applications for the sole purpose of an easement, lease, mortgage or title correction the requirement for additional environmental work may be waived, provided that the following can be demonstrated to the satisfaction of the **Region**:

- Conformity to the current area municipal zoning by-law; and
- The **development** does not pose any **physical development**.

Minor Variance Applications

If an Applicant submits a minor variance application, the **Region** encourages its **Area Municipalities** to use the **SSQ** form provided in **Appendix C**. However, **Area Municipalities** in consultation with the **Region**, may develop their own form for their minor variance applications.

Where a minor variance application proposes a **Prescribed Change in Property Use** in accordance with O.Reg. 153/04, an **RSC** is mandatory.

Appendix C Site Screening Questionnaire Form



Regional Municipality of Durham
Planning and Economic Development Department
605 Rossland Road East
Whitby, ON L1N 6A3
Telephone: 905.668.7711
Toll Free: 1.800.372.1102
www.durham.ca

Site Screening Questionnaire for Identifying Potentially Contaminated Development Sites in the Regional Municipality of Durham

This form must be completed for all planning applications unless two original copies and a digital copy of the applicable Environmental Site Assessment (ESA) work prepared in accordance with Ontario Regulation (O.Reg.) 153/04, as amended, is submitted to the approval authority in support of this development proposal. If you have any questions about this questionnaire, please contact the Regional Municipality of Durham as identified above.

Landowner Name: _____

Mailing Address (Street No. and Name): _____

Location of Subject Lands (Municipal Address): _____

Lot(s): _____ Concession(s): _____ Registered Plan #: _____

Former Township: _____ Municipality: _____

Related Planning Application(s) and File Number(s) _____

1. What is the current use of the property? Check the appropriate use(s):

Category 1: Industrial Commercial Community

Category 2: Residential Institutional Parkland

Category 3: Agricultural Other

Note: daycare facilities and a property that contains a religious building(s) are considered institutional uses. See Ontario Regulation 153/04, as amended, for definitions.

2. Does this development proposal require a change in property use that is prescribed under the *Environmental Protection Act* and O.Reg. 153/04 (e.g. a change to a more sensitive use from Category 1 to 2; 2 to 3; or 1 to 3 as identified under Question 1)?

Yes No

If yes to Question 2, a Record of Site Condition must be filed on the Provincial Environmental Site Registry.

3. Has the property or any adjacent lands ever been used as an Enhanced Investigation Property (e.g. industrial uses; chemical warehousing; automotive repair garage; bulk liquid dispensing facility, including a gasoline outlet and/or a dry-cleaning equipment)?

Yes No

4. Has fill (earth materials used to fill in holes) ever been placed on the property?

Yes No

5. Is the property or any adjacent lands identified as a wellhead protection zone? (Please review the Ministry of the Environment, Conservation and Parks [Source Protection Information Atlas](#) to confirm)

Yes No

6. Is the property within 250 metres from an active or decommissioned landfill/dump, waste transfer station or Polychlorinated Biphenyl (PCB) storage site?

Yes No

7. Has the property ever stored/generated/accepted hazardous materials requiring Hazardous Waste Information Network (HWIN) registration or other permits?

Yes No

8. Does the subject lands or lands abutting it previously or currently support one or more of the Potentially Contaminating Activities identified in Table 2 of Schedule D of O.Reg 153/04, as amended (see attachment)?

Yes No

If Yes was selected in any of the questions above, a Phase One ESA (and possibly a Phase Two ESA) at a minimum prepared in accordance with O.Reg. 153/04, is required. Please submit two hard copies and a digital copy of the Phase One and/or a Phase Two ESA that satisfies the requirements of O.Reg 153/04, as amended.

ESA's may be waived at the Region's discretion provided that the Applicant/Qualified Person (QP) can demonstrate that the response(s) does not pose a risk to human health and the environment to the Region's satisfaction (e.g. consent applications relating to easements, leases, mortgages, correction of title as well as location of off-site Potentially Contaminated Activities; and direction of surface and groundwater flow etc.).

The Region must be granted third party reliance on all ESA work through the completion of its Reliance Letter and Certificate of Insurance. Regional third-party reliance is not required if a Record of Site Condition is filed on the Environmental Site Registry for the proposed property use and/or the Ministry of the Environment, Conservation and Parks (MECP) issues a notice of a Certificate of Property Use where applicable.

Note: The Region may scope the Environmental Site Assessment requirements for minor development proposals on Enhanced Investigation Properties (e.g. accessory structures) or determine if additional environmental work is required.

Declarations:

This form must be completed and signed by both a Qualified Person and the property Owner(s) or Authorized Agent for all development applications made under the *Planning Act* and reviewed by the Region of Durham Planning Department.

A QP sign-off may be waived by the Region for the following Land Division Committee application types: leases; mortgages; title corrections; re-establishment of lot lines (where title inadvertently merged); minor lot line adjustments (at the discretion of the Region); as well as minor variances; minor zoning by-law amendments (e.g. where there is no physical development, the addition of a new non-sensitive land use), and/or part lot control applications where site contamination was recently addressed by a related planning application. For a full list of QP exemptions, please see Appendix B of the Regional Municipality of Durham's Soil and Groundwater Assessment Protocol.

Where a QP sign-off is required on this form, the completion of a Regional Reliance Letter and Certificate of Insurance may be waived.

To the best of my knowledge, the information provided in this questionnaire is true, and I do not have any reason to believe that the subject property contains contaminants at a level that would interfere with the proposed property use. I am a Qualified Person in accordance with Ontario Regulation 153/04 and carry the required liability insurance in accordance with Appendix F of the Regional Municipality of Durham's Soil and Groundwater Assessment Protocol.

Qualified Person:

Name (Please Print) _____

Signature: _____

Name of Firm: _____

Address: _____

Telephone: _____ Fax: _____

E-Mail Address: _____

Date: _____

Professional Seal:

Property Owner, or Authorized Officer:

Name (Please Print) _____

Signature: _____

Name of Company (if Applicable): _____

Title of Authorized Officer: _____

Address: _____

Telephone: _____ Fax: _____

E-Mail Address: _____

Date: _____

Regional File Number: _____

Area Municipal File Number: _____

Appendix D: List of Potentially Contaminating Activities

Table 2 – Ontario Regulation 153/04

Records of Site Condition – Part XV.1 of the *Environmental Protection Act*

Ministry of the Environment, Conservation and Parks

Item	Potentially Contaminated Activity (PCAs)
1.	Acid and Alkali Manufacturing, Processing and Bulk Storage
2.	Adhesives and Resins Manufacturing, Processing and Bulk Storage
3.	Airstrips and Hangars Operation
4.	Antifreeze and De-icing Manufacturing and Bulk Storage
5.	Asphalt and Bitumen Manufacturing
6.	Battery Manufacturing, Recycling and Bulk Storage
7.	Boat Manufacturing
8.	Chemical Manufacturing, Processing and Bulk Storage
9.	Coal Gasification
10.	Commercial Autobody Shops
11.	Commercial Trucking and Container Terminals
12.	Concrete, Cement and Lime Manufacturing
13.	Cosmetics Manufacturing, Processing and Bulk Storage
14.	Crude Oil Refining, Processing and Bulk Storage
15.	Discharge of Brine related to oil and gas production
16.	Drum and Barrel and Tank Reconditioning and Recycling
17.	Dye Manufacturing, Processing and Bulk Storage
18.	Electricity Generation, Transformation and Power Stations
19.	Electronic and Computer Equipment Manufacturing
20.	Explosives and Ammunition Manufacturing, Production and Bulk Storage
21.	Explosives and Firing Range

Item	Potentially Contaminated Activity (PCAs)
22.	Fertilizer Manufacturing, Processing and Bulk Storage
23.	Fire Retardant Manufacturing, Processing and Bulk Storage
24.	Fire Training
25.	Flocculants Manufacturing, Processing and Bulk Storage
26.	Foam and Expanded Foam Manufacturing and Processing
27.	Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles
28.	Gasoline and Associated Products Storage in Fixed Tanks
29.	Glass Manufacturing
30.	Importation of Fill Material of Unknown Quality
31.	Ink Manufacturing, Processing and Bulk Storage
32.	Iron and Steel Manufacturing and Processing
33.	Metal Treatment, Coating, Plating and Finishing
34.	Metal Fabrication
35.	Mining, Smelting and Refining; Ore Processing; Tailings Storage
36.	Oil Production
37.	Operation of Dry-Cleaning Equipment (where chemicals are used)
38.	Ordnance Use
39.	Paints Manufacturing, Processing and Bulk Storage
40.	Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications
41.	Petroleum-derived Gas Refining, Manufacturing, Processing and Bulk Storage
42.	Pharmaceutical Manufacturing and Processing
43.	Plastics (including Fibreglass) Manufacturing and Processing
44.	Port Activities, including Operation and Maintenance of Wharves and Docks
45.	Pulp, Paper and Paperboard Manufacturing and Processing
46.	Rail Yards, Tracks and Spurs

Item	Potentially Contaminated Activity (PCAs)
47.	Rubber Manufacturing and Processing
48.	Salt Manufacturing, Processing and Bulk Storage
49.	Salvage Yard, including automobile wrecking
50.	Soap and Detergent Manufacturing, Processing and Bulk Storage
51.	Solvent Manufacturing, Processing and Bulk Storage
52.	Storage, Maintenance, Fueling and Repair of Equipment, Vehicles, and Material used to Maintain Transportation Systems.
53.	Tannery
54.	Textile Manufacturing and Processing
55.	Transformer Manufacturing, Processing and Use
56.	Treatment of Sewage equal to or greater than 10,000 litres per day
57.	Vehicles and Associated Parts Manufacturing
58.	Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners
59.	Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products

Note: the above-noted PCAs may change from time-to-time. Please refer to the Provincial Brownfields Regulation O.Reg.153/04 for the official list of PCAs.

Appendix E: Detailed Environmental Site Assessment Processes

Phase One Environmental Site Assessment (ESA) Report

A **Phase One Environmental Site Assessment (Phase One ESA)** involves the study of a property by a **Qualified Person (QP)**, a person defined by Ontario Regulation (O.Reg.) 153/04, to determine the likelihood that one or more soil, groundwater and/or sediment contaminants are present in or on a subject property. A **Phase One ESA** typically consists of records review, interviews and site visits/reconnaissance.

If a **QP** concludes that there are no **Potentially Contaminating Activities (PCA)** on or within 250 metres of the subject property, the **QP** will be required to complete and submit a Regional **Reliance Letter** and **Certificate of Insurance** (see **Appendices F** and **G**). Once received, no further site investigation will be required.

If a **QP** concludes that one or more **PCAs** on or within 250 metres of the subject property contributes to an **Area of Potential Environmental Concern (APEC)** as described under the Terminology section of this Protocol in **Appendix Q**, a **Phase Two ESA** and the associated criteria identified under Section 5.2.2 of this Protocol will be required.

Phase Two Environmental Site Assessment (ESA) Report

A **Phase Two ESA** involves the study of a property by a **QP** to determine the location and concentration of one or more contaminants in the soil and/or groundwater of a subject property. This is typically done through soil and/or groundwater testing in areas where **APECs** are identified on a subject property. Soil and/or groundwater samples are analyzed to determine whether the concentration of one or more contaminants exceed the applicable **MECP Site Condition Standards**.

Where a **Prescribed Change in Property Use** is proposed for a site, an **RSC** is mandatory pursuant to the *Environmental Protection Act* and O.Reg. 153/04. Under these circumstances, a **Phase Two ESA** may also be submitted to the **Region** in support of any planning application.

Where a **Prescribed Change in Property Use** is not proposed on a site, the **Region** will require a **Phase Two ESA** where the **Phase One ESA** identifies one or more **APECs** on a subject property. Examples of various **APECs** include:

- A potential for site contamination that may be present because of current or historical uses and activities on the site;
- Importation of soil/fill moved to the subject property from an off-site location associated with a development proposal made under the *Planning Act*;
- An **Enhanced Investigation Property (EIP)**; and
- A **Potentially Contaminating Activity (PCA)** as set out in Table 2 of Schedule D of O.Reg. 153/04, as amended (**Appendix C**), is located on or within 250 metres of a subject property.

Phase Two ESA Exemptions

Where a **QP** concludes that the **Phase One ESA** for a subject property does not identify the potential for site contamination and a **Prescribed Change in Property Use** is not proposed, a **Phase Two ESA** requirement will be waived and the planning application may proceed toward approval, subject to all other requirements of the approval authority being met.

In addition, where a planning application does not propose a **Prescribed Change in Property Use** and where **physical development** is not proposed, a **Phase Two ESA** requirement may also be waived for a subject property based on its current site conditions e.g. topography; the direction of surface and/or groundwater flow; and the completion of previous environmental work at the Region's sole discretion.

A **Phase Two ESA** will also not be required where an RSC was previously filed on the Environmental Site Registry on or after July 1, 2011 and an updated report/letter confirms that the environmental conditions on the subject property have not changed since the filing of the RSC on the Environmental Site Registry.

RSCs filed on the Environmental Site Registry before July 1, 2011 are no longer accepted by the **Region** for the purposes of this Protocol. The July 1, 2011 date represents the date the **MECP** made significant changes to their **Site Condition Standards (SCS)**. Under these circumstances, **Updated ESA Documents** must be submitted to confirm that the site meets the current **MECP SCS** unless the **Updated ESA Documents** concludes that a **Phase Two ESA** is not required.

Reliance Letters and Certificate of Insurance Forms

Phase One and **Phase Two ESA's** (including all supporting/updated documentation) must be accompanied by a **QP** signature and seal on the Regional **Reliance Letter** (see **Appendix D**) granting third-party reliance on the report(s), and a completed Regional **Certificate of Insurance** (see **Appendix G**). If the **QP** is unable to grant the **Region** third-party reliance on the **QP's ESA** work, the **Region** may require the Applicant to file an **RSC**. **QPs** are also required to carry liability insurance with a minimum indemnity limit of \$2 million per claim and \$4 million in aggregate.

The **Region** encourages **QPs** to complete these forms through the submission of a planning application(s). However, these forms may be submitted prior to final approval provided that conditional approval can be granted through the application process.

QPs are not required to submit **Reliance Letter** or **Certificate of Insurance** forms to the **Region** when the **QP** confirms they are submitting the same **ESA** reports to **MECP**, or its successor as part of an **RSC** or **RA** approval process.

Environmental Site Assessment (ESA) Reporting Requirements

All **ESA** documents must:

- Be prepared by a **Qualified Person (QP)** in accordance with the *Environmental Protection Act* (EPA) and O.Reg. 153/04;
- Satisfy the regulatory requirements of O.Reg. 153/04, as amended; and
- Be based on current work (e.g. the date of the report must be completed within 18 months).

If an **ESA** document exceeds 18 months, the **Region** will require the **QP** to submit updated materials or **Updated ESA Documents** (Phase One/Two) which validates that no significant changes to the site or its soil/groundwater/sediment conditions have occurred following the completion of the original **ESA** work. However, the **Phase One ESA** will remain valid, provided that the **Phase Two ESA** work commences within 18 months.

If an Applicant resolves their **ESA** requirements during the initial stages of the development proposal, but the report exceeds 18 months, their **QP** must provide a statement demonstrating that the site conditions have not changed since the most recent **ESA** report. Under these circumstances, this statement will be required prior to the Regional sign-off on **ESA** work associated with the development proposal.

The **Region** will not accept and consider site assessments that are prepared in accordance with the Canadian Standards Association (CSA) requirements (e.g. CSA Z768-01, CSA Z769-00).

Appendix F: Regional Municipality of Durham Reliance Letter



Reliance Letter
Regional Municipality of Durham
Planning and Economic Development Department
605 Rossland Road East
Whitby, ON L1N 6A3
Telephone: 905.668.7711
Toll Free: 1.800.372.1102
www.durham.ca

Reliance Letter (to be presented on each company's unique letterhead)

At the request of Property Owner or Developer's Name and for other good and valuable consideration, [ABC Engineering Ltd.] represents and warrants to the Regional Municipality of Durham ("Region") that the reports and work are completed in accordance with Ontario Regulation 153/04 (O.Reg.153/04), unless stated otherwise in the documents, for the purposes of filing a Record of Site Condition in accordance with O.Reg. 153/04 and was completed by or under the supervision of a Qualified Person within the meaning of the *Environmental Protection Act* and O.Reg. 153/04, as amended from time to time.

[ABC Engineering Ltd.] agrees that the Region may rely upon the reports listed herein referenced by the Region as [File # xxx], including the representations, assumptions, findings, and recommendations contained in the reports:

- Phase One Environmental Site Assessment, date, report type, author (QP), company (mandatory)
- Phase Two Environmental Site Assessment, date, report type, author (QP), company (if applicable)
- Other Environmental Site Assessment Documentation, PSF, RA (if applicable)

[ABC Engineering Ltd.] further agrees that that in the case of any inconsistency between this Reliance Letter and any limitations set out in the aforementioned reports, this letter shall take priority.

[ABC Engineering Ltd.] understands and agrees that it is appropriate to extend reliance to the Region in relation to the reports listed herein so as to assist the Region in its assessment of the environmental suitability of the site and/or request to use non-potable groundwater standards.

[ABC Engineering Ltd.] further agrees that it will promptly notify the Region upon receipt of notice by the Ministry of the Environment, Conservation and Parks that the Ministry intends to audit any report listed herein and if so, to provide the Region with written confirmation of the results of the audit (Only applicable if filing the report as part of RSC or RA).

[ABC Engineering Ltd.] represents and warrants that it complies with all applicable insurance provisions contained within O.Reg. 153/04, as amended.

[ABC Engineering Ltd.] shall provide the Region with proof of insurance and maintain a minimum Professional Liability insurance coverage of \$2,000,000 per claim and \$4,000,000 aggregate.

[ABC Engineering Ltd.] agrees that its liability to the Region shall not be limited to an amount less than the Region’s minimum insurance requirements set out immediately above.

[ABC Engineering Ltd.] shall indemnify and save harmless the Region and its elected officials, officers, employees and agents from and against all claims actions, causes of action, losses, expenses, fines, costs, interest or damages of every nature and kind whatsoever, arising out of or allegedly attributable to the negligent acts, errors, omissions, misfeasance, nonfeasance, fraud or willful misconduct of the Consultant/Company, its directors, officers, employees, agents, contractors and subcontractors, or any of them, in connection with or in any way related to the delivery or performance of the work and reports provided to the Region that is subject to this Reliance Letter. This indemnity shall be in addition to and not in lieu of any insurance to be provided by the Consultant/Company in accordance with this reliance letter.

Signed and Sealed by Qualified Person:

_____ Date: _____

Signed by person authorized to bind Consulting Firm:

_____ Date: _____

Signed by Property Owner or Authorized Officer: _____

Name (please print): _____

Name of Company (if applicable): _____

Title of Authorized Officer: _____

Address: _____

Telephone: _____

Fax/Email: _____

Date: _____

Note: Edits to this document are only permitted in areas within the square brackets e.g.
[ABC Engineering Ltd.

Appendix G

Regional Municipality of Durham Certificate of Insurance



The Regional Municipality of Durham
Finance – Insurance and Risk Management

Certificate of Insurance

Proof of liability insurance will be accepted on this form only.

This form must be completed and signed by your agent, broker or insurer.

All insurers shown must be licensed to operate in Canada

This is to certify that the Named Insured hereon is insured as described below

Named Insured:

Address of the Named Insured

Location and operations of the Named Insured for which Certificate is issued: All operations performed for the Region of Durham

Insuring company	Policy numbers	Limit of coverage	Effective date	Expiry date
	Commercial General Liability	Per Claim / Annual Aggregate Deductible, if any	D/M/Y	D/M/Y
	Excess Liability (if applicable)	Per Claim / Annual Aggregate	D/M/Y	D/M/Y

Provisions of Amendments or Endorsements of Listed Policy(ies)

Professional Liability – Claims Made Basis – Yes No

Insuring company	Policy numbers	Limit of coverage	Effective date	Expiry date
	Professional Liability	Per Claim / Annual Aggregate Deductible, if any	D/M/Y	D/M/Y
	Excess Professional Liability (if applicable)	Per Claim / Annual Aggregate	D/M/Y	D/M/Y

Is the limit inclusive of indemnity and claims expenses - Yes No

If the policy is on a claims made basis have there been any claims notices given for this policy term – Yes No

Commercial General Liability is issued on an ‘occurrence’ basis form and is extended to include Personal Injury Liability, Contractual Liability, Non-Owned Automobile Liability, Owner’s and Contractor’s Protective Coverage, Products/Completed Operations, Contingent Employer’s Liability, Cross Liability Clause and Severability of Interest Clause.

With respect to Commercial General Liability Insurance, The Regional Municipality of Durham is added as an Additional Insured but only with respect to its liability arising out of the operations of the Named Insured.

The policy(ies) identified above shall apply as primary insurance and not excess to any other insurance available to The Regional Municipality of Durham.

If cancelled or changed so as to reduce the coverage as outlined on this certificate, during the period of coverage as stated herein, thirty (30) days, prior written notice by registered mail will be given by the Insurer(s) to: The Regional Municipality of Durham, Attention: Insurance and Risk Management, Finance Department, 605 Rossland Road East, Whitby, ON, L1N 6A3

I certify that the insurance is in effect as stated in this certificate and that I have authorization to issue this certificate for and on behalf of the insurer(s).

Date

Name, Address, Fax and Telephone Number of Certifying Party

Print Name of above Authorized Representative or Official

Signature of Authorized Representative or Official

Appendix H: Detailed Record of Site Condition Process

Records of Site Condition (RSC)

Under Part XV.1 of the *Environmental Protection Act* (EPA), **RSCs** are submitted by a **QP** to the Ministry of the Environment, Conservation and Parks (**MECP**). The RSC provides a “snapshot” in time summary of the environmental condition for the subject property.

RSCs are filed on the **MECP’s** Environmental Site Registry. Documents submitted in support of an **RSC** filing may include ESA reports, remediation reports, **Risk Assessment** reports, reports prepared in response to a **MECP** order or a **MECP** request and any other reports relating to the presence of a contaminant on, in or under the property.

In cases where an **RSC** is required by the *Environmental Protection Act*, or this Protocol, a copy of the **RSC** and supporting documentation, including the **MECP’s** acknowledgement letter, updated reports and any audit and review correspondence including orders or **Certificates of Property Use (CPU)** issued by **MECP** must be submitted to the **Region** and the **Area Municipality** before Regional final clearance of conditions or approval can be provided. To determine whether the **MECP** has previously accepted/filed an **RSC**, please see the following links:

- For **RSC’s** filed [between October 1, 2004 and June 30, 2011](#); and
- For **RSC’s** filed [since July 1, 2011](#).

Notwithstanding the foregoing, in some cases the requirements associated with the filing of an **RSC** and/or an **RA** that is accepted by **MECP** as well as the municipality’s receipt of the **RSC/RA** for a subject property may vary and may be secured through the following:

- through official plan policy which may defer adoption of an official plan amendment until such a time the **Region** receives the **RSC/RA** documents or directs the submission of the required documentation through a subsequent planning approval such as a zoning by-law amendment (rezoning), a subdivision or site plan application;
- As a condition imposed through a rezoning application which precludes the removal/lifting of a Holding (H) Zone provision;
- As a condition of approval to be fulfilled prior to final approval of a related application (e.g. subdivision, condominium, consent);

- On a case-by-case basis in consultation with the **Area Municipality**, the Applicant and their **QP** coordinate a strategy to the **Region's** satisfaction through an appropriate subsequent planning application process prior to any building permit approvals for aboveground construction; and
- As a requirement of applicable law under the *Building Code Act, 1992*, as amended prior to the issuance of a building permit (where there are no approvals required under the *Planning Act*, excluding Minor Variances).

Where an **RSC** may not be achievable, or there may be other measures that could be applied to address specific environmental issues, the Applicant's **QP** must contact the York-Durham District **MECP** office to discuss available options.

Detailed Site Assessment

Based on the findings of a **Phase Two ESA**, the following **development** scenarios are intended to assist the Applicant and their **QP** to determine whether an **RSC** is required in accordance with this Protocol. See **Appendix I** for a chart which details each scenario. Where a **Prescribed Change in Property Use** is introduced into a **development** proposal it must meet the respected Table Site Condition Standards for residential/parkland/institutional (RPI) land uses.

Scenario A – Development does not Propose a Prescribed Change in Property Use and No Exceedances

For **developments** not proposing a **Prescribed Change in Property Use**, an **RSC** is not required where the **Site Screening Questionnaire (SSQ)** and/or a **Phase One ESA** does not reveal any exceedances contributing to an **APEC** or where a **Phase Two ESA** reveals that the sub-surface conditions are within the applicable **MECP Site Condition Standards (SCS)**. Under these circumstances, the Applicant will not be required to conduct further environmental investigations, if they provide the following:

- A Regional **SSQ** form is completed in accordance with **Appendix C**; or
- A professional statement in an **Environmental Site Assessment (ESA)** confirming no further investigations and that the site is suitable for proposed property use and supported with the following Regional documents:
 - **Reliance Letter** (completed in accordance with **Appendix F**); and
 - **Certificate of Insurance** (completed in accordance with **Appendix G**)
 - Non-Potable Groundwater Request - if Tables 3, 7 and 9 SCS for RPI use are considered, refer to **Appendices K & L**)

Scenario B – Development does not Propose a Prescribed Change in Property Use, and Exceedances are Discovered

An **RSC** may be optional if the **QP's** findings reveal sub-surface conditions which exceed the **MECP SCS** but does not propose a **Prescribed Change in Property Use**. In accordance with Section 5.2.2.2 of this Protocol, the Applicant has the following options:

- Update the **Phase Two ESA** (post **site remediation**);
- An **RSC**;
- A **Risk Assessment (RA)**;
- Arrange to have the **Region peer review** the **QP's** reports; or
- Non-Potable Groundwater Request - if Tables 3, 7 and 9 SCS for RPI use are considered, refer to **Appendices K & L**)

Whichever option the Applicant and their **QP** selects, the **Region** will require the submission of the associated supporting materials prior to the Municipality issuing its final approval(s) for the proposed **development**.

Scenario C – Development Proposes a Prescribed Change in Property Use

In accordance with the O.Reg. 153/04, an **RSC** is mandatory if the **development** proposes a **Prescribed Change in Property Use**, despite whether exceedances are discovered on the subject lands. This scenario will require the Applicant to provide the **Region** (and the **Area Municipality** if requested) a copy of the **RSC** filed on the Environmental Site Registry, the written acknowledgement provided by the **MECP**, along with any additional supporting materials before the planning application can be approved.

Scenario D – Minor Variances which Propose a Prescribed Change in Property Use

As noted in **Appendix B**, where a **Prescribed Change in Property Use** is introduced through a Minor Variance application, an **RSC** is also mandatory.

Detailed Site Assessment for Mixed-Use Properties

This Protocol was developed in accordance with O.Reg 153/04. The following scenarios provide updated regulatory changes for **mixed-use development** proposals that may require an **RSC** (for the complete list of regulatory changes, please refer to O.Reg. 153/04).

Scenario E – Conversion of an Existing Low-Rise Commercial/Community Building to Accommodate Mixed-Uses

An **RSC** is not required to convert an existing low-rise **commercial** and/or **community** building into a **mixed-use development** which also includes **residential/institutional** use(s) provided that the following criteria is met:

- A Regional **SSQ** Form is completed in accordance with **Appendix C**; or
- A professional statement in an **Environmental Site Assessment (ESA)** report confirming no further investigations and that the site is suitable for proposed property use and supported with the following:
 - Regional **Reliance Letter** (completed in accordance with **Appendix F**); and
 - **Certificate of Insurance** (completed in accordance with **Appendix G**). or
- Non-Potable Groundwater Request - if Tables 3, 7 and 9 SCS for RPI use are considered, refer to **Appendices K & L**).

In any of the scenarios above, the **QP** must also demonstrate the following:

- That the building has no more than six storeys before the change and will be no more than six storeys after the change;
- That **residential** and/or **institutional** uses are restricted to floors above the ground floor;
- That the existing building envelope must remain unchanged and no proposed horizontal and/or vertical addition(s) to the exterior portions of the building; and
- That the subject property containing the existing building is not used or has not been historically used in whole or in part as an **Enhanced Investigation Property (EIP)** (e.g. **industrial**, a **garage**, a **bulk liquid dispensing facility**, and/or a **dry-cleaning equipment establishment**).

Scenario F – Conversion of Existing Mixed-Use Buildings to Support Only Residential or Institutional Land Uses

An **RSC** is not required for **development** proposals on a subject property intending to convert an existing **mixed-use** building(s) supporting **community** or non-EIP **commercial** use(s) and **residential** or **institutional** uses to only include **residential** or **institutional** land uses provided that the following criteria is met:

- A Regional **SSQ** Form is completed in accordance with **Appendix C**; or
- A professional statement in an **Environmental Site Assessment (ESA)** report confirming no further investigations as well as that the site is suitable for proposed property use and supported with the following:
 - Regional **Reliance Letter** (completed in accordance with **Appendix F**); and
 - **Certificate of Insurance** (completed in accordance with **Appendix G**). or
- Non-Potable Groundwater Request - if Tables 3, 7 and 9 SCS for RPI use are being used, refer to **Appendices K & L**)

In any of the scenarios above, the **QP** must also demonstrate the following:

- That a part of the building was used for either **residential** or **institutional** uses and the other part of the building was used for either **commercial** or **community** uses before the proposed change in use to the building;
- That the existing building envelope remain unchanged and there would not be any horizontal and/or vertical addition(s) to the exterior portions of the building after the change in use to the building;
- That the subject property containing the existing building is not used or has not ever been used in whole or in part as an **EIP**; and
- If a fully **commercial/community** building was not previously converted into a **mixed-use** building.

Scenario G – Conversion of Existing Buildings Used for the Indoor Gathering of People for Religious Purposes

In accordance with O.Reg. 153/04, religious buildings are categorized as **institutional** uses.

An **RSC** is not required to convert a religious building (used for the indoor gathering of people for religious purposes) to a **residential** use or a daycare establishment in the same building.

In accordance with O.Reg 153/04, an **RSC** is mandatory if a property used for **industrial/commercial/community** purposes is legally converted to a religious building.

Scenario H – Conversion of an Existing Sensitive Land Use into a Mixed-Use Development

An **RSC** is not required to convert an existing sensitive land use (i.e. **residential, parkland, institutional, agricultural** and/or **other uses**) into a mixed-use development that introduces a less sensitive land use (i.e. **industrial, commercial** and/or **community**) provided that the following criteria is met:

- A Regional **SSQ** form is completed in accordance with **Appendix C**; or
- A professional statement in an **Environmental Site Assessment (ESA)** confirming no further investigations and that the site is suitable for proposed property use and supported with the following Regional documents:
 - **Reliance Letter** (completed in accordance with **Appendix F**); and
 - **Certificate of Insurance** (completed in accordance with **Appendix G**).
 - If a **Phase Two ESA** is submitted, it must meet the respected Table SCS for Residential/Parkland/Institutional (RPI) use; or
- Non-Potable Groundwater Request - if Tables 3, 7 and 9 SCS for RPI use are being used, refer to **Appendices K & L**)

Scenario I – Mixed-Use - All Other Change of Uses

An **RSC** is mandatory for all other **mixed-use development** proposals that are not described in Scenarios E to G above.

Approaches to Remediating Sites and Filing an RSC

Various approaches to remediating contaminated sites in Ontario are provided below:

1. A site can be remediated to meet the Typical Background Conditions which are set out in Table 1 of the **MECP Site Condition Standards (SCS)**;
2. A site can be remediated to meet Generic Site Condition Standards for the proposed use(s) which are set out in Tables 2 through 9 of the **MECP SCS**; and
3. A site can be remediated or meet the **Property Specific Standards** developed through a **Risk Assessment** prepared by a **QPRA**.

All approaches are based on **MECP SCS** for soil, groundwater and sediment as part of O.Reg. 153/04. Tables 1 to 9 in the **MECP SCS** set out prescribed contaminants and the maximum concentration for various property uses. Each approach is described below.

Approach 1 – Remediating to Table 1 Standards

Table 1 soil standards are typical full depth background conditions derived from the Ontario Typical Range values for specific property uses and reflect typical province wide background concentrations in soils that are not contaminated. These standards are prescribed in certain circumstances as described by O.Reg. 153/04 (e.g. environmentally sensitive sites). The groundwater standards in Table 1 are the most pristine and were derived to provide the highest level of protection to human health and ecosystems.

Approach 2 – Remediating to Table 2 through 9 Standards

Tables 2 through 9 of the **MECP SCS** are generic conditions where the Province has utilized a set of assumptions to develop standards that can be applied to all sites throughout the Province for different property uses. Each Table is applied to specific circumstances (e.g. proximity to bedrock and bodies of surface water).

Tables 2, 4, 6 and 8 of the **MECP SCS** are typically used in rural areas, where properties are serviced by private wells (potable groundwater). Tables 3, 5, 7 and 9 of the **MECP SCS** may be applied in municipally serviced urban areas, provided that the **QP** can demonstrate that surrounding property uses (e.g. within 250 metres of the subject property) will not adversely impact existing serviced private wells as discussed in detail under **Section 5.2.3** and **Appendix K** of this Protocol.

Based on the existing **MECP SCS** applicable to the **Region's** geography, this Protocol will recognize the use of all Full Depth Tables. Where the Applicant proposes to use the stratified soil and/or groundwater **MECP SCS** (either Tables 4 or 5 of the **MECP SCS**) in support of a planning application, the Applicant may be required to engage in the **Region's peer review** process.

Approach 3 - The Risk Assessment Process

The **Risk Assessment (RA)** approach is used when the Applicant determines that it is not feasible to remediate some or all the subject property to meet the generic standards set out in the **MECP SCS**. If pursued, the Applicant's **QP** will be required to prepare and submit all documents in support of a **Risk Assessment**. Similar to **RSC's**, these reports may consist of, but are not limited to the following: **ESAs**; remediation; **Risk Assessment**; any other reports prepared in response to an **MECP** order or an **MECP** request and any other reports relating to the presence of a contaminant on, in or under the property.

Appendix I: Detailed Site Assessment Chart for Records of Site Condition

Scenarios	RSC Mandatory	Materials Required to Satisfy the Region's Soil and Groundwater Assessment Protocol
Proposed development site does not contain site contamination and does not propose a Prescribed Change in Property Use (typically a more sensitive property use)	No	<ul style="list-style-type: none"> • A Regional Site Screening Questionnaire (SSQ) (completed in accordance with Appendix C); or • A professional statement in an Environmental Site Assessment (ESA) confirming no further investigations are required and that the site is suitable for proposed property use and supported with the following: <ul style="list-style-type: none"> ○ Regional Reliance Letter; and ○ Certificate of Insurance; or • Non-Potable Groundwater Request - if Tables 3, 7 and 9 Site Condition Standards (SCS) are being used, refer to Appendices K & L)
Proposed development site does not contain site contamination but proposes a Prescribed Change in Property Use	Yes	<ul style="list-style-type: none"> • Proof that an RSC (post July 1, 2011) was filed on the Environmental Site Registry. If the filing of the RSC exceeds 18 months, Updated ESA Documents from a Qualified Person (QP) will also be required
Proposed development site contains site contamination but does not propose a Prescribed Change in Property Use	No	<ul style="list-style-type: none"> • Phase One and Two ESA reports, which documents the site remediation methods undertaken on the subject property; or • Proof that an RSC (post July 1, 2011) was filed on the Environmental Site Registry. If the filing of the RSC exceeds 18 months, Updated ESA Documents from a QP may be required; or

Scenarios	RSC Mandatory	Materials Required to Satisfy the Region’s Soil and Groundwater Assessment Protocol
		<ul style="list-style-type: none"> • Receipt of a Certificate of Property Use through a Risk Assessment where site contamination is intended to meet Property Specific Standards; • The completion of a successful peer review paid entirely by the Applicant; or • Non-Potable Groundwater Request - if Tables 3, 7 and 9 SCS are being used, refer to Appendices K & L)
Proposed development site contains site contamination and proposes a Prescribed Change in Property Use	Yes	<ul style="list-style-type: none"> • Proof that a Record of Site Condition (post July 1, 2011) was filed on the Environmental Site Registry. If the filing of the RSC exceeds 18 months, Updated ESA Documents from a QP will also be required.
Existing mixed-use Commercial / Community – Residential / Institutional Development site proposes a more sensitive land use	No	<ul style="list-style-type: none"> • A Regional SSQ (completed in accordance with Appendix C); or • A professional statement in an ESA report confirming no further investigations are required and that the site is suitable for proposed property use supported with the following: <ul style="list-style-type: none"> ○ Regional Reliance Letter; Certificate of Insurance; and ○ If a Phase Two ESA is submitted, it must meet the respected Table SCS for Residential/Parkland/Institutional (RPI) use • Non-Potable Groundwater Request - if Tables 3, 7 and 9 SCS for RPI use are being used, refer to Appendices K & L) • In any one of the above-noted scenarios, the QP must also demonstrate the following:

Scenarios	RSC Mandatory	Materials Required to Satisfy the Region’s Soil and Groundwater Assessment Protocol
		<ul style="list-style-type: none"> ○ That the existing building envelope will remain unchanged and no addition(s) are proposed to the exterior portions of the building ○ That the change to a residential and/or institutional use is restricted to floors above the ground floor; ○ That the building has no more than six storeys before the change and will be no more than six storeys after the change; and ○ That the subject property containing the existing building is not used or has not been ever used in whole or in part as an EIP
<p>Existing mixed-use Commercial / Community – Residential / Institutional Development site proposes only Residential/Institutional (sensitive) uses throughout the existing building</p>	No	<ul style="list-style-type: none"> • A Regional SSQ (completed in accordance with Appendix C); or • A professional statement in an ESA report confirming no further investigations and that the site is suitable for proposed property use supported with the following: <ul style="list-style-type: none"> ○ Regional Reliance Letter; and ○ Certificate of Insurance; ○ If a Phase Two ESA is submitted, it must meet the respected Table SCS for RPI use • Non-Potable Groundwater Request - if Tables 3, 7 and 9 SCS for RPI use are being used, refer to Appendices K & L) • In either scenario above, the QP must also demonstrate all of the following <ul style="list-style-type: none"> ○ That a part of the building was used for either residential or institutional uses and the other part of the building was used for either commercial or community uses

Scenarios	RSC Mandatory	Materials Required to Satisfy the Region’s Soil and Groundwater Assessment Protocol
		<p>before the proposed change in use to the building;</p> <ul style="list-style-type: none"> ○ That the existing building envelope will remain unchanged and no addition(s) are proposed to the exterior portions of the building; ○ That the subject property containing the existing building is not used or has not been ever used in whole or in part as an EIP; and ○ That the existing mixed-use was not exempt from filing an RSC when the property was converted to mixed-uses.
<p>A development site that proposes to convert an existing Industrial / Commercial / Community use building to a building and/or the property used for the indoor gathering of people for religious purposes (Institutional use)</p>	<p>Yes</p>	<ul style="list-style-type: none"> • Proof that an RSC (post July 1, 2011) was filed on the Environmental Site Registry. If the filing of the RSC exceeds 18 months, Updated ESA Documents from a Qualified Person (QP) will also be required
<p>A development site that proposes to convert an existing sensitive land use into a mixed-use Residential / Institutional – Commercial / Community development</p>	<p>No</p>	<ul style="list-style-type: none"> • A Regional SSQ (completed in accordance with Appendix C); and/or • A professional statement in an ESA confirming no further investigations and that the site is suitable for proposed property use supported with the following: <ul style="list-style-type: none"> ○ Regional Reliance Letter; ○ Certificate of Insurance; and

Scenarios	RSC Mandatory	Materials Required to Satisfy the Region’s Soil and Groundwater Assessment Protocol
		<ul style="list-style-type: none"> ○ If a Phase Two ESA is submitted, it must meet the respected Table SCS for RPI use ● Non-Potable Groundwater Request - if Tables 3, 7 and 9 SCS for RPI use are being used, refer to Appendices K & L)
All other mixed-use scenarios not described above	Yes	<ul style="list-style-type: none"> ● Proof that an RSC (post July 1, 2011) was filed on the Environmental Site Registry. If the filing of the RSC exceeds 18 months, Updated ESA Documents from a QP may be required

Appendix J:

Peer Review Process for Brownfield sites with Minor Exceedances

If the **QP** determines that exceedances on a subject site pose little or no risk to human health and the environment, the Applicant may submit a written request along with the associated fees and documents to the Regional Planning and Economic Development Department requesting the **Region** to conduct a **peer review** in support of the **development** proposal. The **Region** will review the request to confirm whether it is eligible for a **peer review**. Any application that proposes a **Prescribed Change in Property Use** (typically a more sensitive land use) is not eligible for **peer review** and will require a letter of acknowledgement from the Ministry of the Environment, Conservation and Parks (**MECP**) confirming that a **Record of Site Condition (RSC)** was filed on the Environmental Site Registry.

Should the **peer review** process be deemed appropriate, the **Region** will select the next **Peer Review Consultant** from a Council-approved roster and ask the Consultant to provide the following:

- Cost estimates to review any **ESA** reports and any associated materials requested by the **Region** in support of the **development** proposal (per submission);
- Any potential conflicts of interest;
- Project Team list and their job title(s) assigned to the **peer review**;
- Anticipated time schedule required to complete the **peer review**; and
- Anticipated completion date of the **peer review**.

Regional **Peer Review Consultants** should consider the following questions as guidelines in support of their technical review response of the **ESA** work and any associated materials for the **development** proposal:

- Were the **ESA** reports submitted prepared in accordance (or consistent) with Provincial legislation (i.e. O.Reg. 153/04) and Regional requirements? If a **QP** considers their report “consistent with” Provincial and Regional requirements, has the **QP** identified how their investigation and reporting requirements deviate from O.Reg. 153/04 and this Protocol?
- Are any additional supporting documents/materials required?

- What, if any, are the potential or expected impacts on human health and the environment within the study area?
- Are further environmental investigations required? (e.g. have **APECs** been properly identified and investigated and has suitable work been completed in accordance with O.Reg. 153/04?)
- Are adverse off-site impacts (including potable wells) expected based on the on-site and study area investigations?
- Do you agree that environmental conditions at the site are appropriate for the proposed property use(s) (e.g. **residential/parkland** or **industrial/commercial**)?
- Is the Applicant's environmental work completed by their environmental consultant team comprehensive and does it satisfactorily demonstrate the soil, groundwater and sediment conditions of the subject property?
- Does the study area outlined in the **ESA** reports sufficiently cover any potential off-site migration?
- Do the environmental reports submitted accurately represent the environmental conditions on and off site?
- Do you agree with the Applicant's **QP's** analysis, assessment results, conclusions and recommendations?
- Does the Applicant's environmental consultant team meet regulatory **QP** credential requirements?

Pre-Consultation Meeting with Regional Peer Review Consultant

Prior to the **Peer Review Consultant's** review of submitted **ESA** materials, the Applicant and their QP may request a pre-consultation meeting with Regional staff and its **Peer Review Consultant** (at the Applicant's sole expense). This meeting will discuss the requirements and expectations of the **ESA** reports and any related materials submitted to help streamline the review process.

Amending the Terms of Reference where Necessary

Upon receipt of the **Peer Review Consultant's** cost estimate, Regional staff will provide a letter to the Applicant for their acceptance of the cost estimate and the required fees (in accordance with the applicable Regional Planning Fee By-law), made payable to the **Region**.

If the Applicant signs and accepts the cost estimate and provides the associated fees, Regional staff will prepare a letter to its **Peer Review Consultant**, confirming the Applicant's concurrence to initiate the **peer review** process.

The **Peer Review Consultant** is required to complete and submit a copy of the draft **peer review** report to staff for review within 30 days from the date the assignment is awarded. Regional staff will review the draft report to ensure there are no concerns with its content prior to the Consultant finalizing the report.

If the **Peer Review Consultant** concludes that the **QP's** supporting documents satisfactorily demonstrates that the site conditions on the subject property represents minor exceedances (determined through a risk based assessment and/or best practices as described in O.Reg. 153/04 and/or O.Reg. 407/19) to the **MECP Site Condition Standards (SCS)** and that the contaminants pose little to no risk to human health and the environment, the **Peer Review Consultant** must include an opinion statement noting the same.

If the **Peer Review Consultant** concludes that the **QP's** supporting documents cannot conclude or cannot satisfactorily demonstrate that the site conditions represent minor exceedances to the **MECP SCS**, the Applicant's **QP** would have to prepare one or both of the following:

- Conduct further analysis and resubmit additional supporting information and fees as requested by the **Peer Review Consultant** and the **Region**; or
- File an **RSC** on the Environmental Site Registry and or have a **Risk Assessment (RA)** accepted by **MECP**.

If the Applicant and their **QP** disagrees with the **Peer Review Consultant's** conclusions, a meeting with the consultants (at the Applicant's expense) may be required to determine an acceptable and expeditious course of action.

Appendix K: Non-Potable Groundwater Requests

Section 35 of O.Reg. 153/04 identifies two standards for groundwater conditions: Potable and Non-Potable. “Potable Standards” apply to areas where the drinking water source is from private wells, whereas “Non-Potable Groundwater Standards” typically apply to areas where the predominant drinking water source is from a municipal water supply.

Requests to utilize the less stringent Non-Potable Groundwater Ministry of the Environment, Conservation and Parks’ **(MECP’s) Site Condition Standards (SCS)** are made by the Applicant’s **QP** and are submitted for properties in urban areas where municipal services are available and where reliance on private wells for drinking water and/or gardening is low. Since vulnerable groundwater areas exist within many of the serviced areas of the **Region**, requests to use Non-Potable Groundwater **MECP SCS** in municipally serviced areas are evaluated on a case-by-case basis.

The **Region** may approve the use of Tables 3, 7 and 9 ground water **MECP SCS** for a property prior to completion and filing of a **Record of Site Condition (RSC)** provided certain conditions are met. **Development** proposals which considers using Table 5 **SCS**, must be peer reviewed at the owner’s expense. The procedure the **Region** will use to assess requests to use the non-potable groundwater standard is set out in **Appendix L**.

Other Resources

The York Durham District **MECP** office in the Town of Ajax can assist Applicants, **QP’s** and other stakeholders to identify properties with site contamination potential. The Ajax office can be contacted as follows:

Ministry of the Environment, Conservation and Parks

230 Westney Road South, Fifth Floor

Ajax, Ontario L1S 7J5

General Inquiries: 905.427.5600

Toll Free: 1.800.376.4547

Fax: 905.427.5602

The Ministry of Municipal Affairs and Housing (MMAH) “[Brownfields Ontario](#)” website also provides additional resources and can answer questions surrounding brownfields and site contamination.

Appendix L: Non-Potable Groundwater Request Standards and Procedures

The Ontario Ministry of the Environment, Conservation and Parks (**MECP**) allows municipalities to develop their own procedures surrounding Non-Potable Groundwater Requests. This Protocol assesses the appropriateness of Non-Potable Requests using Tables 3, 7 or 9 of **MECP Site Condition Standards (SCS)** within the **Region**.

The process ensures that appropriate **Environmental Site Assessment (ESA)** documentation is submitted with a request and that any **brownfield sites** and potentially contaminated sites are appropriately identified and remediated if necessary. This process also ensures that there are no adverse impacts to public or private drinking water systems (as defined under the *Safe Drinking Water Act, 2002*) within the **Phase One Study Area** in urban areas. In accordance with O.Reg. 153/04, the **Region** must respond to Non-Potable Requests within 30 days of receipt.

Circulation of Written Notification/Requests

If a **Qualified Person (QP)** seeks permission to use the Non-Potable Groundwater **MECP SCS** for a property, in accordance with Provincial requirements, they must submit a written notice/request to the Clerk of both the **Region** and the **Area Municipality**.

The Regional Legislative Services Division will circulate the request and supporting materials to the Regional Planning Division for review and comment.

Coordinated Regional Response

There are two scenarios for a **QP** to file a Non-Potable Request. These scenarios consist of Requests requiring or not requiring a **Record of Site Condition (RSC)** and/or **Risk Assessment (RA)**.

The **Region** will not process incomplete Non-Potable Groundwater Requests. For a Non-Potable Groundwater Request to be considered complete, the following materials must be included at a minimum:

- A covering letter indicating the request, address, Applicant's name, whether the Applicant plans to submit an **RSC** for filing on the Environmental Site Registry and/or submit a **Risk Assessment** for **MECP** acceptance, and groundwater standard proposed;

- The existing **Environmental Site Assessment** Report(s);
- The required processing fee, in accordance with the applicable Regional Planning Division's Fee By-law; and
- Any associated supporting documents under the heading "Procedures for Non-Potable Requests Not Requiring an RSC or an RA" (if required by the **Region**).

If the supporting materials noted above have not been prepared to the **Region's** satisfaction, Regional staff will issue an objection letter to the Applicant's **QP** and the applicable Area Municipal Clerk in response to the use of the Non-Potable Groundwater Standards request. Once the supporting materials are updated and submitted, the **Region** will reevaluate the Non-Potable Groundwater Request.

If the Applicant's **QP** provides the **Region** with satisfactory supporting materials, Regional staff will issue a follow-up letter to the Applicant's **QP**, and the applicable **Area Municipality** either objecting or not-objecting to the Non-Potable Groundwater Standard request.

Procedures and requirements for Non-Potable Requests Requiring an RSC or an RA

Non-Potable Groundwater Requests requiring an **RSC** and/or an **RA** submission to **MECP** must include the following:

- A covering letter indicating the request, address, Applicant's name and groundwater standard proposed;
- The **Environmental Site Assessment** Report(s) prepared by the **QP**;
- The required processing fee, in accordance with the applicable Regional Planning Division's Fee By-law; and (if applicable); and
- Any associated supporting documents.

Following Regional review of the above-noted materials, a letter either objecting to or not objecting to the Applicant's **QP's** request for the use of the non-potable standard will be issued to the Applicant's **QP** and the applicable **Area Municipality**.

If the **Region** issues a non-objection letter (in accordance with the Evaluation Criteria below) granting conditional approval to consider the use of Non-Potable Groundwater Standards, the Applicant's **QP** must submit the Regional letter to **MECP**. The Applicant's **QP** must provide the **Region** with **MECP's RSC** Acknowledgment Letter and/or a copy of the **RA** Submission within 12 months of the Request being granted Conditional Approval.

If the Regional receipt of **MECP's** clearance letter exceeds 12 months, in accordance with O.Reg. 153/04, its Conditional Approval will lapse and the **QP** will be required to update their Non-Potable Groundwater Request with the **Region**.

Procedures for Non-Potable Requests Not Requiring an RSC or an RA

Non-Potable Groundwater Requests for development applications not requiring an **RSC** and/or an **RA** submission to **MECP** must include the following:

- All **ESA** reports, processing fees and any associated supporting documents noted above;
- A completed Regional **Reliance Letter** and **Certificate of Insurance** from the **QP** for the **Region** to rely on all of the supporting documents;
- A well record survey provided by **MECP's** Well Record Mapping;
- A description of the methodology used to demonstrate that residences, businesses and **other uses** in the above noted areas do not rely on groundwater-based water sources [e.g. no private wells on or within 250 metres (m) of the subject property used for drinking water purposes, this could be more than 250 m depending on nearby **Potentially Contaminated Activity (PCA)** property uses, soil conditions, topography, direction of groundwater flow, etc.]. **MECP** water well records may also be used to assess potential groundwater usage within the **Phase One Study Area**;
- A description of previous and proposed uses of the subject property;
- A description of the type and nature of any contamination and representation of any proposed/required **site remediation**;
- The use and servicing details of **residential** dwellings, businesses and other properties within 250 metres (m) of the subject property;
- Confirmation that the subject property will not create adverse impacts on Wellhead Protection Areas;
- Confirmation that the subject property is not located within an **Area of High Aquifer Vulnerability** on the Oak Ridges Moraine;
- A professional opinion statement by **QP** confirming that the site will be developed in accordance with the applicable **MECP SCS** or applicable Site-Specific **RA** Standard Levels;

- Confirmation that present or future surface water or groundwater sources of drinking water will not be adversely affected including water for **agricultural** and aquaculture uses; and
- Any other information deemed reasonably necessary by the **Region** or the applicable **Area Municipality**.

Following the **Region's** review of the above-noted materials, a letter either objecting to or not objecting to the Applicant's **QP's** Non-Potable Groundwater Request will be issued to the Applicant's **QP** and the applicable **Area Municipality**.

A letter objecting to the Non-Potable Request may be issued for a **development** proposal under the following circumstances:

- If it proposes a threat that will impact potable water supply;
- If it is located within a Wellhead Protection Area; and/or
- If it is located in an **Area of High Aquifer Vulnerability** within the Oak Ridges Moraine.

If the **Region** issues a non-objection letter in response to the Non-Potable Groundwater request (in accordance with the Evaluation Criteria below), the **development** proposal may proceed (if there are no other outstanding matters of Regional Interest) eliminating any concerns surrounding potential groundwater exceedances.

To protect the Regional groundwater resources, any proposed cleanup/**site remediation** of **brownfield sites** and potentially contaminated sites in the rural area must use the "potable groundwater" **MECP SCS**. This includes **Areas of High Aquifer Vulnerability**, which extend beyond wellhead protection areas. Please note that Non-Potable Groundwater Requests will not be considered within the Regional rural and unserved areas.

Evaluation Criteria

Requests to utilize the non-potable groundwater standard will be considered when the supporting documentation confirms:

- That the site and all properties within 250 m of the subject property are supplied by a municipal drinking water system or that there are no wells within 250 m of the subject property used for drinking water purposes. The Applicant's **QP** may recommend a study area of more than 250 m, if a nearby **PCA** has the potential to impact the subject property based on its property use history and/or soil conditions, topography, direction of groundwater flow, etc. The Applicant's **QP** may utilize other methods to confirm that

there are no potable wells affected by on site contamination. For example, a registered notice could be sent to all property owners within the study area to advise residents of the proposed use and the request to use non-potable groundwater **MECP SCS** to remediate the property;

- It is reasonable and appropriate to use the less stringent Table 3, 7 or 9 **MECP SCS** for the site;
- The on-site conditions will not detrimentally impact: Wellhead Protection Areas; **Areas of High Aquifer Vulnerability**; areas of natural significance and water bodies; and
- That the present and future surface water and groundwater sources of drinking water will not be adversely affected, including water for **agricultural** and aquaculture uses.

Appendix M: Procedure to Assess Enhanced Investigation Properties

Assessing Enhanced Investigation Properties (EIPs)

This Protocol will assess the appropriateness of evaluating **development** proposals concerning EIPs as defined under O.Reg. 153/04, as amended, within the **Region**. **EIP** uses consist of **industrial** uses and the following **commercial** uses: a **garage** (i.e. an automotive repair facility), a **bulk liquid dispensing facility** (including **gasoline outlets**), or the operation of **dry-cleaning equipment**.

This process intends to streamline **development EIP** proposals that are considered either major or minor in nature. Depending on the proposed level of **development**, this procedure is intended to prevent adverse impacts to human health, and the environment within the **Phase One Study Area**.

ESA documentation submitted with the request must demonstrate that any **brownfield sites** and potentially contaminated sites are appropriately identified and remediated. This process ensures that there are no negative impacts to public or private drinking water supplies within the **Phase One Study Area**.

A flow chart which outlines the **Region's EIP** process is provided in **Appendix P**.

Major Development Proposal Containing Site Contamination on an Enhanced Investigation Property

If a **major development** proposal intends to temporarily or partially remediate a site due to the nature of the permitted use (e.g. **gasoline outlets**, automobile wreckers yards, or a **bulk liquid dispensing facilities**) or where significant **physical development** is proposed, the Applicant has the option of completing the following:

- Submitting an **RSC** or a **Risk Assessment** through **MECP**; or
- Engaging in the **Region's peer review** process.

In addition to the mandatory **Phase One** and **Two ESA** reports, where an Applicant opts for a **peer review** process, the **Region** may request that the Applicant submit a Contaminant Management Plan (CMP), which outlines the following to address risk management:

- A list of the existing and/or proposed bulk fuels/chemicals stored, manufactured or processed on the subject property and within any buildings/structures;
- A procedure on how any potential risk of release of fuels/chemicals to abutting lands will be mitigated and managed; and
- A procedure demonstrating the proposed safety measures to be implemented on the subject property and abutting lands impacted by existing and/or proposed fuels/chemicals.

In addition to the CMP requirements noted above, the following additional records listed in Section 3(2)(14) of Schedule D, of O.Reg. 153/04 be also provided in support of a

peer review:

- Regulatory permits and records related to **Areas of Potential Environmental Concern (APECs)**;
- Material Safety Data Sheets (MSDS);
- Underground utility drawings;
- Inventory of chemicals, chemical usage and chemical storage areas;
- Inventory of above ground storage tanks and underground storage tanks;
- Environmental monitoring data, including data created in response to an order or request of the Ministry;
- Waste management records, including current and historical waste storage locations and waste generator and waste receiver information maintained pursuant to Regulation 347 of the Revised Regulations of Ontario, 1990 (General — Waste Management) made under the *Environmental Protection Act*, or its predecessors;
- Process, production and maintenance documents related to **APECs**;
- Records of spills and records of discharges of contaminants of which notice is required to be given to the **MECP** under the *Environmental Protection Act* and records of such spills and discharges required to be kept pursuant to Ontario Regulation 675/98 (Classification and Exemption of Spills and Reporting of Discharges) made under the *Environmental Protection Act*;
- Emergency response and contingency plans, including spill prevention and contingency plans prepared pursuant to section 91.1 of the *Environmental Protection Act*, and Ontario Regulation 224/07 (Spill Prevention and Contingency Plans) made under the *Environmental Protection Act*;
- Environmental audit reports; and
- A site plan of the facility showing all buildings, storage areas, areas of production and manufacturing.

For proposals relating to the bulk liquid dispensing facilities, the **Region** may also request the coordination of/documentation from the Technical Safety Standards Authority (**TSSA**).

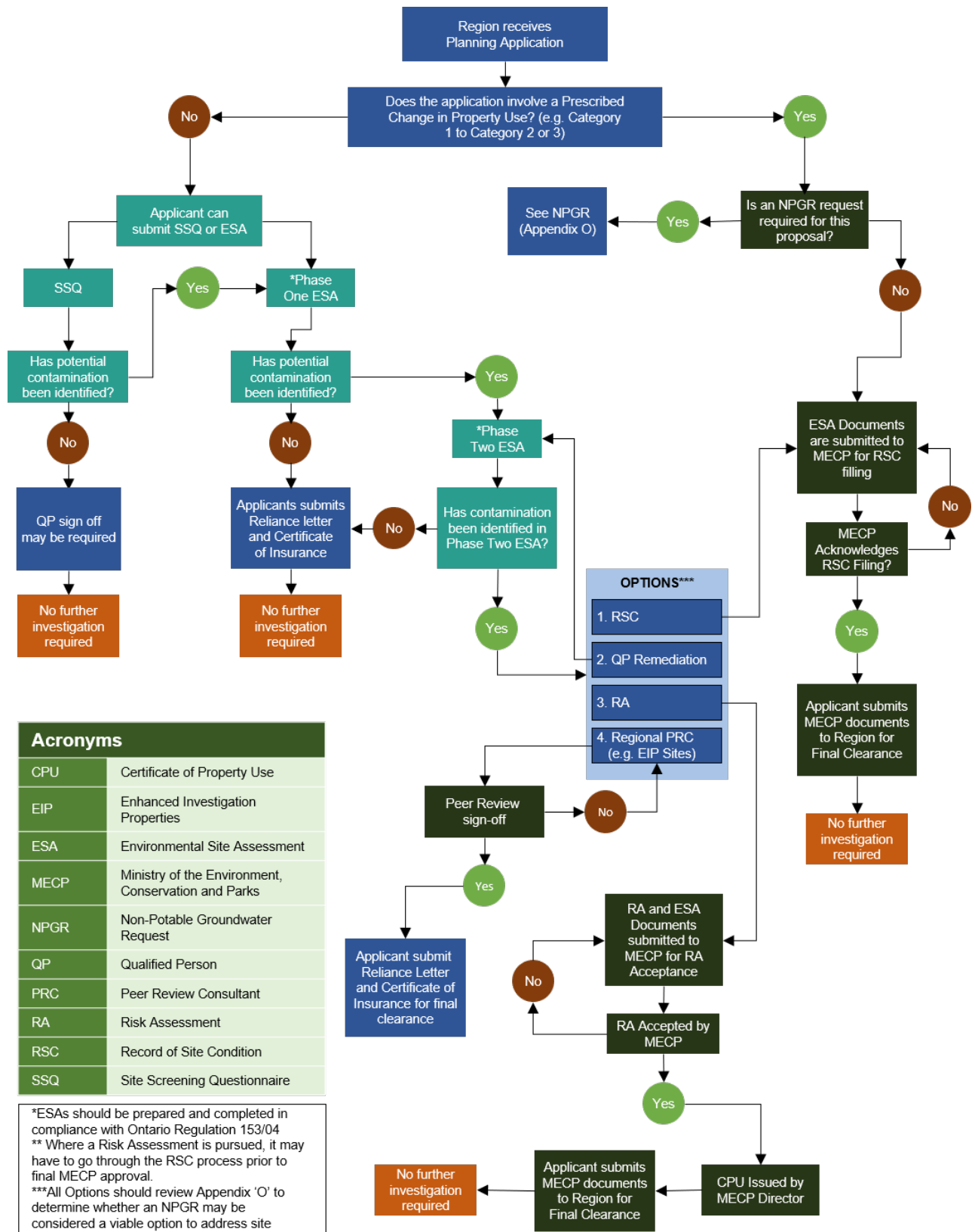
Minor Development Proposal within an EIP

At the **Region's** discretion, an **SSQ** (at a minimum) may suffice where a **minor development** on an **EIP** site (e.g. small accessory structures, **development** within an existing building, etc.) is proposed. However, at the **Region's** sole discretion, depending on the **SSQ's** findings, an Applicant may be required to prepare ESA reports and file the applicable documents/materials identified above under **major developments**.

Properties Previously used as Enhanced Investigation Properties

Properties in whole or in part that were previously used as an **EIP** and have since filed an RSC on the **MECP's** Environmental Site Registry for a sensitive property use (e.g. **residential, institutional, parkland** etc.) are no longer considered an **EIP**.

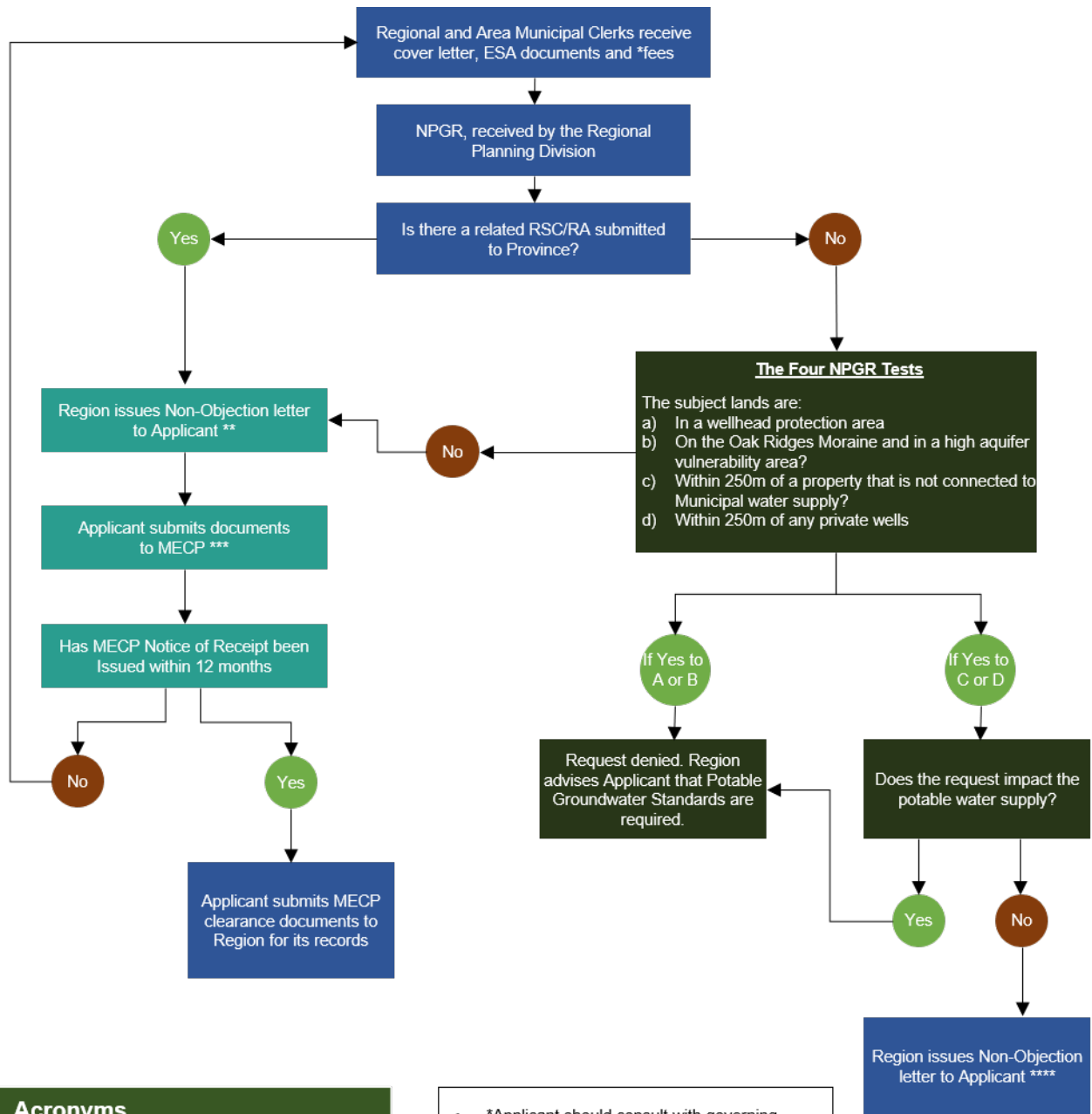
Appendix N: Soil and Groundwater Assessment Protocol Flowchart



Acronyms	
CPU	Certificate of Property Use
EIP	Enhanced Investigation Properties
ESA	Environmental Site Assessment
MECP	Ministry of the Environment, Conservation and Parks
NPGR	Non-Potable Groundwater Request
QP	Qualified Person
PRC	Peer Review Consultant
RA	Risk Assessment
RSC	Record of Site Condition
SSQ	Site Screening Questionnaire

*ESAs should be prepared and completed in compliance with Ontario Regulation 153/04
 ** Where a Risk Assessment is pursued, it may have to go through the RSC process prior to final MECP approval.
 ***All Options should review Appendix 'O' to determine whether an NPGR may be considered a viable option to address site contamination

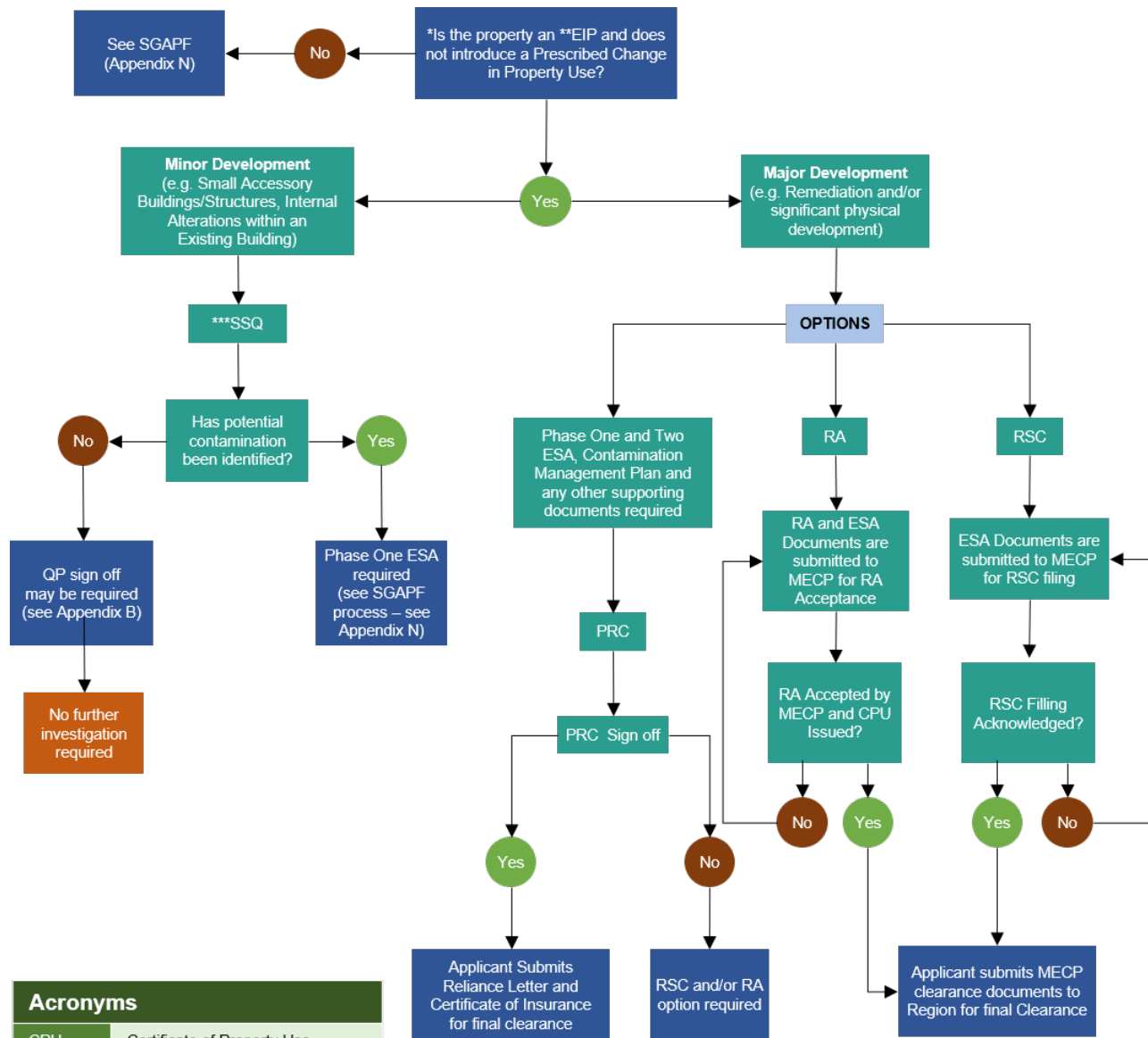
Appendix O: Non-Potable Groundwater Request Flowchart for Urban Serviced Areas



Acronyms	
ESA	Environmental Site Assessment
MECP	Ministry of the Environment, Conservation and Parks
RA	Risk Assessments
RSC	Record of Site Condition
NPGR	Non-Potable Groundwater Request

- *Applicant should consult with governing Area Municipality to determine fee requirements (if any).
- ** When an RSC/RA is not required, and the answer is "No" to the Four Non-Potable Requests Test, the Region will issue a final non-objection letter.
- *** Prepared in accordance with Region of Durham's NPGR flow chart for Urban Serviced Areas.
- **** If Table 5 is requested by Qualified Person then Peer Review is required.

Appendix P: Enhanced Investigation Properties Flowchart



Acronyms	
CPU	Certificate of Property Use
EIP	Enhanced Investigation Properties
ESA	Environmental Site Assessment
MECP	Ministry of the Environment, Conservation and Parks
NPGR	Non-Potable Groundwater Request
PRC	Peer Review Consultant
RA	Risk Assessment
RSC	Record of Site Condition
SGAPF	Soil Groundwater Assessment Protocol flowchart
SSQ	Site Screen Questionnaire

- *An EIP is a property that consists of at least one of the following:
 - A Bulk Liquid Dispensing Facility;
 - A Dry Cleaning Facility;
 - A Garage; and/or
 - Industrial Uses.
- ** A property in whole or in part that was previously considered an EIP and had filed an RSC on the Environmental Site Registry for a sensitive property use is no longer considered an EIP.
- *** ESA reports may be required depending on the SSQs findings.

Appendix Q: Glossary of Terms

Applicable terminology referenced by O.Reg. 153/04 and the Protocol are provided below. The following definitions found under O.Reg. 153/04 are provided for convenience purposes only and may be subject to change from time-to-time. Please refer to O.Reg.153/04: Records of Site Condition – Part XV.1 of the *Environmental Protection Act*, where applicable to confirm the official terminology.

Adverse Effect

Means in accordance with the *Environmental Protection Act* one or more of the following:

1. Impairment of the quality of the natural environment for any use that can be made of it;
2. Injury or damage to property or to plant or animal life;
3. Harm or material discomfort to any person;
4. An adverse effect on the health of any person;
5. Impairment of the safety of any person;
6. Rendering any property or plant or animal life for human use,
7. Loss of enjoyment of normal use or property; and
8. Interference with the normal conduct of business

Agricultural or Other Use

Means any of the following in accordance with Part I of O.Reg. 153/04:

1. The use of land, or a building on the property for an agricultural purpose, including, but not limited to, animal husbandry, aquaculture, beekeeping, dairying, field crops, forestry, fruit farming, horticulture, market gardening, poultry raising and the operation of glass- or plastic covered greenhouses; or
2. Any other use of land or a building on the property, other than a commercial use, community use, industrial use, institutional use, parkland use or residential use.

Area Municipalities

Means any or all of the following municipalities within the Regional Municipality of Durham: the Town of Ajax; the Township of Brock; the Municipality of Clarington; the City of Oshawa; the City of Pickering; the Township of Scugog; the Township of Uxbridge; and the Town of Whitby.

Area of High Aquifer Vulnerability

Means lands (in accordance with the Durham Region Official Plan) whose uppermost aquifer is most vulnerable to contamination as a result of surface activities or sources, due to the thickness and permeability of the rock and soil above the aquifer. Vulnerability is expressed as an intrinsic susceptibility index calculated using methods established by the Ministry of the Environment Conservation and Parks. Lands with an index value of less than 30 are considered to be of high vulnerability.

On the Oak Ridges Moraine, means an Area of High Aquifer Vulnerability as prescribed in the Oak Ridges Moraine Conservation Plan.

Areas of Potential Environmental Concern (APEC)

Means the area on, in or under a Phase One Property where one or more contaminants are potentially present, as determined through the phase one Environmental Site Assessment, including through,

1. Identification of past or present uses on, in or under the Phase One Property; and
2. Identification of Potentially Contaminating Activity.

Brownfield sites

Means undeveloped or previously developed properties that may be contaminated. They are usually, but not exclusively, former industrial or commercial properties that may be derelict, underutilized, or vacant.

Bulk Liquid Dispensing Facility

Means premises at which solvents; gasoline or associated products are stored in one or more storage tanks and dispensed for sale.

Certificate of Insurance

Means a Regional form completed and signed by the QP's Insurer that meets the Region's minimum Professional Liability insurance coverage to the satisfaction of the Region.

Certificate of Property Use (CPU)

Means a legal document is issued by MECP to enforce Risk Management Measures (RMM) for a contaminated site. The CPU is registered on the title of the property for notification purposes so future property owners, municipal officials, and occupants of a property will be aware of any property use restrictions, building restrictions or equipment installation required to ensure that contaminants remaining on a site meet the site-specific Risk Assessment standard levels. The CPU requires Owners to:

1. Prevent or eliminate any problems with contamination on the property;
2. Monitor contamination; and/or
3. Follow specified land use or building restrictions set out in the Risk Assessment.

Contaminant

Means in accordance with the *Environmental Protection Act* any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination of any of them resulting directly or indirectly from human activities that causes or may cause an adverse effect.

Contaminants of Concern (COC)

Means any of the following:

1. One or more contaminants found on, in or under a property at a concentration that exceeds the applicable Site Condition Standards for the property, or
2. One or more contaminants found on, in or under a property for which no applicable site condition standard is prescribed under Part IX (Site Condition Standards and Risk Assessment) and which are associated with Potentially Contaminating Activity.

Commercial Use

Means any of the following uses of land or a building on the property for an enterprise or activity involving the exchange of goods or services, including the following uses:

1. Use as a hotel, motel, hostel or similar accommodation.
2. Use as an office building.
3. In respect of the classification of occupancies in Table 3.1.2.1 of Division B of Ontario Regulation 332/12 (Building Code) made under the Building Code Act, 1992, use that falls within,
 - a) Group D, business and personal services occupancies; or
 - b) Group E, mercantile occupancies.

Community Use

Means any of the following uses:

1. Land on the property for a road.
2. A building on the property for,
 - a) Indoor recreational activities,
 - b) Travel purposes, such as use for a railway station or an airport passenger terminal, or like purposes,
 - c) An indoor gathering of people for civic, or social purposes.
3. In respect of the classification of occupancies in Table 3.1.2.1 of Division B of Ontario Regulation 332/12 (Building Code) made under the *Building Code Act*, 1992, use of a building on the property that falls within,

- a) Group A, Division 1, assembly occupancies intended for the production and viewing of the performing arts,
 - b) Group A, Division 3, assembly occupancies of the area type, or
 - c) Group A, Division 4, assembly occupancies in which occupants are gathered in the open air and that is used for a stadium.
4. Use of a classroom in a building on the property by,
- a) A university that is authorized to operate pursuant to section 3 of the *Post-Secondary Education Choice and Excellence Act, 2000*;
 - b) A college established under the Ontario Colleges of Applied Arts and Technology Act, 2002;
 - c) Any institution other than an institution mentioned in subparagraph i. or ii. above with authority to grant a degree or part of a degree under the *Post-Secondary Education Choice and Excellence Act, 2000*; or
 - d) A private career college as defined and approved under the *Private Career Colleges Act, 2005*.

Development

Means the creation of a new lot, a change in land use, or the construction of buildings and structures, requiring approval under the *Planning Act*, but does not include:

- 1. Activities that create or maintain infrastructure authorized under an environmental assessment process;
- 2. Works subject to the *Drainage Act*; or
- 3. For the purposes of policy 2.1.4(a) underground or surface mining of minerals or advanced exploration on mining lands in significant areas of mineral potential in Eco Region 5E, where advanced exploration has the same meaning as under the Mining Act. Instead those matters shall be subject to policy 2.1.5(a).

Dry Cleaning Equipment

Means dry cleaning equipment as defined in Ontario Regulation 323/94 made under the *Environmental Protection Act*.

Enhanced Investigation Property (EIP)

Means a property that is being used or has been used, in whole or in part, for an industrial use or for any of the following commercial uses, which may be amended from time to time by the Ministry of the Environment, Conservation and Parks:

- 1. As a garage;
- 2. As a bulk liquid dispensing facility, including a gasoline outlet; or
- 3. For the operation of dry-cleaning equipment.

If the property is currently used for an agricultural or other use, or a community use, an institutional use, a parkland use or a residential use it is not an EIP if an RSC has been filed in the Registry since it was last used for an industrial or one of the specified commercial uses.

Environmental Site Assessment (ESA)

Means in accordance with Part II of O. Reg 153/04, an investigation in relation to land to determine the environmental condition of property, and includes a Phase One Environmental Site Assessment and a Phase Two Environmental Site Assessment

Garage

Means a place or premises where motor vehicles are received for maintenance or repairs for compensation.

Gasoline Outlet

Means any premises to which the public is invited, at which gasoline or an associated product is sold and is put into fuel tanks or motor vehicles or floating motorized watercraft, or into portable containers.

Industrial Use

Means any of the following uses of land or of a building on the property for:

1. An enterprise or activity involving assembling, fabricating, manufacturing, processing, producing, storing, warehousing or distributing goods or raw materials;
2. In respect of the classification of occupancies in Table 3.1.2.1 of Division B of Ontario Regulation 332/12 (Building Code), use that falls within:
 - a) Group F, Division 1, high hazard industrial occupancies,
 - b) Group F, Division 2, medium hazard industrial occupancies, or
 - c) Group F, Division 3, low hazard industrial occupancies;
3. Research or development in association with an enterprise or activity described in paragraph 1;
4. The transportation of goods or people by railway or by airplane, but not including use for a gathering of people for travel purposes, such as use as a railway station or an airport passenger terminal;
5. A waste disposal site as defined in Section 25 of the *Environmental Protection Act*, except a site for organic soil conditioning as defined in regulation 347 of the Revised Regulations of Ontario, 1990 made under the Act;

6. In connection with sewage works described in subsection 53 (6.1) of the *Ontario Water Resources Act*;
7. Production of oil or gas, or mining or quarrying;
8. In connection with a water treatment facility;
9. In connection with a sewage treatment facility;
10. Use for the generation or transformation of electricity;
11. Use for the storage, maintenance, fueling or repair of equipment, vehicles or material used to maintain transportation systems;
12. Use as a salvage yard, including and automotive wrecking yard or premises;
13. Use of a building where both of the following circumstances apply:
 - a) The building was previously used for an industrial use, commercial use or community use.
 - b) The building is used for the cultivation, growing and harvesting of agricultural commodities, where the cultivation and growing of the agricultural commodities is achieved through hydroponics or other methods that do not rely on cultivating and growing the commodities using the soil from the property;

Institutional Use

Means any of the following uses of land or a building on the property for:

1. A day-care centre. within the meaning of the *Child Care and Early Years Act*, 2014;
2. A school as defined in the *Education Act*;
3. A private school as defined in the *Education Act*; or
4. A building on the property for an indoor gathering of people for religious purposes.

MECP

Means the Government of Ontario Ministry of the Environment, Conservation and Parks or its successors.

MECP Site Condition Standards (SCS)

Refers to the “Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*” published by the Ministry and dated April 15, 2011. It is anticipated that the Ministry’s criteria for the standards may be amended from time to time.

Mixed-Use Property, most sensitive use

Means if a property is used for more than one type of property use, the Site Condition Standards that are applicable to the property are the standards that are applicable to the most sensitive type of property use. O. Reg. 153/04, s. 3 (1).

The following rules apply in determining which type of property use is the most sensitive type of property use:

1. An agricultural or other use is the most sensitive of any type of property use; and
2. A residential use, parkland use, or institutional use is more sensitive than an industrial use, commercial use or community use. O. Reg. 153/04, s. 3 (2).

O.Reg. 153/04

Means Ontario Regulation 153/04, as amended "Records of Site Condition – Part XV.1 of the *Environmental Protection Act* made under the Act.

Parkland Use

Means any of the following uses of land or of a building on the property for:

1. Outdoor recreational activities, including use for a playground or a playing field;
2. A day camp, an overnight camp or an overnight camping facility;
3. An outdoor gathering of people for civic or social purposes; or
4. In respect of the classification of occupancies in Table 3.1.2.1. of Division B of Ontario Regulation 332/12 (Building Code), use that falls within Group A, Division 4, assembly occupancies in which occupants are gathered in the open air other than use for a stadium.

Peer Review

Means a process the Regional Municipality of Durham may use to ensure the sufficiency and accuracy of environmental documents and opinions submitted through ESA reports to support a planning application.

Peer Review Consultant

Refers to an environmental consultant (Qualified Person Risk Assessment) hired by the Regional Municipality of Durham to provide technical advice on contaminated development sites.

Phase One Environmental Site Assessment (Phase One ESA)

Means an assessment of property conducted in accordance with the regulations by or under the supervision of a qualified person to determine the likelihood that one or more contaminants have affected any land or water on, in or under the property. In accordance with Part VII of O. Reg. 153/04, a Phase One ESA shall include the following components:

1. A records review;
2. Interviews;
3. Site reconnaissance;
4. An evaluation of information from records review, interviews and site reconnaissance;
5. A Phase One ESA report; and
6. The submission of the Phase One ESA report to the owner of the Phase One Property.

Phase One Property

Means the property that is the subject of a Phase One Environmental Site Assessment.

Phase One Study Area

Means the area that includes a Phase One Property, any other property that is located, wholly or partly, within 250 metres from the nearest point on a boundary of the Phase One Property and any property that the Qualified Person determines should be included as part of the Phase One Study Area under clause 3 (1) (a) of Schedule D of O.Reg 153/04, as amended.

Phase Two Environmental Site Assessment (Phase Two ESA)

Means an assessment of property conducted in accordance with the regulations by or under the supervision of a qualified person to determine the location and concentration of one or more contaminants in the land or water on, in or under the property. In accordance with Part VIII of O. Reg. 153/04, a Phase Two ESA shall include the following components:

1. The planning of a site investigation;
2. A site investigation;
3. A review and evaluation of the information gathered through the site investigation;
4. A Phase Two Environmental Site Assessment report; and
5. The submission of the Phase Two Environmental Site Assessment report to the owner of the Phase Two Property.

Phase Two Property

Means the property that is the subject of a Phase Two Environmental Site Assessment.

Physical Development

For the purpose of this Protocol means the creation of a new lot a change in land use, or the construction of buildings and structures requiring approval under the *Planning Act*.

Potentially Contaminating Activity (PCA)

Means a use or activity set out in Column A of Table 2 of Schedule D of O.Reg. 153/04 that is occurring or has occurred in a Phase One Study Area.

Prescribed Change in Property Use

Refers to a proposed change in property use that is prohibited by the *Environmental Protection Act* and O.Reg. 153/04 unless a Record of Site Condition is filed on the Environmental Site Registry. The change in property uses that are prohibited are generally changes to more sensitive uses either between different Categories (Category 1 – Industrial, Commercial or Community to Category 2 – Residential, Parkland, Institutional, and/or Category 3 – Agricultural/Other Use) and/or within the same Category (e.g. an Industrial land use to a Commercial Day Care Establishment). The higher the Category number the more sensitive the land use.

Property Specific Standards

Refers to the development of Risk Assessment based site specific standards that are developed for a property when MECP Site Condition Standards are unobtainable physically or financially. The site-specific standards are approved by MECP at levels that protect the uses, such as residential, that are proposed for the property; see Risk Assessment (RA).

Qualified Person – Other than Risk Assessment (QP)

Means an individual who may conduct or supervise an ESA in accordance with the *Environmental Protection Act* (EPA) and O. Reg. 153/04, as amended. A Qualified Person also meets the qualifications prescribed in subsection 5(2) of O.Reg. 153/04, namely a person who:

1. Holds a license, limited license or temporary license under the *Professional Engineers Act*, or
2. Holds a certificate of registration under the *Professional Geoscientists Act*, 2000, and is a practicing member, temporary member, or limited member of the Association of Professional Geoscientists of Ontario

Section 5 of O.Reg. 153/04 outlines additional qualifications for a QP conducting a Phase One and/or Phase Two ESA.

Qualified Person – Risk Assessment (QPRA)

Means an individual who may conduct or supervise a Risk Assessment. Section 6 of O.Reg. 153/04 outlines the qualifications for a QP conducting a Risk Assessment (RA).

Region

Means the Regional Municipality of Durham or its successor.

Reliance Letter

Means the Regional Municipality of Durham's Regional letter, which must be copied onto the QP's Environmental Consulting Firm's letterhead and signed by the QP and a person who can bind the Consulting Firm, which allows the Region to rely upon the findings of the ESA report and any associated documents. The Regional Reliance Letter template form is provided in Appendix F of this Protocol.

Record of Site Condition (RSC)

Means a Record of Site Condition under Part XV.1 of the *Environmental Protection Act*. This document provides a summary of the environmental conditions of a property as certified by a QP at a certain point in time. It also provides the landowner with limited protection from environmental cleanup orders when filed in the Brownfields Environmental Site Registry (BESR).

Residential Use

Means any of the following uses of land or of a building on the property for:

1. A home or mobile home, or as a residence not otherwise described in this definition, but not including use as a hotel, motel, hostel or similar accommodation;
2. In respect of the classification of occupancies in Table 3.1.2.1. of Division B of Ontario Regulation 332/12 (Building Code), use that falls within:
 - a) Group B, Division 1, detention occupancies;
 - b) Group B, Division 2, care and treatment occupancies; or
 - c) Group B, Division 3, care occupancies;
3. A health care facility as defined in Ontario Regulation 170/03 made under the *Safe Drinking Water Act, 2002*;
4. A place of custody or detention for the purposes of the *Youth Criminal Justice Act* (Canada) or a correctional institution established or continued under section 14 of the *Ministry of Correctional Services Act*, whether the institution is operated or maintained by the Crown or any other person;

5. A penitentiary as defined in the *Corrections and Conditional Release Act* (Canada) or as a prison as defined in the *Prisons and Reformatories Act* (Canada); or
6. A residence associated with any of the following:
 - a) A university that is authorized to operate pursuant to section 3 of the *Postsecondary Education Choice and Excellence Act*, 2000;
 - b) A college established under the *Ontario Colleges of Applied Arts and Technology Act*, 2002;
 - c) A private career college as defined and approved under the *Private Career Colleges Act*. O. Reg. 153/04, s.1 (3); O. Reg. 511/09, s.1 (7,10,11,13); O. Reg. 179/11, s. 1 (2,3); and/or
 - d) A private career college as defined and approved under the *Private Career Colleges Act*. O. Reg. 153/04, s. 1 (3); O. Reg. 511/09, s. 1 (7, 10, 11, 13); O. Reg. 179/11, s. 1 (2, 3); O. Reg. 333/13, s. 1; O. Reg. 407/19, s. 1 (3-9).

Risk Assessment (RA)

Means a decommissioning approach which is conducted by a specialized Risk Assessment QP (RA) to assess the risks posed to humans, plants, wildlife and the natural environment by exposure to on site contaminants. The QP (RA) may recommend engineered measures to manage, control the movement of, or reduce the concentrations of contaminants over time. The QP (RA) may also recommend site specific environmental standards for the site including various monitoring and maintenance requirements implemented through a risk management plan.

Road

Means the part of a common or public highway, street, avenue, parkway, square, place, bridge, viaduct or trestle that is improved, designed or ordinarily used for regular traffic and includes the shoulder.

Site Remediation

Means to clean up a phase two property to an appropriate MECP Site Condition Standards to the satisfaction of either the Ministry of the Environment, Conservation and Parks and/or the Regional Municipality of Durham by completing the following:

1. Identify and assess cleanup options;
2. Provide a detailed design and implement the chosen cleanup option;
3. Provide confirmatory sampling and verify the completed cleanup; and
4. Provide a site remediation report following the cleanup.

The site remediation report may form the basis for filing a Record of Site Condition in the Ministry of the Environment, Conservation and Parks' Environmental Site Registry.

Site Screening Questionnaire (SSQ)

Refers to a form that must be completed by a Qualified Person and/or the Owner/Applicant for all planning applications (with certain exceptions) and/or non-potable groundwater standard requests submitted to the Region for comment and/or approval. The SSQ is an effective tool to help identify potentially contaminated sites.

TSSA

Means the Technical Safety Standards Authority or its successors.

Updated ESA Documents

Means updated ESA work that is typically provided in a report or letter format, prepared by a QP when the last ESA report completed for a Phase One Property was conducted more than 18 months prior to the submission of the planning application. Completion of the updated ESA work must ensure that the investigated site conditions have not substantially changed since the most recent ESA report and will not pose any adverse impacts on human health and the environment to the satisfaction of the Regional Municipality of Durham.



The Regional Municipality of Durham
605 Rossland Road East, Whitby, Ontario L1N 6A3
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www.durham.ca



The Regional Municipality of Durham Report

To: Planning and Economic Development Committee
From: Commissioner of Planning and Economic Development
Report: #2021-P-9
Date: April 6, 2021

Subject:

Durham Environmental Advisory Committee “Residents’ Guide to Climate Resiliency”

Recommendation:

That the Planning and Economic Development Committee recommends to Regional Council:

- A) That the Durham Environmental Advisory Committee’s “Residents’ Guide to Climate Resiliency” be endorsed; and
 - B) That a copy of DEAC’s “Residents’ Guide to Climate Resiliency” be forwarded to the Durham Region Roundtable on Climate Change, Durham’s area municipalities, area municipal environmental advisory committees, conservation authorities, school boards, BIAs, homeowners’ associations, condominium boards, property management groups, and real estate boards and associations.
-

Report:

1. Purpose

- 1.1 The purpose of this report is to present the new “Residents’ Guide to Climate Resiliency” prepared by the Durham Environmental Advisory Committee (DEAC).

2. Background

- 2.1 The DEAC’s 2020 and 2021 workplans included the development of a residents’ guide to climate resiliency as a high priority project.

- 2.2 Accordingly, DEAC assembled a subcommittee in late 2019 to prepare the Guide, including identifying a vision, conducting research, and developing content. The subcommittee comprised of five DEAC members over the course of the project, including: Jay Cuthbertson (Chair of the subcommittee), Geoff Carpentier, Keiko Lui, Susan Clearwater, and Dhruv Upadhyay (former youth member). The subcommittee was supported by the DEAC staff liaison, Aneesah Luqman, and the CAO's Office Climate Change Coordinator, Melanie Kawalec.
- 2.3 The result of their work is a well-written and informative document for which all involved are to be commended.

3. Previous Reports and Decisions

- 3.1 [2021-P-3](#) Durham Environmental Advisory Committee 2020 Annual Report and 2021 Workplan

4. The Residents' Guide to Climate Resiliency

- 4.1 The Guide is intended to provide residents with practical information on how to build climate resilience into their day-to-day lives and contribute to a cleaner and healthier Durham Region.
- 4.2 The Guide consists of eight sections, including:
- a. Your Home;
 - b. Food;
 - c. Waste;
 - d. Health and Wellness;
 - e. Transportation;
 - f. Water;
 - g. Energy; and
 - h. Businesses.
- 4.3 The Guide highlights various considerations and lifestyle choices pertaining to these areas that residents can incorporate around their home that will play a significant role in climate resiliency, as individuals and as a community.
- 4.4 The Guide will be available on the Region's website at www.durham.ca/DEACguide, and will be promoted through various communications methods, including the Region's social media platforms. Limited print copies will also be available at some Regional and Area Municipal facilities, and libraries.

5. Relationship to Strategic Plan

5.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

- a. Goal 1: Environmental Sustainability's objective: To protect the environment for the future by demonstrating leadership in sustainability and addressing climate change.

In addition, the Guide responds to Council's climate change declaration made on January 29, 2020, which embeds environmental sustainability and climate change as a Council priority.

6. Conclusion

6.1 DEAC is a Council-appointed citizen volunteer committee, reporting through the Planning and Economic Development Committee, to provide advice to Regional Council on the environmental impacts of land use planning decisions. DEAC undertakes initiatives to promote community outreach and stewardship through various activities across the Region.

6.2 In keeping with its broad mandate, DEAC has produced an informative Citizens' Guide to Climate Resiliency that will help Durham's residents and businesses take practical steps to make a meaningful difference in addressing the impacts of climate change.

6.3 It is recommended that DEAC's "Residents' Guide to Climate Resiliency" be endorsed and that a copy of this report be forwarded to the Durham Region Roundtable on Climate Change, all area municipalities, Durham's area municipal environmental advisory committees, conservation authorities, school boards, BIAs, homeowners' associations, condominium boards, property management groups, and Real Estate boards and associations.

7. Attachments

Attachment #1: DEAC Residents' Guide to Climate Resiliency

Respectfully submitted,

Original signed by

Brian Bridgeman, MCIP, RPP
Commissioner of Planning and
Economic Development

Recommended for Presentation to Committee

Original signed by

Elaine C. Baxter-Trahair
Chief Administrative Officer

climate

RESILIENCY

a resident's guide



Durham
Environmental
Advisory Committee



This guide has been prepared by the Durham Environmental Advisory Committee (DEAC). DEAC is a Council-appointed citizen volunteer committee that provides advice on the environmental impacts of planning matters and promotes community outreach and stewardship through various activities across the Region.

This document was authored by the following DEAC members:
G. Carpentier, J. Cuthbertson, S. Clearwater, K. Lui, and D. Upadhyay.

To learn more about DEAC, visit durham.ca/DEAC.

If this information is required in an accessible format, please contact
1-800-372-1102 extension 2551 or deac@durham.ca.





what's inside...



A photograph of a wooden boardwalk in a park during autumn. The boardwalk is made of dark wooden planks and is covered with fallen leaves in shades of yellow, orange, and red. On either side of the boardwalk is a dark metal fence with vertical bars. In the background, there are tall trees with vibrant autumn foliage. The sky is bright and slightly hazy.

introduction

We increasingly hear about climate change on the news, and from our friends and neighbours. We all impact the Earth's climate, but understanding what that means can be a challenge. This guide provides a general understanding of what climate change is and how it affects us as individuals and residents of Durham Region. Most importantly, this guide offers suggestions on what you can do at home and in your day-to-day life to help you better respond to, and prepare for the impacts of climate change.

What the concern is about

Let's start by understanding the difference between weather and climate. Weather refers to short-term changes in the atmosphere (e.g. day-to-day temperature, humidity, rainfall, and barometric pressure), while climate describes what the weather is like over a long period of time in a specific area – average weather, so to speak.

You have probably heard about greenhouse gases (GHGs), like carbon dioxide and methane, as much as you have about climate change, and this is for good reason.

When we talk about the problem of climate change, we are referring to the unprecedented rate at which the Earth's climate is warming because of rising concentrations of GHGs in our atmosphere. GHGs absorb energy from the Earth's surface and act like a greenhouse trapping heat in the atmosphere. This greenhouse effect results in temperatures on Earth that allow for life to exist here.

However, the problem now is that our activities have started to release GHGs at an alarming rate, which have led to worrisome changes in our climate. The build-up of these gases has led to more and more heat being trapped on Earth. As a consequence, we are experiencing a rise in global average temperatures that have shifted our climate, presenting us with the new challenges, including extreme weather.

Why you should care

Climate change challenges our status quo, in terms of what we are used to doing for our work, travel, leisure, food, health, and at home. There are many reasons for why you should care, and they are all closely tied to the climatic changes we can expect in Durham Region over the next two decades.

For example, along with warmer temperatures, we can anticipate hotter summers, higher wildfire risks, and more heat and air pollution alerts. As a result, we will need to pay greater attention to our health, especially those of us already at risk of heat stroke and respiratory conditions during heat waves and smog advisories. We also need to pay attention to our home, especially if we live in areas that may be vulnerable to wildfires.

Other key changes we can anticipate in the region include warmer, shorter winters with less snow but more rain, overall increased amounts and intensity of precipitation, and more extreme weather events such as tornadoes, violent storms, and floods. Building our resiliency to the challenges posed by climate change helps us become less vulnerable to its risks as individuals and as a society.

Let's consider the reasons why the climate might be changing and focus on what can and should be done to reduce our carbon footprints. The foundation of climate change is based on the release of carbon back into the environment at a rate that cannot naturally be controlled. Everything we do—eat, drink, drive, breathe, play, and shop—influences our carbon footprint. We cannot expect to ever reduce it to zero, but we can make it much smaller. Every small action will make a positive difference.

◀ **Image taken at:**
Petticoat Creek Conservation Area,
Pickering, ON

Looking ahead

Municipalities, such as Durham Region, are putting scientifically based strategies in place to predict what will happen in the next 10, 20, or 50 years. These predictions are like estimations that are used to help determine what the potential range of impacts is over long periods of time. While there will always be a degree of uncertainty which prevents us from being 100 per cent right, we can trust that science will help to most accurately tell us what to expect in the future.

As the title of this document implies, we, as residents of Durham, need to be resilient if we are to succeed in overcoming negative climatic impacts. We all have to be proactive and act innovatively to develop and implement our own solutions to improve the Earth so the impacts of carbon are minimized. We must not simply adapt and respond to changes forced on us by changes in climate.

What you can do about it

One of the difficulties we may face is that, although we want to help, we may not have the information on how to do so. We need to be prepared to examine our lifestyles and make informed choices where possible. How often and how far do we drive? Could we have walked or taken public transit instead? Do we buy products from companies with a huge carbon footprint? Do we recycle and compost? Do we challenge ourselves and our leaders to make wise and useful decisions that can actually produce useful outcomes?

This guide is intended to help you understand how your actions can both negatively and positively affect the climate. Thinking about the things you do, such as driving or buying new products, will help build an understanding of how to make changes that will offset the impacts of climate change. The guide will also help you take action by providing you with various options to pick and choose from, depending on what applies to you. The information that follows is organized into themes including your home, food, waste, health and wellness, transportation, water, energy, and business. So, let's get started!

Image taken in: North Pickering, ON ►

Cracks in the soil are an indicator of dry soil. Clay particles in this soil swell when they soak up water and then shrink when the soil dries out. If climate change results in rapid, but infrequent rain events, this will become a common sight on our landscape.





Key Terms

Climate Change

The Government of Canada defines climate change as “a long-term shift in weather conditions identified by changes in temperature, precipitation, winds, and other indicators. Climate change can involve both changes in average conditions and changes in variability, including, for example, extreme events”.¹ It occurs when long-term weather patterns are altered.²

Resilience

Resilience is strengthening the capacity of human and non-human systems, be it an individual, a forest, a city, or an economy, to withstand and respond to the changes in the Earth’s climate, and continue to develop while bridging the gap between adaptation and mitigation approaches.³

According to the Intergovernmental Panel on Climate Change (IPCC), it is also “the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions.”⁴

Adaptation

Natural Resources Canada defines adaptation to climate change as “any activity that reduces the negative impacts of climate change and/or takes advantage of new opportunities that may be presented”.⁵

The United Nations Framework Convention on Climate Change (UNFCCC) defines adaptation as “adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change”.⁶

Mitigation

Disaster mitigation measures are those that eliminate or reduce the impacts and risks of hazards through proactive measures taken before an emergency or disaster occurs.⁷

What is Durham doing?

The Region of Durham

On January 29, 2020, Durham Regional Council declared a [climate emergency](#), accelerating actions to reduce greenhouse gas (GHG) emissions. Council committed to embedding environmental sustainability and climate change as a factor in the decisions of Regional Council, in daily operations, and as a strategic priority.

The following principles will guide future responses linked to climate:

- Regional infrastructure, programs, and services are low carbon and resilient to climate impacts.
- Climate change considerations are included in business planning for both municipal governments and the broader public sector, as well as private sector organizations.
- Citizens, businesses, and public sector organizations are aware of climate change, and have the knowledge, skills, and resources to take action.
- Initiatives with the greatest value added are put into action based on cost effectiveness and co-benefit the Region's economic and social priorities.
- Durham Region sustains itself as an attractive place to live and invest, and strives to be a leader in climate action.

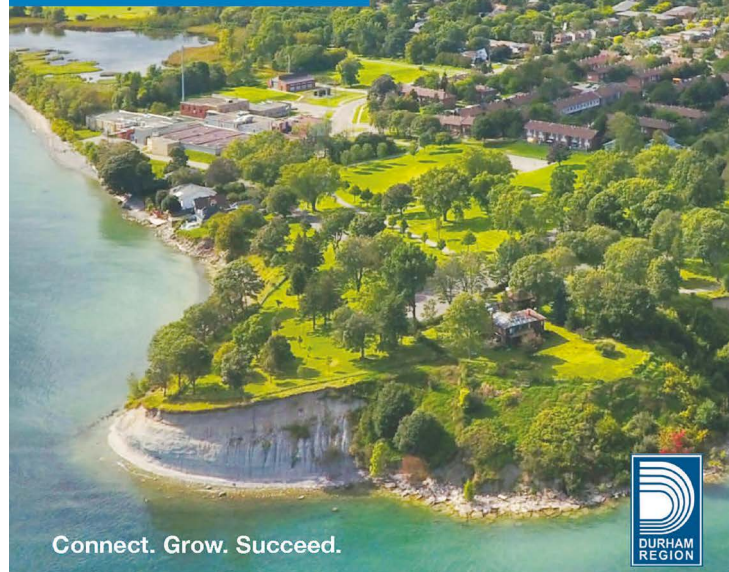
Additional plans that focus specifically on climate change are outlined below.

Durham Strategic Plan

Regional Council adopted the [Durham Region Strategic Plan 2020-2024](#) in March 2020. This Plan identifies five goal areas, namely Environmental Sustainability, Community Vitality, Economic Prosperity, Social Investment, and Service Excellence. Actions identified to meet the environmental goal include:

- Adopt green technologies and clean energy solutions faster through strategic ►

Durham Region Strategic Plan 2020-2024



Connect. Grow. Succeed.



FROM VISION TO ACTION

Region of Durham
Community Climate Change
Local Action Plan 2012



If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2600.

Seizing the opportunity:

The Clean Energy Economy in Durham

PART 1: THE PLAN

DURHAM
COMMUNITY
ENERGY
PLAN

SSC SUSTAINABILITY
SOLUTIONSGROUP
whatIf?



TOWARDS RESILIENCE

Durham Community
Climate Adaptation Plan 2016

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2600.

The Durham Community Climate Change Local Action Plan includes the following vision and mission:

“ **Vision:** Durham Region is a carbon-neutral, sustainable, prosperous, and resilient community with a high quality of life.

Mission: Work with our community to develop and advocate innovative policies, strategies and actions that address the threat of climate change.



KEEPING OUR COOL

Managing Urban Heat Islands in Durham Region
2018



- partnerships and investment.
- Increase waste diversion and resource recovery.
- Protect, preserve, and restore the natural environment, including greenspaces, waterways, parks, trails, and farmlands.
- Be a leader in sustainability and addressing climate change.
- Expand sustainable and active transportation.

Durham Community Climate Change Local Action Plan

Regional Council adopted the [Durham Community Climate Change Local Action Plan](#) and set community GHG emission reduction targets that are consistent with the Intergovernmental Panel on Climate Change (IPCC) that will limit global warming to 2°C in an attempt to prevent catastrophic change to the climate.

Durham Community Energy Plan

The [Durham Community Energy Plan](#) recommends a Low Carbon Pathway identifying six key programs that will help to significantly reduce GHG emissions while growing the local economy.

Durham Community Climate Adaptation Plan

The Region has a [Community Climate Adaptation Plan](#) that outlines 18 actions to be undertaken to ensure Durham remains a livable, resilient, and prosperous community.

Urban Heat Islands Study

Urban Heat Islands happen when pockets of higher temperatures occur, usually in urban areas because of higher density development without green spaces. These urban heat islands have health, social, economic, and environmental impacts. Refer to [Keeping our Cool – Managing Urban Heat Islands in Durham Region](#) for more information.

Proposed Mixed Waste Pre-sort and Anaerobic digestion (AD) Facility

At the time of publishing this guide, Durham Regional Council approved the development of a Mixed Waste Pre-sort and Anaerobic Digestion (AD) Facility. The facility will remove non-combustible materials and capture additional recyclables from the waste stream, helping increase our diversion rate while freeing up capacity at the Durham York Energy Centre.

Anaerobic digestion is a natural composting process that breaks down organic material into compost, producing methane as a byproduct. This methane can be collected and added to natural gas, creating renewable natural gas. You can track the progress of this project online on the [Region's webpage on Anaerobic Digestion](#).

LEAF Program

The [Local Enhancement and Appreciation of Forests Program](#), or LEAF, supports landowners to plant more trees through their subsidized Backyard Tree Planting Program. LEAF is committed to protecting and improving our urban tree cover through planting, education, and training. They provide support to landowners to restore and improve properties by planting native trees and shrubs that help to provide a windbreak, absorb water where it falls, and reduce soil erosion.





Local Municipalities

The Region and local municipalities, including Ajax, Brock, Clarington, Oshawa, Pickering, Scugog, Uxbridge, and Whitby, are actively engaged in climate change initiatives, including the following:

- Durham Region, together with local municipalities, was awarded funding to install 60 level two electric vehicle chargers in public spaces for community use.
- The Region and the Town of Whitby are developing a Low Carbon Fleet Strategy for their corporate fleets.
- Durham Region Transit is piloting eight electric buses.
- Durham Region is investigating rooftop solar photovoltaic opportunities.
- The Town of Whitby approved a Green Development Standard.

Local municipalities may have further information regarding ongoing projects on their websites. Visit your municipality's website for details.

What can you do?

A [2014 survey of Canadian homes](#) found that Canadians were concerned about threats of severe weather, power outages, disease outbreak, industrial or transportation accidents, contamination or shortages of food and water, floods, and earthquakes. More broadly, the World Economic Forum 2020 Risk Registry published this [infographic](#) to communicate the most likely risks in the next decade.

In the survey of Canadians, only 47 per cent of households had emergency supply kits. The quality and duration of this survey was not noted in the published results.

The lists in this guide are not meant to cause fear but are meant to start a conversation around our changing climate and to help build a resilient community that works together to mitigate and adapt to its impacts.

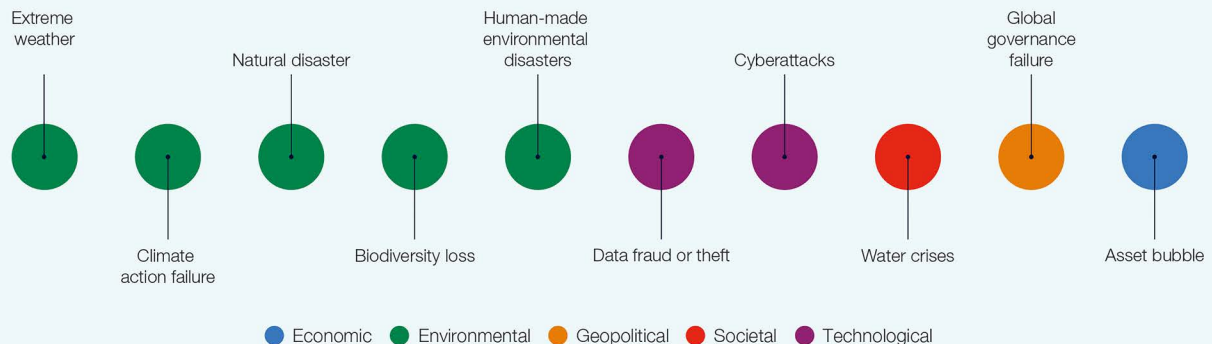
How big is your circle of community? In some ways it can be difficult to expand it, but the widespread use of video conferencing has opened up a new avenue to meet people, attend group chats, webinars, or conferences. You may even consider joining a club or sharing your thoughts on climate resilience with friends and family.

TOP 10 RISKS OVER THE NEXT 10 YEARS

Long-Term Risk Outlook: Likelihood



Multistakeholders





your home

Home is often where we feel safest and tends to be the largest single monetary commitment we will make in our lives. Whether you rent or own a house, condo, or apartment, it's important to look ahead and set yourself and your family up for the best chances of effectively responding to the impacts of climate change.

Why it's important

The weather in recent years has been unusual compared to past trends in local climate. A [study](#) on future climate conducted by SENES Consultants for the Region of Durham indicates that the coming decades will be “wilder, warmer, and wetter”. Without preparation, this will mean increased use of air conditioning, a risk of wet basements due to flooding, and storm damage. Insurance companies are paying attention to the changes in climate and this could mean rate increases or reduced coverage in risky areas.

What to expect in the next 20 years

Changes to our local climate are expected to be relatively moderate compared to tropical regions thanks, in part, to the calming effects of the Great Lakes. We can expect far less snow and much more rain in the winter, reduced wind chill, as well as shorter and warmer winters overall. Summers will have many more heat alerts, dangerously high humidex on occasion, and more rain in July and August.

What you can do about it

When buying a new home

- **Stay informed.** Consider flood potential and good drainage around your home. If you are buying a newly built home, ask your local municipality or conservation authority what the 100 year high water mark is, especially if the home is near a lake, creek, or body of water, and ask if your home is located above that. Ask your builder if they have considered this during construction.

An R-value is an indicator of how well building materials, such as insulation, retain heat in your home, and is based on the thickness and density of the material. The higher the R-value, the more effective it is in preventing the flow and transfer of heat to the outside or inside of your home.

- **Now is the best time to insulate your house.** Ask about increasing the R value in the walls, attic, and windows. This incremental increase can make a significant difference in your home's ability to retain heat. The cost of materials for triple pane, gas filled windows are only 10 to 15 per cent more expensive compared to standard windows, but will increase insulation by 25 per cent or more.
- **Exterior insulation** under the slab, footing, and around the basement can retain significant heat and provide thermal mass, which will moderate indoor temperatures.
- **Consider buried electrical service.** It is more reliable during extreme weather.

Buried electrical service refers to underground cables that connect your home to the utility pole, as opposed to overhead wires that are susceptible to extreme weather impacts such as heavy wind or snowfall.

- **Shine some sunlight on the solar aspect.** How does the sun hit your home? Facing south will be bright year-round; but in the summer, it could be a burden on your air conditioner, wallet, and comfort without shade from trees or awnings. Similar to southern exposure, facing west will bring increased heat in the evening, so you may consider windows that reflect more UV and are shaded. Eastern exposure will warm early in the day though it will be less noticeable. Windows on the north will lose a lot of heat in the winter. For this reason, you may wish to consider smaller windows and/or higher R value for your walls, attic, and windows.
- **Choosing lighter coloured roofing** over dark will reduce heat loading in the summer.
- **Consider using efficient electrical appliances** like induction stoves and air-to-air heat pumps instead of gas stoves and furnaces. The Ontario electrical grid has a low carbon footprint.
- **Heat mitigation** through passive (trees, awnings, overhangs, insulation) and active (air conditioning, generator back-up) sources should be considered when making decisions about your home, especially if personal health or age is, or could become a concern.



Renovations

- **Consider investing in more insulation**, robust roofing, southern awnings or overhangs, and tree preservation or planting. Many of the considerations for new homes will also apply for renovations.
- **Look for changes made by previous owners** that might put you at risk, such as drainage swales filled in, downspouts not routed away from homes, or basement repairs that might indicate drainage or flooding problems.

As outlined earlier in this guide, **the urban heat island effect** refers to the warmer temperatures in an area that result from light-absorbing and impermeable surfaces in our built environment. See [Durham Region's Urban Heat Islands Study](#) for more information.

- **Reduce heat generated by your property** to reduce the urban heat island effect and lower overall temperatures.
 - **Using building material that is light in colour or has a high-reflectivity coating** on your driveway, roof, or house exterior will reflect more sunlight (rather than absorb it). This will reduce temperatures around your property, which you may appreciate in the heat of the summer! Traditional materials used for building roads, parking lots, and houses like asphalt, steel, and brick are often dark in colour and absorb all wavelengths of light from the sun and convert it into heat.
 - **Increasing the proportion of your property that is vegetated** will enable water to cycle through naturally, and result in evaporative cooling. Other permeable materials you can use include mulch, gravel, and paver stones designed to let grass and ground cover grow through. This combats higher temperatures that result from impervious surfaces where water cannot flow through and evaporate, which is what happens in a natural water cycle and enables cooling to take place.
 - **Adding permeable surfaces on your property**, such as your driveway for example, allows more natural rainwater filtration as well as better mitigation and control of stormwater runoff which is important for reducing the risk of flooding. It also prevents potential contaminants from entering storm drains. This is covered in greater detail in the Water section.

Trees

- **Planting deciduous trees south and west of your home** will help with summer shade, while allowing winter sunlight and heat through. Locusts are a good choice for their fast growth, hardiness, and dappled shade which will allow grass or other plants to grow underneath.
- **Planting evergreens to the north of your home** will block cold winds and reduce heat loss. This can also delay frost and increase the number of growing days in your garden. Trees are a great investment and when planted properly (by removing nursery baskets, having a doughnut of mulch, and regular watering while establishing) will grow quickly, increase in value, utility, and beauty.



food

While the most significant climate impact mitigation is fueled at the policy and systems level, our food choices are a major factor in our individual and collective environmental impact. This is good news because it means our individual choices can make a difference. As transport is a significant component of society, consider learning more about local food options like Community Supported Agriculture (CSA) food shares and think about starting your own small garden. A packet of seeds costs as much as a handful of herbs from the store. With this equivalent investment, you can have a season's worth of fresh, tasty, and more nutrient packed greens at home. The money you can save by growing a herb garden will surprise you, and the nutrient-dense and flavour-packed produce will seal the deal.

In our global economy, supply lines stretch across the oceans, wind through superhighways, and plod up major rivers. These complex systems are efficient and provide us with produce and supplies which, only a few decades ago, were seasonal, or unavailable. These systems are not fool-proof and are subject to our changing climate. In 2012-13 the drought in the United States reduced the level of the Mississippi River to historic lows and endangered the shipping of 60 per cent of that country's grain among other commodities.⁸

What you can do about it

We can start to build our household resilience through new skills. Starting small is a great way to go; and even better if you can enlist family or friends to try it too. By beginning, we start to build our household resilience through new skills while yielding a new source of fresh food for you and your family. If you aren't sure where to put your plants, perhaps you have some empty containers, planters or a patch of grass? Start there and reach out to your circle of contacts for help. Locally, there are groups like D.I.G. (Durham Integrated Growers) that can assist with knowledge or a place to grow. There are endless resources online through YouTube, Facebook, Reddit, or other platforms that can help you get started. Here are some more ways:

- **Consider occasionally exchanging proteins from meat sources for a plant-based option like lentils, or beans** – you won't believe how delicious lentil tacos taste! Our protein sources (meat) are often highlighted in the news and documentaries and can be confusing. Factory farmed meat is known to have a negative impact on the environment, but is often a necessity for many families. Another option is sourcing your meat from a farmer who incorporates sustainable practices like regenerative grazing or holistic land management. These practices increase the health of the soil, animals, and ultimately the health ►





and flavour of the food. Learn more about sourcing local food from Durham farms on the [Invest Durham Local Food webpage](#). Beef from sustainable sources are a net benefit to the environment, net sequestering more carbon in the soil than methane emitted by the animals.^{9,10,11}

Did you know?

Some greenhouse gases are more harmful to the climate than others? For example, methane is 21 times more potent than carbon dioxide in its ability to trap heat in the atmosphere. Methane emissions in our hands, so to speak, come from landfills, sewage, and animal waste, including burps and farts.

- **Backyard layer hens** are another option that's gaining popularity. They are permitted in Durham if your property is located within a Prime Agricultural area, but make sure to check with your local municipal Official Plan and zoning by-laws first. Raising your own chickens means delicious eggs; and as a bonus, it is a great use of your lawn and kitchen scraps to supplement their feed.
- **Reduce your intake of toxic chemicals** by trying to buy organic produce, or trying to purchase from a local farmer who practices regenerative techniques. Durham Region has buying groups, food co-ops, farmers markets, and Consumer Supported Agriculture (CSA). Visit [Durham Farm Fresh](#) for more information. An easy way to try organic produce is to start with the most often contaminated foods, or "[The Dirty Dozen](#)".

Making food changes one step at a time is a great idea. Try incorporating "Meatless Mondays" into your week, especially if you have picky eaters in the house. Remember, this is a journey, not a race. The internet is a fantastic resource for recipes, gardening advice, and household resiliency that can help you along the way. In the end, consider the advice of Food Inc. author Michael Pollan, "eat food (that your great grandparents would recognize), not too much and mostly plants".



waste

We, as a society, generate a lot of waste. Whether it's food that is left over or gone bad, yard waste from gardening activities, the newspapers we read, packaging material from deliveries, fast food containers, or a range of other conveniences that we simply have come to accept as part of our lifestyle. It's all waste and it must be managed.

Why you should care

Why do we care if we produce a lot of waste in the first place? The earth is a big place and we have lots of space in Canada – right? Actually, no, it takes huge amounts of energy to produce new products, including food or conveniences to make our lives easier. If we bought less, then less would have to be produced to replace the items we already own. Many things are designed to break down over (sometimes) short periods of time. Innovative products, particularly electronic ones, change at an alarming rate to feed the insatiable appetite of modern consumers. That means that millions of useful phones, TVs and tablets are thrown away annually, not because they're broken, but because the new model is slightly better. Not only do we use energy to make new things, we also use energy to carry away and dispose of old items too. Even if it goes to recycling centres, energy will still be used to recycle what we can. The energy for all these activities is primarily fossil-fuel based, which releases carbon into the environment. When the material gets to the landfill for final disposal, more greenhouse gases will be released into the atmosphere over time.

Did you know?

The Region donates used Regional mobile devices to the Canadian National Institute for the Blind (CNIB) for use by persons with visual impairment.

The Region also takes steps to ensure other used IT equipment is disposed securely in an environmentally conscious manner.

The Paris Agreement is an international treaty on climate change adopted by 195 countries—including Canada—on December 12, 2015. Its goal is to limit global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels. The Paris Agreement also aims to foster climate resilience and lower greenhouse gas development, as well as to make climate flows consistent with a pathway toward a lower carbon future.¹²

Under the agreement, countries are required to take action on both climate mitigation and adaptation by implementing their nationally determined climate actions.¹³

What to expect in the next 20 years

At the rate the western world is developing and the desire for better, faster, and more innovative products increases, our impact on the environment will continue to grow. Even in the past one to two years, despite our best efforts, more mega-tonnes of carbon were produced in Canada than before the Paris Agreement. We must do better!

To achieve this long-term temperature goal, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century.



What you can do about it

- **Consciously think about every new purchase.** Do you need a new TV or is the old one okay for now? Is that new cell phone really worth the harmful impacts that will arise from its manufacture and delivery to your door?
- **Insist on less packaging when you decide to buy a new product.** If you think something is over packaged, contact the manufacturer and insist they use less packaging in their products. Support stores that consciously use suppliers with a smaller carbon footprint.
- **When shopping, always bring your own reusable bags,** even if the store doesn't charge for disposable ones.
- **Think of your own innovative solutions to reuse packaging material.** For example, use cardboard as a weed retardant in your garden or use shipping 'peanuts' to package valuables for storage or shipping. Empty yogurt containers can ►
be used to store leftovers in the fridge or freezer, or painted and used for plants or storage around the house.
- **Recycle as much as you can,** even when you travel. When at a fast food restaurant, before disposing of leftovers and packaging in the trash, ask if they offer recycling and compost options. Ask the store if they plan to offer recycling and compost options; and let them know about competitors who do. Work with your municipality to find new markets and uses for often wasted materials, such as Styrofoam and plastic bags.
- **Support sharing and donation opportunities for used products.** Visit and donate to ReStores, thrift stores, and Freecycle sites where ►

White Elephant sales refer to sales that are organized by social or community groups, typically for the purpose of fundraising towards a social or community-related cause.



people can gift used items, or to White Elephant sales in your area.

- **Don't forget to manage your own yard waste.** Save yourself an afternoon of work and use a mulching mower instead of raking your leaves or grass clippings. Leaving them in place naturally builds more fertile soil and avoids the need to buy unfriendly carbon-generating synthetic fertilizers for your lawn. Take advantage of your municipality's yard waste collection program as they will use it to provide nutrient-rich compost for others to use.
- **Think of other easy solutions for waste reduction**, such as:
 - Use newspaper or used egg cartons to line your green bin. See Durham Region's [webpage on Garbage, Recycling, Green Bin, and Other Collection](#) for more information on how to safely dispose of your waste.
 - Use reusable and clearly labelled open-top containers to put out your yard waste, ►

rather than manufactured single use yard waste bags. The energy it took to produce containers is minimal compared to the annual saving their use will create.

- Do you really need a straw for your drink? Bring your own coffee mug to the coffee shop and have it refilled. You can also carry your own water bottle and reusable straw everywhere.
- When dining in at a fast food store, ask for glass or china plates and cups rather than disposable ones, where available.
- Share a newspaper or magazine with your neighbour, doctor's office, or school – multiple readers mean less waste.

This is just an introduction to the many things you can do to reduce your waste footprint. There are great books and resources available with more ideas (included in the Suggested Readings section of this guide). We know you can think of lots more!



health and wellness

The physical and mental health consequences of climate change can impact healthy people and exacerbate illnesses in people with pre-existing health conditions. It is important to know about the health risks associated with climate change so that we can be proactive in being resilient and staying healthy.

Why you should care

Many human health issues are influenced by weather and climate conditions; so the more we know about the risks a changing climate poses to our well-being, the better we can look after ourselves. The information below describes what we can expect in the next 20 years in terms of climate change in Durham, as well as what you can do to help increase your resilience to climate-related health risks.

What to expect in the next 20 years

Over the next two decades, we can plan on several climatic changes to occur in Durham's climate. Key changes include hotter summers, shorter winters, increased precipitation, and more extreme weather events over time. Some of the changes mean greater frequency of heat waves, higher risk of wildfires, and greater number and duration of air pollution events. The consequences include increased incidences of heat exhaustion, heat stroke, respiratory conditions, cardiovascular disorders, and fire-related injuries.

In addition to the damage to our infrastructure, more extreme weather events such as rainstorms and tornadoes put us at a greater risk of injuries and illnesses associated with mudslides, floods, fallen trees and structures, contaminated drinking water, and spoiled food supplies.

The changes in climate are also expected to alter our ecology, which, in turn, impacts the presence and persistence of pathogens and diseases in our environment. We face greater risks of new pathogens emerging and more outbreaks in diseases occurring, which have the potential to greatly impact water quality, food availability, and overall human health.

Fortunately, you can do something about it. Taking action, as described below, can help you to strengthen the overall capacity and resilience needed to meet the health challenges ahead.

What you can do about it

- **Take care of yourself.** Maintaining your health as best as you can on a regular basis is priceless when it comes to being resilient. The healthier you are, the more capable you will be to endure unexpected, difficult events. Good health enables you to recover from injury or illness and it puts you in a position to be able to help others around you who cannot help themselves.
- **Plan to be cool when it's hot.** With the risk of hotter summers and more heat waves, it is important to ensure you have a way to stay out of the heat and keep cool.
 - Having air conditioning (A/C) in your home is ideal, especially if it is central A/C generated from an energy efficient unit. If home A/C is not feasible, plan to have access to a local cooling centre or even a nearby shopping centre in times of extreme temperature highs to reduce the risk of heat related illnesses such as heat stroke and heat exhaustion.
 - Avoid being outdoors during peak temperature times of the day, especially while gardening, exercising, or doing outdoor activities. It's also important to stay hydrated.
 - Consider planting trees around your home that will eventually form a canopy cover and shade for an overall cooling effect on your home. Read more in the "Your Home" section of this guide.
- **Beware of your wildfire risks.** In Ontario, fire season spans April to October. Stay informed of local alerts, municipal fire bans, and restricted fire zones if you live in an area prone to wildfires. The Province of Ontario has an [interactive fire map](#) that shows areas of high fire danger. Online resources such as [FireSmart Canada](#) and the [Canadian Red Cross](#) provide detailed information on precautions you can take to be prepared and protected. If you plan to burn wood, brush, leaves, and grass during fire season, make sure you obtain the necessary fire permit from your municipality and know how to burn safely.
- **Minimize your exposure to pathogens.** Climate change is expected to place us at greater risk of disease and illness caused by ►

pathogens in our environment. Because of increased potential in the frequency and type of disease outbreaks projected, it is prudent to do what we can to minimize our exposure.

- West Nile virus is known to be transmitted from mosquitoes to humans; so it is important to eliminate stagnant pools of water in your yard where mosquitoes can breed, in order to reduce the risk of exposure to the virus. Puddles as small as a hockey puck can be used as breeding pools for mosquito larva.
- Lyme disease is caused by a pathogen that is transmitted from a very small wood tick to humans typically when people hike through forested areas known to harbour the pathogen. Find out if your area is identified at risk of Lyme disease using the Ontario Lyme Disease Map, updated annually on the [Public Health Ontario Lyme Disease webpage](#). Stay informed of local incidences or posted warnings that can help you to avoid contracting the disease. Reduce your overall exposure to the pathogen-carrying ticks when venturing into the woods by wearing long pants that are tucked tightly into socks, a long-sleeved shirt that is tucked into your pants, and wearing a hat. Extra precautions include spraying your clothing with DEET.
- In times when we're dealing with new, unknown diseases, the best we can do is be in the habit of good overall hygiene practices, including diligent hand washing, practicing safe coughing and sneezing etiquette, disinfecting high traffic germ surfaces, wearing a mask, and avoiding touching your face –especially in public places. You may also consider having a basic supply of personal protective equipment like face masks and sterile latex gloves in your home or car.





- **Strengthen emergency capabilities at home.** Maintaining your well-being is a priority, especially in crisis. With unprecedented times and more uncertainties ahead, help yourself and loved ones with overall emergency preparedness.
 - With more extreme weather events anticipated, there is an increased risk of system-wide power outages. Having a back-up home power generator, or an off-the-grid source of green energy, such as solar panels installed on your property, will help serve essential electricity needs at home in the event of a power outage. If this is not feasible, consider making plans in advance with nearby neighbours or family members as an alternative for safe shelter, if and when it becomes necessary.
 - Having emergency first aid and CPR training and a first aid kit can prepare you with the basic skills to help others in your household or neighbourhood in case someone is injured.
 - If you or your dependents have pre-existing health conditions that require medication, ensure you have a small, back-up supply of necessary prescriptions at home, if possible, in case you run out of medicine and cannot access more right away. Make sure to keep an eye on the expiry dates.
 - Keep an emergency supply of basic necessities at home that will help you during emergency situations when you may have to go without power, or access to amenities for an unknown length of time.

The most basic necessities to keep as an emergency supply at home include clean drinking water, non-perishable foods, a first aid kit, personal protective equipment, matches and candles, prescription drugs, battery- or manually-powered radio, and a means for communicating with people outside of your household (whether cell phone or walkie-talkie).



transportation

We make transportation-related decisions daily about how, where, and when we travel to work, school, for shopping, and other daily needs. The information provided in this section is intended to help you make transportation choices that reduce your carbon footprint and build resiliency into your everyday life.

Why you should care

In Ontario, road transportation makes up almost half of the province's carbon emissions – a large portion of which is caused by personal vehicles.

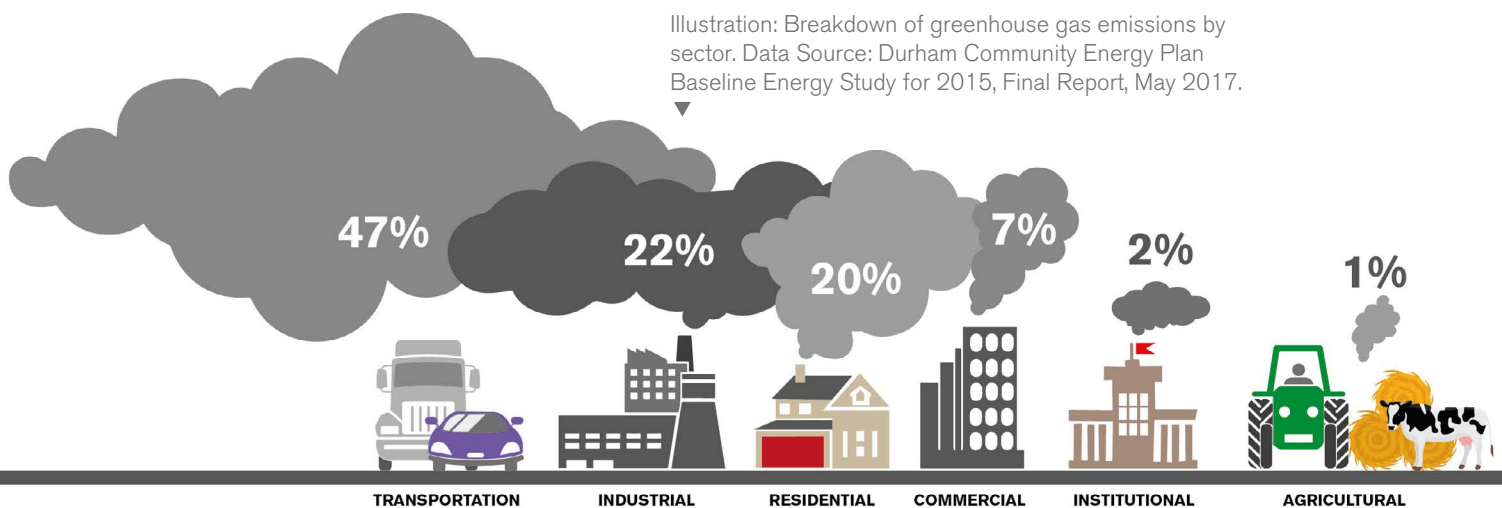
The greenhouse gas (GHG) emissions, for which we are responsible, have driven change in our climate and will continue to do so over the course of our lifetime. Taking steps to reduce our GHG emissions and broaden our transportation choices helps in lessening the expected impacts of climate change on ourselves and our loved ones. For example, in the Region of Durham, we can anticipate greater risks of tornadoes, violent storms, and the resulting flooding of roads and destruction of bridges that we rely on for daily transportation.

By choosing travel alternatives, like the ones described in this section, we can build resiliency that strengthens our capacity to meet our transportation needs in both the present and the future.

What to expect in the next 20 years

Durham is home to just over 704,000 residents based on 2020 reporting; and is expected to grow to 1.3 million people by the year 2051 according to the Growth Plan for the Greater Golden Horseshoe, placing more pressure than ever on our transportation system. Over this same time period, there are key changes to the Region's climate we can anticipate, including more extreme weather events, and increased amounts and intensity of precipitation. This means an increased risk of weather-related disruptions, such as tornadoes and floods, causing traffic congestion.

Fortunately, we can do something about it. We can help ourselves and each other to be resilient and less vulnerable to the uncertainty of climate change while reducing the negative impact we have on our environment.



◀ Image taken on:
Multi-use pathway on
Garden Street, Whitby ON



What you can do about it

- **Walk.** In sunshine, rain or snow, most people have walked through all sorts of weather and arrived alive and well at their destination, whether it be school, work, the corner store, or a friend's house a few blocks away. On average, a person can walk one kilometre in 10 minutes. Although walking may not always be feasible for everyone all of the time, consider walking for shorter distance trips more often. Remember, you can probably cover three kilometres in just a half hour.
- **Ride your bike.** Cycling can be the fastest way to travel in the city, especially during rush hours. In 10 minutes, a person can bike approximately 3.5 kilometres on average. Anyone riding a bike can take advantage of roads that have bike lanes and multi-use paths, while also saving on fuel costs by not driving a car.
- **Ride on Durham Region Transit (DRT).** DRT provides transit services throughout the entire region and is your best alternative to a car. Trading in your car for a transit pass may put you outside of your comfort zone, especially if you are new to transit, or if it has been some time since your last trip. Instead of opting out entirely, start by making one trip each week. While one trip's worth may not seem like a big deal, it's the cumulative impact of trips over a year, a decade, and a lifetime that adds up to make a difference!

As a bonus, a trip on public transit always involves active transportation. Transit stops are easily accessible by walking and many stops also include bike racks. You may also consider taking your bike with you by using the bike rack on the front of the bus.

Visit the [Durham Region Transit website](#) or contact DRT'S customer service team at 1-866-247-0055 for help with trip planning, schedules, fare options, and other information to make your trip a success.

Plan your trip using [Transit \(app\)](#). Transit is DRT's official trip planning application for your travel needs in Durham Region, the Greater Toronto and Hamilton Area, and beyond. Use the app by entering your start and end locations and the time you want to travel. It will check nearby bus routes, On Demand services, walking routes, and more, to provide you with multiple options to serve your travel needs. Transit is available on [Google Play](#) and the [App Store](#).



- **Carpool.** Two or more people sharing a ride is better than one person driving a car alone because it helps alleviate traffic congestion on our roads and reduces the carbon footprint per person. Carpoolers can take advantage of High Occupancy Vehicle (HOV) lanes and the many commuter lots (e.g. park-and-ride lots) available around Durham Region that may be used as transit stops, transfer locations, or carpool parking lots for free. Visit the [Region of Durham's Carpooling page](#) for information and maps of available carpool parking lots.
- **Electric vehicles (EVs)** are powered 100 per cent by an electric motor and battery, and are charged using the power in Ontario's low carbon electrical grid through electric vehicle charging stations. EVs are significantly cheaper to fuel and maintain than internal combustion engines.¹⁴ Most EVs can travel 200-250 kilometres on a full charge, with some models capable of 400+ kilometre distances. When available, government rebates provide incentives to assist consumers in this choice. Learn more about incentives and find a map of existing public EV Charging stations in Canada on [Transport Canada's page on zero-emission vehicles.](#)
- **Hybrid vehicles.** Hybrid-electric vehicles (hybrids) use both a conventional gas-powered engine and an electric motor. Hybrids have battery packs that are charged with electricity generated by the vehicle. Hybrids run on zero-emission when in electric-only mode and they are more efficient than their conventional counterparts with fuel savings of 20 to 40 per cent compared to gas-only cars.

Choosing a hybrid or EV helps us with resiliency in terms of being able to meet our transportation needs in the present and the future. That is because gasoline and diesel are highly prone to unpredictable prices and major fuel producers are already looking to shift away from this non-renewable resource

toward alternative, low-carbon, renewable energy sources.

- **Telecommuting.** Working remotely from home, also known as telecommuting or teleworking, reduces the number of trips a person makes throughout the week. It is a trending option, especially after the start of the COVID-19 pandemic, which resulted in many employers shifting their staff to working from home in an effort to maintain business productivity while ensuring the safety of their staff.

Instead of physically commuting to your workplace, opt to work from home whenever you can, if feasible. If you do not have a teleworking program set up at work, talk to your team about joining the Smart Mobility Durham program. It builds resilience into your ability to work while helping reduce traffic issues and your carbon footprint.

- **Alternative work scheduling.** To help reduce peak period travel, more and more employers are open to alternative work hours for their employees. Instead of nine to five office hours and five day work weeks, where feasible, consider making arrangements to come into work at off peak times like seven to three or ten to six, or even to work a longer day but shorter work week (such as four days at work and three days off).

Smart Mobility Durham is a program offered by the Region of Durham that works with employers to help their staff travel to work in healthier and sustainable ways. Programs include promoting active transportation such as walking and cycling, and helping to setup teleworking and alternative work arrangements.



water

The possible impact of climate change is well documented with respect to runoff, river flows, lake levels, and extreme weather events. Less attention has been given to urban water use. Canadians have the second-highest water consumption rates in the world, and it's quickly becoming apparent that water isn't an unlimited resource.

Water Conservation

Climate change appears in the form of weather extremes involving too much or too little rain. It is therefore important to know how you can conserve water in the event of a drought induced by changes in climate.

The average Ontarian uses 225 litres of water daily per person which is nearly twice as much as people in Germany (120 litres per day) and 50 per cent more than residents of the United Kingdom (150 litres per day). Households account for nearly 60 per cent of municipal water use, with almost two thirds of that used in the bathroom for flushing toilets and bathing.

Why conserve water?

Conserving water helps prevent GHG emissions that occur when treating and distributing water. Clean drinking water is essential to our health, the environment, and economic well-being. Four great reasons to use less water are to:

1. Preserve water for future generations.
2. Fight climate change.
3. Save money.
4. Reduce energy use and costs for distribution.

Overloading municipal sewer systems can also cause untreated sewage to flow into lakes and rivers. In some communities, costly sewage system expansions have been avoided simply by community household water conservation and the wise use of our water resources.

What you can do about it

- **Leaks.** Stop leaks by replacing worn out washers on your faucets.
 - Toilet leaks: To determine if you have a leak in your toilet, put a few drops of food coloring in the tank and if the color shows up in the bowl after a few minutes, it may be time for a new flapper valve. If the toilet is leaking around the base, you may need to call a professional to repair the leak.
 - Remember that even tiny leaks can waste hundreds of litres of water. Tour your home monthly in search of dripping faucets, showerheads, hoses, and sprinklers. If you're on metered water, read the house water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, there is a leak.
- **Water Flow.** Change the water flow coming out of the tap by installing an aerator which will reduce the flow by 25 to 50 per cent, without drastically affecting the performance of the faucet. Additionally, a low-flow showerhead will use about half the water as a standard showerhead.
- **Toilets.** Toilet flushing accounts for 30 per cent of water use in the home, second only to showers and baths. Replace your toilet with a low-flow toilet which averages six litres per flush compared to the standard 18 litres or more. Retrofitting your current toilet can be cheaply done by installing a water retention, displacement, or alternative flushing device. Install composting toilets, especially at cottages; they require no water at all and keep all the nutrients and pollutants out of waterways. Check zoning by-laws in your area first to be sure they are allowed.

Did you know that an automatic shut-off nozzle added to the end of your hose could save 20 litres of water per minute?



- **Smart gardening.** This involves watering your garden before 9 a.m. to reduce evaporation and prevent the growth of fungus. It is also the best defense against slugs and other garden pests.
 - **Fertilizing.** Fertilizers can be an important part of lawn maintenance and promoting plant growth. However, they also increase water consumption so you should only apply the minimum amount of fertilizer needed.
 - **Watering plants.** Where feasible, water plants with a watering can or use a soaker hose instead of a sprinkler so water reaches the roots directly. Avoid watering when it is hot or windy, because it will cause the water to both transpire and evaporate faster before it can absorb into your plants.
 - **Lawn.** Water conservation is easier with a well-maintained lawn. Add organic material to your soil to help increase absorption and assist with water retention. Control weeds to reduce competition for water in the garden.
 - **Watering your lawn.** Water your lawn, not your driveway. Only water your lawn when needed. Remember most lawns only need 2.5 centimetres of water a week. Letting your grass grow taller to about 7-8 centimetres will also aid in water retention in the soil.
 - **Plants.** A good layer of mulch around your plants helps conserve moisture and keeps weeds under control. Choose drought resistant plants and grass when possible, and encourage native plant species, which require less watering. Native plants also foster healthy soil and desirable insect life.
 - **Collecting rainwater.** Where possible, use a rain barrel to collect water from eavestroughs and use it for outdoor watering. Plant slopes with plants that will retain moisture and help reduce runoff and erosion.
 - **Trees.** In addition to making your house cooler, adding native shade trees helps store carbon and can lessen the need for watering by protecting plants and soil from the afternoon sun.
- **Laundry.** Water efficient appliances with an Energy Star rating, such as washing machines, dishwashers, showerheads, toilets, and irrigation products will save more than just energy. An energy efficient washing machine uses over 25,000 litres less water per year than a standard machine, and a dishwasher uses approximately 1,600 litres less water per year. Special cycles, such as the permanent-press cycle, tend to use extra water unnecessarily. For partial loads, adjust water levels to match the size of the load. Full loads are preferable to maximize efficiency. When replacing your washer and dryer, replace the hoses at the same time to avoid deterioration.
- **Take advantage of government programs and incentives.** Municipalities are improving water conservation by instituting various by-laws and rebate programs for appliances. Check with your municipality for currently available programs.





- **Use less water:**
 - **Cooling off in the summer.** Use a children's pool instead of a sprinkler to cool children off while minimizing water use.
 - **In the bathroom:**
 - **Showering.** Take shorter showers instead of baths! Long showers can use 20 to 30 litres for every unneeded minute. If you do plan to take a bath, fill the bathtub only halfway. Use soap instead of shower gels since gels require extra water for rinse-off.
 - **At the sink.** When washing your hands turn the water off while you lather. Turn off the water after you wet your toothbrush and fill a glass for mouth rinsing. When shaving, rinse your razor in the sink with a few inches of warm water instead of using running water.
 - **In the kitchen:**
 - **Minimize the use of kitchen garbage disposal units** which require lots of water to run properly and add to the volume of solids in septic tanks.
 - **When cooking, don't let the faucet run** while you wash vegetables.
 - **Use less water by using your dishwasher** rather than washing dishes by hand. Washing dishes manually uses 20,000 litres more water per year.
- **Other ways to conserve water:**
 - **Consider your water footprint.** Our diets account for roughly half of all the water we use. All food has a water footprint, but some are much larger than others. Eating less beef, one of the most water-intensive foods, is an easy way to start. Shifting away from animal products to a plant-based diet can shrink your water footprint significantly. See the Food section of this guide for more information.
 - **Buy less food and don't waste it unnecessarily** since consumer products account for up to a third of most water footprints. Buying less—from clothing and electronics to household goods—can dramatically reduce your water footprint.

Flooding

The impact expected from climate change may result in more extreme weather events such as increased rainfall and snowfall. This will be the new normal to which we must adapt. Durham Region has been fortunate compared to other more flood prone areas in Ontario. Municipalities are planning for increased water management impacts, but you can help if you follow the tips offered in this guide.

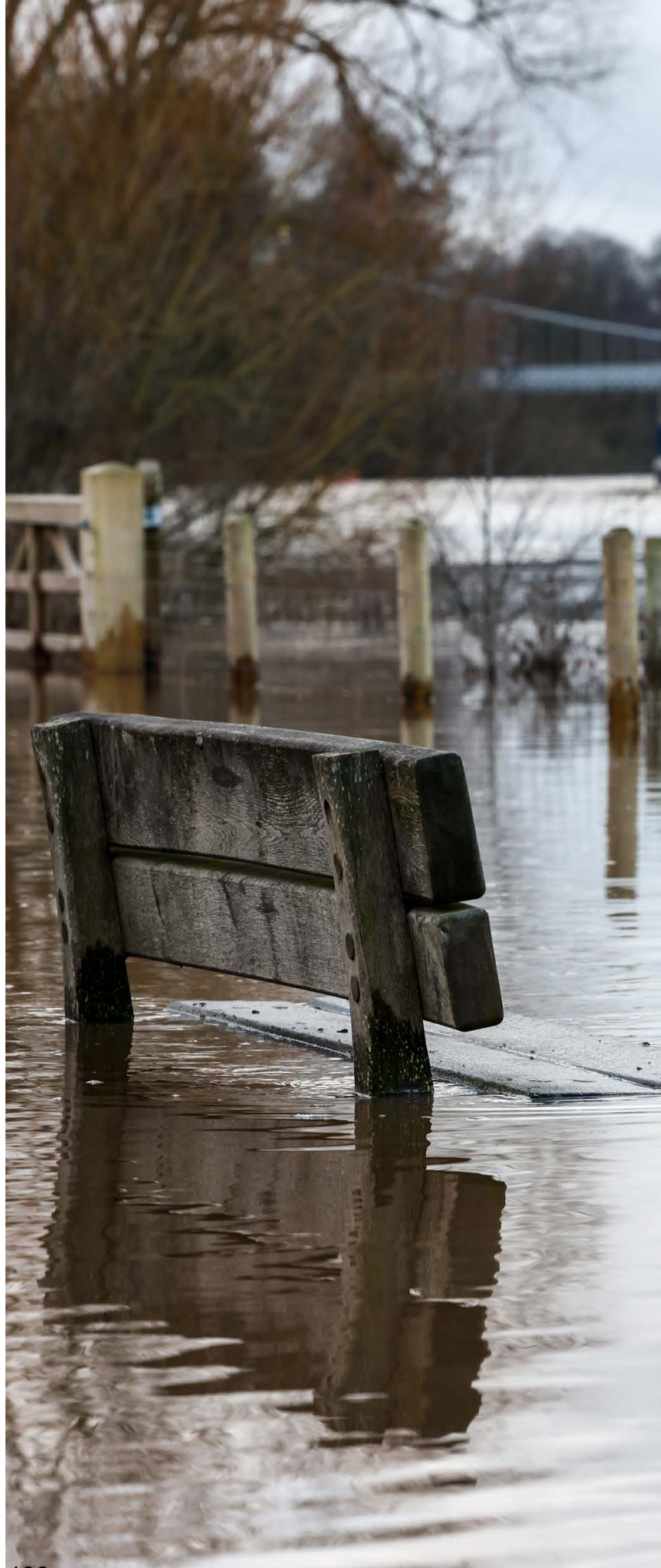
Why you should care:

With increasing temperatures, more evaporation adds moisture to the atmosphere. Extreme and possibly catastrophic weather events happen when increases in temperature and moisture seek to reach equilibrium. The risks from future floods are significant, given expanded and proposed development, urbanization, land use changes, and climate change caused by human activity. Water damage to a home is very costly and insurance policies do not typically cover all water-related claims.

What to expect in the next 20 years:

Urban flooding can be caused by short lived but heavy precipitation events, which are expected to increase over time. New development within Durham Region will result in an increase in hardscapes or impermeable surfaces, which pose a risk to local rivers, by way of increased siltation from erosion. This decreases the capacity of riverbeds to assimilate runoff from the extreme weather events and causes flooding.

River flooding occurs when surface water drained from a watershed into a stream or river exceeds channel capacity, overflows the banks, and overwhelms adjacent low-lying areas. River flooding depends on precipitation as well as other factors such as erosion, soil moisture conditions, and snowmelt. Water levels in lakes are also expected to rise; so if you live by a river or body of water, you will be more susceptible to flooding and precautions should be taken.



What you can do about it

Outside of your house:

- **Storm drains.** Make sure all storm drains in front of your home are clear of debris and/or ice and snow.
- **Eavestroughs and downspouts.** Ensure eavestroughs and downspouts are cleaned in the Spring and Fall, are not plugged, and are adequately moving water away from your house. This is especially important for preventing ice dams from forming in the winter, and causing melting snow to back up onto your roof under your shingles, and causing potential water damage inside your home.
- **Flood alarms.** Maintain and install flood alarms in your home to provide early warning of potential floods.

Visit your local conservation authority's flood warning page to view the current level of threat in real time.

- [Central Lake Ontario Conservation Area \(CLOCA\)](#)
- [Lake Simcoe Region Conservation Authority \(LSRCA\)](#)
- [Toronto Region Conservation Authority \(TRCA\)](#)
- [Ganaraska Region Conservation Authority \(GRCA\)](#)
- [Kawartha Region Conservation Authority \(KRCA\)](#)

- **Your foundation.** Work with a qualified home foundation specialist to address major issues that might be complicated by flooding.
- **Grading.** Correct grading of your lawn to direct water at least two metres away from your foundation.
- **Downspouts and pipes.** Extend downspouts and sump discharge pipes at least two metres from the foundation.
- **Cracks.** Apply sealants to any cracks in your home foundation.
- **Install a sump pump** (with battery backup above flood level in case of power failure) for crawl spaces and basements.
- **Window height.** Windows should sit higher than 10-15 centimetres above the ground. If your garage or entry door sits below ground level,

Rain gardens and larger bioswales can eliminate 80 per cent of bacteria and 60 per cent of chemical pollution from stormwater. Native plants and trees are better choices since they are better able to adapt to the prevailing climate. A medium size tree can absorb more than 9,000 litres of water a year.

keep exterior drains in good working order and ensure that doors, frames, and seals are in good condition to minimize water entry.

- **Green infrastructure.** Use plants, soil, and natural systems, known as "Green Infrastructure" or Low Impact Development (LID) to manage rainfall runoff and erosion.
- **Plants and trees.** Consider planting trees and shrubs that have large root systems to take up water instead of hardscaping your property with impervious surfaces.

Inside of your house:

- Remove any obstructions to basement floor drains. Ensure personal belongings and valuables are stored in waterproof boxes at least 30 centimetres off the floor.
- Keep all hazardous materials (e.g. paints) stored in sealed boxes and raised at least 30 centimetres off the floor.
- Check with your municipality to determine if installing a backflow, check valve or one-way valve is appropriate to prevent the backup of municipal sewage into your home during extreme rainfall events.
- Safeguard indoor utilities and outdoor equipment by elevating furnaces, water heaters, electrical systems (switches, sockets, circuit breakers, and wiring), generators, and air-conditioning units above flood levels.

Assess your home for flood risk using the [Home Flood Protection Check-up tool](#) created by the Intact Centre on Climate Adaptation in partnership with the University of Waterloo.



energy

Our life today is intertwined with energy, whether it is electricity, natural gas, propane, or gasoline. Everything from the lights and heat in our homes, our morning coffee, the fossil fuel powered cars we drive, the technology we use, to the equipment and machinery that drive our economy, all rely on some form of energy. We know that energy use comes with a carbon footprint, and some forms of energy produce significantly more GHGs than others. Natural gas and gasoline produce more GHGs when consumed than electricity. This makes it significantly more important to reduce, conserve, or wherever possible, switch your fuel use to a greener source, such as electricity. We all must reduce our carbon footprint and conserving energy and changing the way we use it, is the simplest way.



Why you should care

Living in a society where electricity is available at the flick of a switch or push of a button can make it very easy to take our energy for granted. It is important to realize the benefits of reducing energy consumption which will result in better air quality, and help reduce global warming by keeping temperature rise within the 1.5°C threshold.

Changes in climate can result in higher demand for energy over time. For instance, a hot summer day yields greater air conditioning use region-wide, which places significant demand on our energy system. If the demand exceeds the supply of available energy, the result could mean power brown-outs or outages under the stress. Not only is this an inconvenience, but it also poses a threat to our health and safety. With hotter summers expected from our changing climate, we can expect a greater demand for energy needed for adequate cooling during extreme heat.

Adopting behaviours that foster energy conservation, therefore, not only help to reduce our GHG emissions and improve air quality, but also play an important role in maintaining adequate energy supply, especially during extreme weather when we need it the most. Not only does this reduce your utility costs, but it also ensures that we are taking the necessary steps towards a cleaner, greener future.

What to expect in the next 20 years

With Durham Region's population anticipated to double over the coming decades, we will all need to do our part to reduce our GHGs. New homes and buildings are being built to greener standards. Automakers are designing and producing more electric vehicles. Large and small corporations are pledging to become net zero by 2050. The technology is available, we just need to make it happen.

Net zero refers to a community that is highly energy efficient and fully powered from on-site and/or off-site renewable energy sources. Net zero buildings are designed and constructed to produce at least as much energy as they consume on an annual basis.

What you can do about it

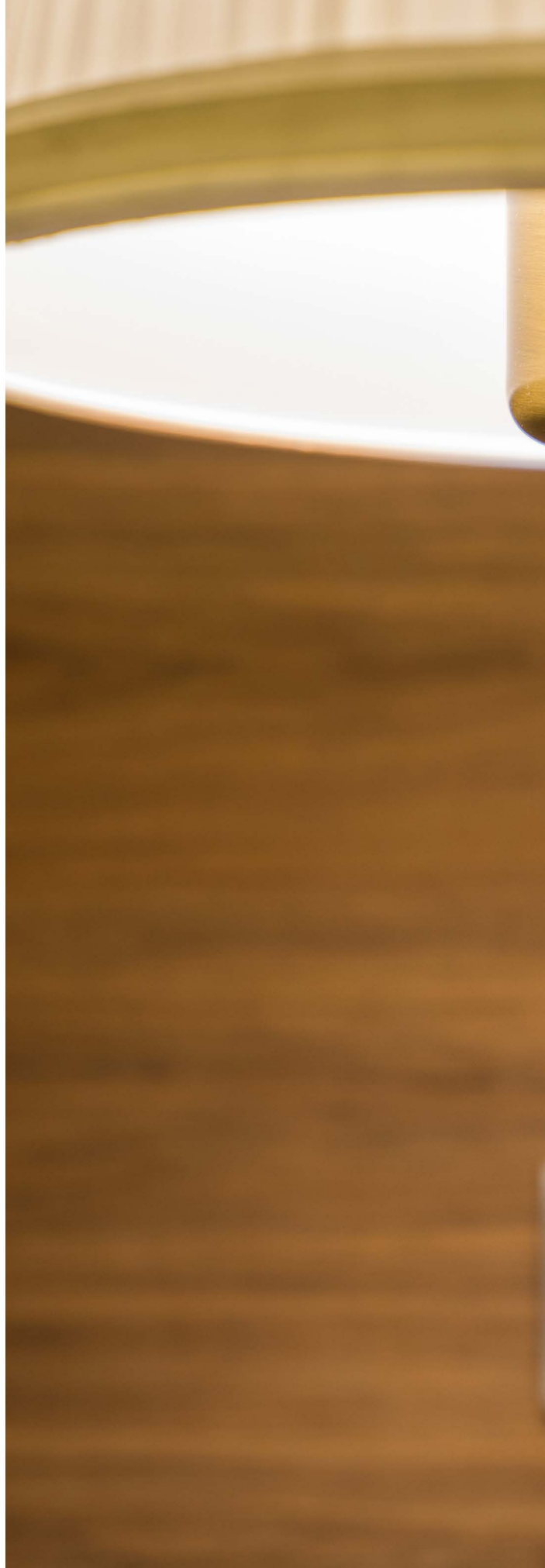
There are many steps that you can take to minimize your energy footprint and foster clean energy:

- **The [Durham Home Energy Savings Program](#)** is a program the Region will launch in 2021 that provides a one-stop shop for home energy retrofit projects. An energy coach will be available, free of charge to residents, to assist in guiding them through the retrofit process, providing assistance on energy savings, hiring contractors, sourcing rebates and incentives, and much more.
- **Only purchase energy efficient appliances and systems in your home.** Appliances and technology with an "Energy Star" certification that is designed to consume less energy and result in lower operating costs, as discussed in the home and water sections of this guide.
- **Program your home thermostat to turn the heat down at night or when you are away.** Smart home technology can help you reduce your home's energy consumption through heating and cooling.



The passive house standard is an internationally recognized energy-based standard that aims to reduce energy consumption from heating and cooling by up to 90 per cent through the use of low energy construction.¹⁵

- **When buying your home** – new homes are being designed and constructed to minimize energy use associated with heating and cooling. Factors such as ground source heat pumps, higher insulation ratings, more efficient windows and doors, less use of natural gas, rooftop solar PV ready, EV charger ready are environmental design features that increase a home's overall energy efficiency. Like appliances, homes are also given an "Energy Star" rating, which you can ask about when buying a new home. The Government of Canada has an [EnerGuide](#) program to monitor energy efficiency. More impressively, the passive house standard achieves an ultra-high performance through intelligent design and consumes only 10 per cent of the energy a normal home would.
- **Consider installing innovative technologies.** One of the best ways to ensure that your energy is obtained from a clean source is to install a solar roof. Although it may seem expensive at first, you will certainly benefit in the long term. Your power bill will decrease over time, and you will also help the renewable energy industry by creating jobs in that sector and doing your part to decrease CO₂ emissions.
- **Take steps to counter phantom energy.** On average, each home has 40 appliances that are plugged in. These appliances continue to draw power even if they aren't directly in use, a phenomenon called phantom energy, which can account for up to 10 per cent of your overall energy consumption. Some ways to tackle this include the use smart power strips, which automatically recognize when an appliance is not in use and reduce the power that is drawn by it.





Did you know?

In 2019, Regional Council endorsed the corporate [Energy Conservation and Demand Management \(CDM\) Plan, 2019-2024](#). Municipalities are required through Ontario Regulation 507/18 to develop and implement a CDM Plan for their internal operations and facilities every five years. This plan provides an overview of the accomplishments achieved from the 2014-2018 CDM plan, tracks energy use and conservation for Regional facilities, as well as proposes action for further conservation to 2024.



businesses

Small businesses have a tremendous impact on communities. As the source of livelihood for almost 70 per cent of employees in the Canadian private sector, they create jobs and economic development, and bring growth and innovation to the areas in which they are located. Their personal connection to consumers renders them integral to most communities. The following steps can help business owners make their businesses more resilient.



Why you should care

Small businesses are one of the groups most vulnerable to the effects of climate change. As weather becomes increasingly unpredictable, undesired outcomes such as floods, wildfires, and droughts can have catastrophic impacts on business operations. Implementing various measures and safeguards to increase climate resilience could make the difference between averting or falling victim to disaster.

Small businesses also have the power to take concrete steps to alleviate the effects of climate change. Factors such as heating and air conditioning, plastic-based resources, or wastepaper contribute to millions of tonnes of carbon emissions every year. By adopting easy-to-implement, low-cost policies that decrease your environmental footprint, you can do your part in the struggle against climate change.

What to expect in the next 20 years

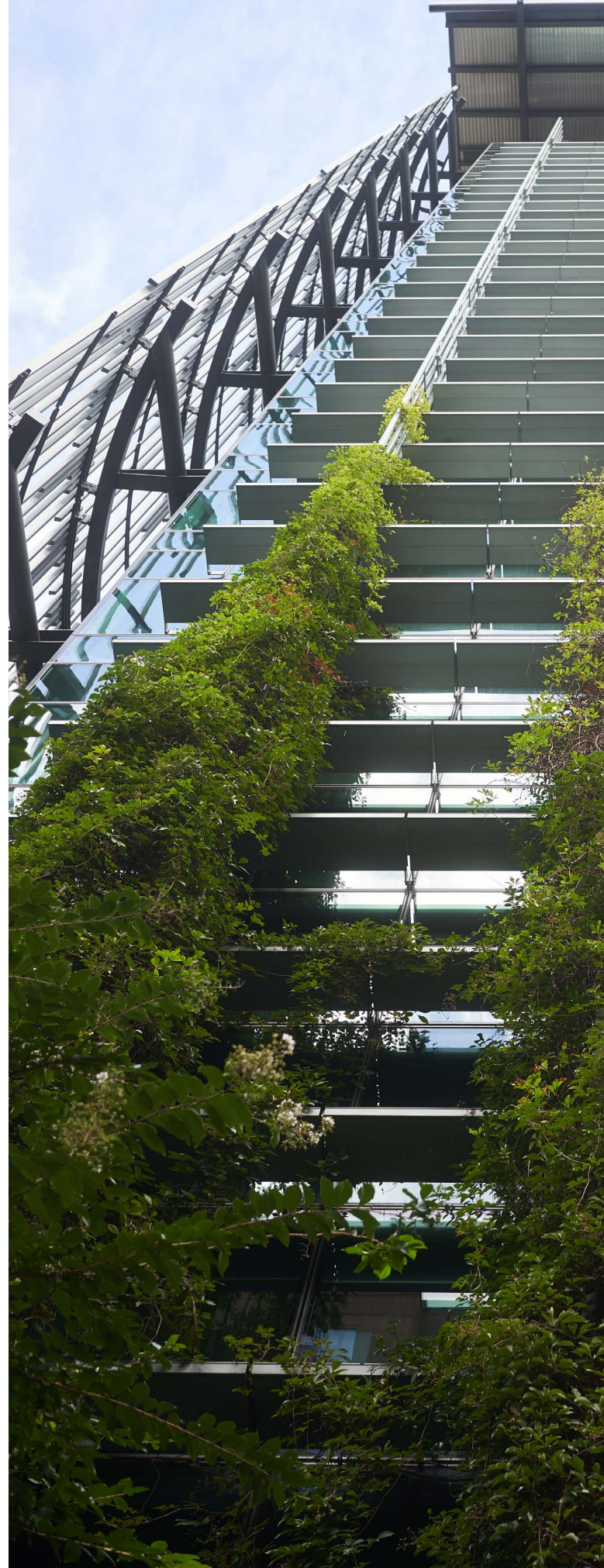
As Durham Region continues to grow, the outlook for businesses is quite positive. With the growing influence of educational institutions such as Ontario Tech University, Trent University, and Durham College, the number of startups and enterprises are expected to increase. Durham is on track to be an economic hub, and businesses will continue to play an imperative role in the region's socio-economic constructs.

◀ Image taken in:
Downtown Uxbridge

What you can do about it

There are many steps that business owners can take to increase resiliency and decrease their environmental impact:

- **Conduct audits.** By conducting audits and analyzing factors hindering energy efficiency such as running heating or A/C with the windows open, leaving computers on overnight, or excessive usage of overhead lights, you can get an effective idea of how much electricity you are consuming unnecessarily.
- **Overhaul obsolete appliances.** You can increase your energy efficiency by replacing appliances and equipment. For example, replacing incandescent light bulbs with LED lights, unplugging unused appliances to reduce phantom energy loss, or installing low-flow toilets and automatic restroom sinks will save you in the long term through reduced utility bills.
- **Explore alternative energy sources.** You can use alternative energy sources such as solar energy to power your operations which will not only help reduce the carbon footprint, but also qualify your business for solar rebates, where available. Ultimately, the initial cost of installation will be outdone by the overall benefits to you and the environment.
- **Initiate effective corporate recycling and programs.** Recycle materials that often end up in landfills, such as scrap metal and electronics (also known as e-waste). In the past few years, e-waste has been the largest growing waste stream in the world, with 45.8 million tonnes being produced in 2018. Many companies have trade-in programs for e-waste, which sometimes provide payment as well. Consider donating your obsolete yet functional corporate electronic devices to local schools or libraries, which will benefit your local community while reducing waste from entering landfills. Implementing effective practices will help keep recyclable material out of landfills, and can also heighten your business's corporate social responsibility.
- **Leverage technology.** In the information age, traditional methods of communication, such as physical meetings and print-based communication, have been replaced by virtual chats and cloud-based sharing services.





Encouraging the use of technology, such as the cloud, will help your employees cohesively share and access information, allowing you to reduce printing costs, while reducing your organization's carbon emissions, paper waste, and overall ecological footprint.

- **Green your premises.** One of the best ways to contribute to climate resilience is to green your business location landscaping using “green” infrastructure and low impact design where possible. By planting native species of trees or using permeable surfaces for your parking lot, you can significantly reduce the urban heat island effect caused by paved, impermeable surfaces. Planting trees will also prevent erosion by providing a path for rainwater to be absorbed into the ground, while offering natural shade and cooling. Something as simple as planting a pollinator-friendly garden near your building can also make a difference in offsetting the overall environmental footprint of your business. Check municipal, provincial, and federal websites for information on available grants that provide the required funds to green your premises.
- **Encourage eco-friendly behaviour from your employees.** Technology allows for easy communication even when separated over a large distance. Platforms such as Microsoft Teams and Zoom facilitate remote communication, making working from home an easy alternative. This reduces CO₂ emissions caused by transportation. The recent COVID-19 pandemic demonstrated how a rapid reduction in vehicles on the road can positively affect the state of pollution and improve air quality. Allowing employees to work from home can preserve that state. Refer to the Smart Mobility Durham program highlighted on page 26 for help on how to get started.

LEED (Leadership in Energy and Environmental Design) is an internationally recognized green building certification system that provides third-party verification that a building was designed and built using strategies aimed at achieving high performance in key areas of human and environmental health, including: location and transportation, sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

A person is sitting on a wooden dock, looking out over a body of water at sunset. The sky is filled with soft, colorful clouds in shades of orange, pink, and blue. The sun is low on the horizon, creating a bright glow and reflecting on the water. The person's silhouette is visible in the foreground, looking towards the water.

looking ahead

We hear that we can make a difference. That every little action matters. That there is hope, and that everyone can make a difference. But is this true?

What you can do about it

Rarely do we have the opportunity to measure in real time what profound impacts our actions might or might not have on our environment. These are not normal times, because during the writing of this publication we are living through a global pandemic. As a result, everyone's life changed dramatically and more importantly our behavior changed as well. We stayed home more and drove less; we appreciated life, family, and friends more; we were more introspective; we cared about things we were too busy to bother with before; we appreciated our environment; and, we made dramatic changes in our lifestyles. The observable outcomes were rapid and profound, not only on our lives, but also on the environment. The positive outcomes—including the reduction of emissions from entering the atmosphere—were realized across the globe, and will undoubtedly contribute towards our fight against climate change. Here are but a few examples that offer environmental hope for our future.

- Air pollution has declined dramatically across the globe. Blue skies are seen over Beijing, and Mount Everest is visible from Nepal for the first time in modern memory. Respiratory health globally has improved significantly in many areas as air pollution declined.¹⁶
- In China, emissions fell 25 per cent at the start of 2020 as people were instructed to stay at home, factories shuttered, and coal use fell by 40 per cent at China's six largest power plants since the last quarter of 2019. The proportion of days with "good quality air" was up 11.4 per cent compared with the same time in 2019 in 337 cities across ►

China, according to its Ministry of Ecology and Environment.^{17, 18}

- Water quality has improved exponentially. The canals of Venice are clear for the first time in decades, and both fish and plants are thriving.¹⁹
- Air and automobile travel plummeted and as a result, tens of thousands of tonnes of CO₂ are not being released, thereby reducing the negative impacts on the climate. Reports out of China, the US, Italy, and other parts of Europe show that airborne pollutants, particularly nitrous oxide (NO₂) have declined by approximately 50 per cent. The European Environmental Agency published numbers that show NO₂ levels in one province of Italy have declined by 47 per cent versus the same time one year earlier. In Rome, these levels are down by about 30 per cent.²⁰
- GHG emissions have declined by an average of 17 per cent globally compared to pre-pandemic levels.²¹
- Fewer cars on the roads²² have saved millions (billions) of insects and other animals that otherwise would have died on our windshields or under our tires.²³

Although, for most of us, these lifestyle changes were involuntary, the outcomes are real and measurable. We need to want to make a difference, because if we really want to – we will! There have been many ideas presented to you in this publication that DEAC hopes you found interesting and useful. Please take a minute to see how you have made a difference. You may be only one person, but you are the one who can change the world.



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Hon. Peter Bethlenfalvy
Minister of Finance
Whitney Block, Room 4320
4th Floor
99 Wellesley St. W.
Toronto, ON M7A 1W3
peter.bethlenfalvy@pc.ola.org

 Corporate Services Department Legislative Services Division	
Date & Time Received:	February 24, 2021 3:57 pm
Original To:	CIP
Copies To:	
Take Appropriate Action	<input type="checkbox"/> File <input type="checkbox"/>
Notes/Comments:	

Sent by E-Mail

February 24, 2021

Re: **In-store Alcohol Service at Convenience Stores**

The following resolution was passed by Ajax Town Council at its meeting held February 22, 2021:

WHEREAS Ajax Council recognizes the ongoing hardships faced by restaurants, pubs and other foodservice businesses as a result of mandated closures and patron limits due to Covid-19;

AND WHEREAS the Town has been working hard to implement and advocate for business supports (such as providing restaurants the ability to access wine, beer and spirits at wholesale or discounted pricing, permitting flexibility, online support and more) to ensure more local businesses survive the pandemic;

AND WHEREAS convenience stores have not been mandated to close during the pandemic and have not endured undue hardship like other industries;

AND WHEREAS 7-Eleven Canada has applied to introduce in-store alcohol service at 61 stores throughout Ontario (including Ajax) to leverage their open status as a competitive advantage;

AND WHEREAS the Alcohol and Gaming Commission of Ontario (AGCO) is ultimately responsible for granting all liquor licensing requests;

AND WHEREAS approval of 7-Eleven’s request would also mean exposing an already vulnerable and hard-hit restaurant/bar industry to further competition;

AND WHEREAS Ontario’s Big City Mayors caucus passed a motion on Friday, February 19 opposed to the 7-Eleven Canada request to serve alcohol;

THEREFORE BE IT NOW RESOLVED THAT Ajax Council oppose 7-Eleven Canada’s proposal to serve alcohol;

AND THAT this motion be distributed to Hon. Peter Bethlenfalvy, Minister of Finance; Hon. Doug Downey, Attorney General; Hon. Steve Clark, Minister of Municipal Affairs and Housing; Hon.

Prabmeet Sarkaria, Associate Minister of Small Business and Red Tape Reduction; Rod Phillips, MPP for Ajax; the Region of Durham, and local Durham Region municipalities.

If you require further information please contact me at 905-619-2529 ext. 3342 or alexander.harras@ajax.ca.

Sincerely,



Alexander Harras
Manager of Legislative Services/Deputy Clerk

Copy: Mayor S. Collier
Councillor A. Khan
Hon. Doug Downey, Attorney General
Hon. Steve Clark, Minister of Municipal Affairs and Housing
Hon. Prabmeet Sarkaria, Associate Minister of Small Business and Red Tape Reduction
Rod Phillips, MPP for Ajax
Region of Durham
All Durham Region municipalities



The Regional Municipality of Durham Report

To: Planning and Economic Development Committee
From: Commissioner of Planning and Economic Development
Report: #2021-EDT-2
Date: April 6, 2021

Subject:

Investment Attraction Metrics – Annual Activity Report 2020

Recommendation:

That the Planning and Economic Development Committee recommends:

That this report be received for information.

Report:

1. Purpose

1.1 This report summarizes and provides an annual overview of the 2020 investment attraction metrics, outlining the investment attraction and real estate related queries handled by the Economic Development and Tourism Division throughout 2020.

2. Background

2.1 The Economic Development and Tourism Division's investment attraction activities are focused on four areas: (i) Generate and source leads for potential new investment, including Investment Attraction missions, and hosting investor tours and delegations; (ii) Respond to investment inquiries; (iii) Promote the Region among the real estate and development community; and (iv) Cultivate relationships with community partners, post-secondary institutions, Toronto Global, as well as the Federal and Provincial Governments, to promote investment attraction to Durham.

2.2 The Investment Attraction team has categorized potential investors based on level of commitment and planned investment time horizon. See Appendix 1 for an overview of the Durham Region Economic Development Sales Funnel, which includes a definition of the categories 'Target', 'Lead', 'Prospect', 'Opportunity', 'Active Investor', and 'Closed-Lost'. Additionally, 'Closed-Hold' stage was created in 2020 to categorize leads that have been put on hold due to various micro and macro-economic factors.

3. Year End Review 2020: Investment Attraction Metrics

3.1 Proactive lead generation activity was put on hold in 2020 in order to support the Region's COVID-19 response. As a result, the number of leads generated in 2020 dropped below those in the previous years with the team focusing on responding to incoming queries. In 2020, the Investment Attraction team handled 65 investment leads or inquiries. An overview of these leads can be found in Appendix 2 of this report.

3.2 2020 started on a strong note, with 34 leads generated in the first three months of the year. Thereafter, the team received approximately four inquiries per month for the remainder of the year. This downward trend is largely attributed to the effects of the COVID-19 pandemic globally which required Economic Development staff efforts to be diverted away from investment promotion and lead generation. The number of investment leads by month in 2020 is shown in Appendix 3 of this report.

3.3 While 53 of 65 new leads in 2020 are still open and still considering their investment plans, 12 of the leads have been closed, mainly due to the negative impacts of COVID-19 on businesses and the lack of real estate options in Durham Region that met the requirements of the leads.

3.4 Leads were generated through a variety of sources. These sources include 15 'Direct' leads; 38 leads from 'Partnerships' with the Province of Ontario, Ontario Manufacturing Communities Alliance (OMCA), Ontario Food Cluster (OFC), Toronto Global, and others; with the remaining leads from Missions and Marketing efforts. The breakdown of leads by source can be found in Appendix 4 of this report.

3.5 A wide range of sectors were represented among the inquiries received. The top 5 industries represented in new 2020 leads were Real Estate (classification assigned to leads inquiring about real estate but with no sector provided), Renewables and Environment, Automotive, Food Production, and Engineering. The breakdown of inquiries by industry can be found in Appendix 5 of this report.

- 3.6 Prior to the COVID-19 Pandemic, in early 2020 the Investment Attraction team undertook one Mission and participated in four trade shows/industry events to meet with potential investors and create partnerships with the goal of attracting new investment. A summary of these events is outlined in Appendix 6.
- 3.7 Prior to the COVID-19 Pandemic, the Investment Attraction team hosted four delegations in 2020. Details of these delegations can be found in Appendix 7 of this report.
- 3.8 In 2020, with support from our local partners, the Investment Attraction team supported two successful investments into the Durham Region, creating over 1,000 jobs. Details of these jobs can be found in Appendix 8 of this report. For successful investments, Regional staff acted in either a 'Lead' role or a 'Support' role, signifying whether the investor's primary contact during the decision-making process was the Region's Economic Development and Tourism Division, or one of its partners. All successful investments listed received material support from Regional staff during the investment decision-making process.

4. Relationship to Strategic Plan

- 4.1 This report aligns with/addresses the following strategic goals and priorities in the Durham region Strategic Plan:
- a. (3.1) Position Durham Region as the location of choice for business;
 - b. (3.2) Leverage Durham's prime geography, social infrastructure and strong partnerships to foster economic growth; and
 - c. (3.4) Capitalize on Durham's strengths in key economic sectors to attract high-quality jobs.

5. Conclusion

- 5.1 The lead generation and investment attraction efforts in 2020 were impacted by the COVID-19 pandemic beginning in March 2020, and the associated shift in Division resources to provide support for the Region's impacted local business community.
- 5.2 The Economic Development and Tourism Division supported two new investments, handled 65 leads/inquiries, undertook one Mission and four Industry Events, and hosted four delegations. Once pandemic restrictions ease and global investment trends improve, investment attraction metrics are expected to increase.

Respectfully submitted,

Original signed by

Brian Bridgeman, MCIP, RPP
Commissioner of Planning and
Economic Development

Recommended for Presentation to Committee

Original signed by

Elaine C. Baxter-Trahair
Chief Administrative Officer

Appendix 1: Durham Region Economic Development Investment Attraction Funnel

The Investment Attraction Funnel has 7 categories, and potential investors are categorized based on criteria in 3 areas: their level of commitment to Durham Region; the level of commitment to making an investment, and their planned timeline associated with the investment.

1. Target

Identified as a company that may potentially invest, but no contact or discussion yet.

2. Lead

Commitment to Durham	Executive Team Commitment	Time Horizon & Communication
Indicated an interest in expanding to/within North America; Durham is a possibility	Little to no investment business planning completed	Investment time horizon is ≤ 5 years

3. Prospect

Commitment to Durham	Executive Team Commitment	Time Horizon & Communication
Seriously considering Durham, among other possibilities	Business plan in development, but no executive team approval (or unknown)	Investment time horizon is ≥ 2 years. We have been providing information.

If we have not heard back in ≥ 12 months, Prospects/Opportunities will be bumped down to Lead.

4. Opportunity

Commitment to Durham	Executive Team Commitment	Time Horizon & Communication
Durham is a primary choice to invest	Business planning advanced; and either: executive team approval of investment business plan; or	<2-year investment horizon

If we have not heard back in 4mo to 12mo, Opportunities will be bumped down to Prospect.

5. Active Investor

Commitment to Durham	Executive Team Commitment	Time Horizon & Communication
In the process of investing in Durham	Business Plan approved, and in active negotiation to purchase or lease property, or in zoning/OP application stage	≤3-month investment horizon We are assisting on logistics

6. Win

Investment has been successfully made in Durham.

7. Lost

Discontinued due to no reasonably foreseeable future investment potential.

8. Hold

Project plan put on hold by the business.

Appendix 2: Summary of Investment Inquiries

S.No.	Lead Name	Industry	Deal Stage	Source
1	Apparel manufacturing and distribution facility	Textiles	Active Investor	Direct
2	Hydrovac services company	Construction	Active Investor	Referral
3	Engineering services company	Civil Engineering	Active Investor	Referral
4	Innovation management services provider	Information Technology and Services	Active Investor	Toronto Global
5	Manufacturing Plant for electrical and electronics products	Electrical/Electronic Manufacturing	Opportunity	Direct
6	Manufacturing plant for sustainable outerwear	Textiles	Opportunity	Direct
7	Office space for a real estate developer	Real Estate	Opportunity	Direct
8	A large automotive distribution and warehousing facility	Automotive	Opportunity	Marketing
9	A fulfilment centre and warehousing facility	Logistics and Supply Chain	Opportunity	Marketing
10	Residential real estate development	Real Estate	Opportunity	Referral
11	Cable and wire manufacturing facility	Electrical/Electronic Manufacturing	Prospect	Direct
12	Facility for clean energy technology development	Renewables & Environment	Prospect	Direct

S.No.	Lead Name	Industry	Deal Stage	Source
13	Production of smart building products	Renewables & Environment	Prospect	Mission - Germany 2020
14	Land development project	Real Estate	Prospect	Referral
15	Industrial plant with a rail spur	Real Estate	Prospect	Referral
16	Distribution and warehousing facility	Logistics and Supply Chain	Lead	Direct
17	Distillery in Durham	Food & Beverages	Lead	Direct
18	Kitchen furniture manufacturing facility	Furniture	Lead	Direct
19	Fusion energy technology	Renewables & Environment	Lead	Direct
20	Commercial real estate development project	Commercial Real Estate	Lead	Direct
21	Sales office for artificial intelligence based medical devices	Medical Devices	Lead	Direct
22	Wastewater treatment technology	Renewables & Environment	Lead	Marketing
23	A large food and beverage facility	Food & Beverages	Lead	Marketing
24	A facility for fleet management technology	Automotive	Lead	Marketing
25	Facility for engineering services in energy industry	Oil & Energy	Lead	Canadian Nuclear

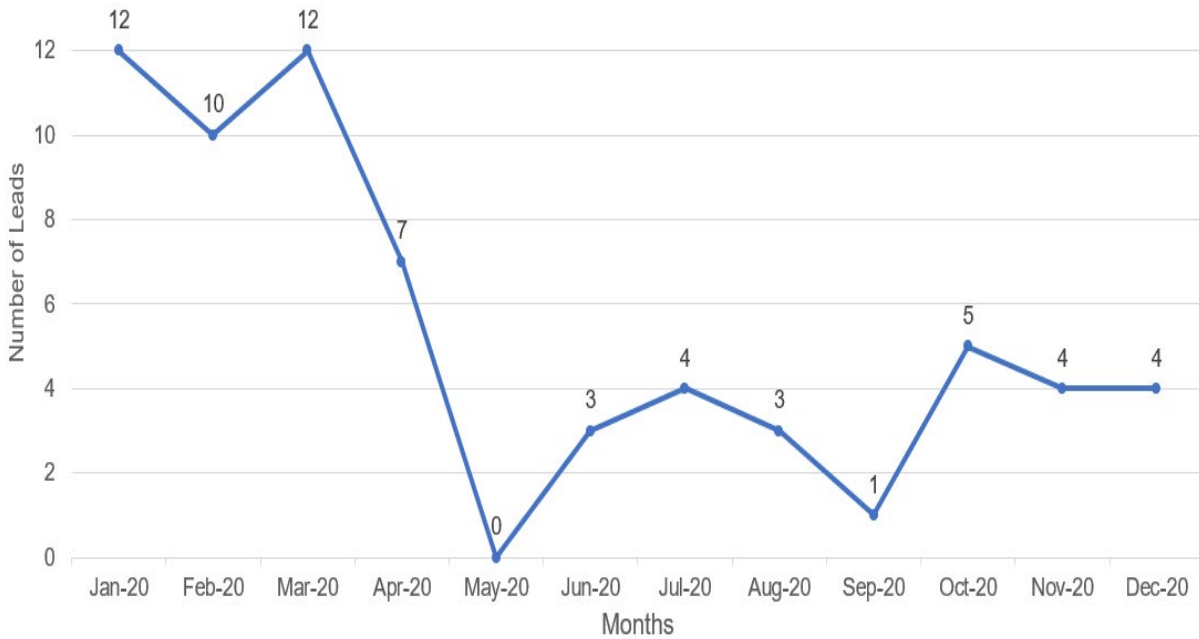
S.No.	Lead Name	Industry	Deal Stage	Source
				Association 2020
26	Facility for nuclear energy products and services	Oil & Energy	Lead	Canadian Nuclear Association 2020
27	Fleet management technology company from Israel	Transportation/Trucking/Railroad	Lead	Collision 2020
28	Facility for a lighting products manufacturer from Poland	Electrical/Electronic Manufacturing	Lead	Mission - Channel Partner
29	Manufacturing company from Germany	Mechanical or Industrial Engineering	Lead	Province
30	Expansion project of a chemical and energy company	Mechanical or Industrial Engineering	Lead	Province
31	Foam pouring facility	Textiles	Lead	Province
32	Food production facility	Food Production	Lead	Province
33	Fibre-optic cabling facility	Electrical/Electronic Manufacturing	Lead	Referral
34	Production and distribution facility	Real Estate	Lead	Referral
35	Construction facility	Real Estate	Lead	Referral
36	Large Fortune 500 manufacturing company	Mechanical or Industrial Engineering	Lead	Referral

S.No.	Lead Name	Industry	Deal Stage	Source
37	Industrial automation solutions provider	Industrial Automation	Lead	Referral
38	Indoor farming (plant production) facility	Farming	Lead	Toronto Global
39	Modern waste management solutions provider	Computer Software	Lead	Toronto Global
40	Chemical production facility	Chemicals	Lead	Toronto Global
41	Carbon recycling and byproducts generation facility	Renewables & Environment	Lead	Toronto Global
42	Carbon reclaiming from tires	Chemicals	Lead	Toronto Global
43	Smart trash-bin technology company - Canadian expansion	Renewables & Environment	Lead	Toronto Global
44	Autonomous vehicle solutions provider	Automotive	Lead	Toronto Global
45	Carrot processing facility	Food Production	Lead	Toronto Global
46	Inventory analytics solutions provider	Information Technology and Services	Lead	Toronto Global
47	Ramp-up factory services for E-Vehicle manufacturers	Automotive	Lead	Toronto Global
48	Abattoir	Farming	Closed hold	Referral
49	Building supplies facility	Construction	Closed hold	Referral

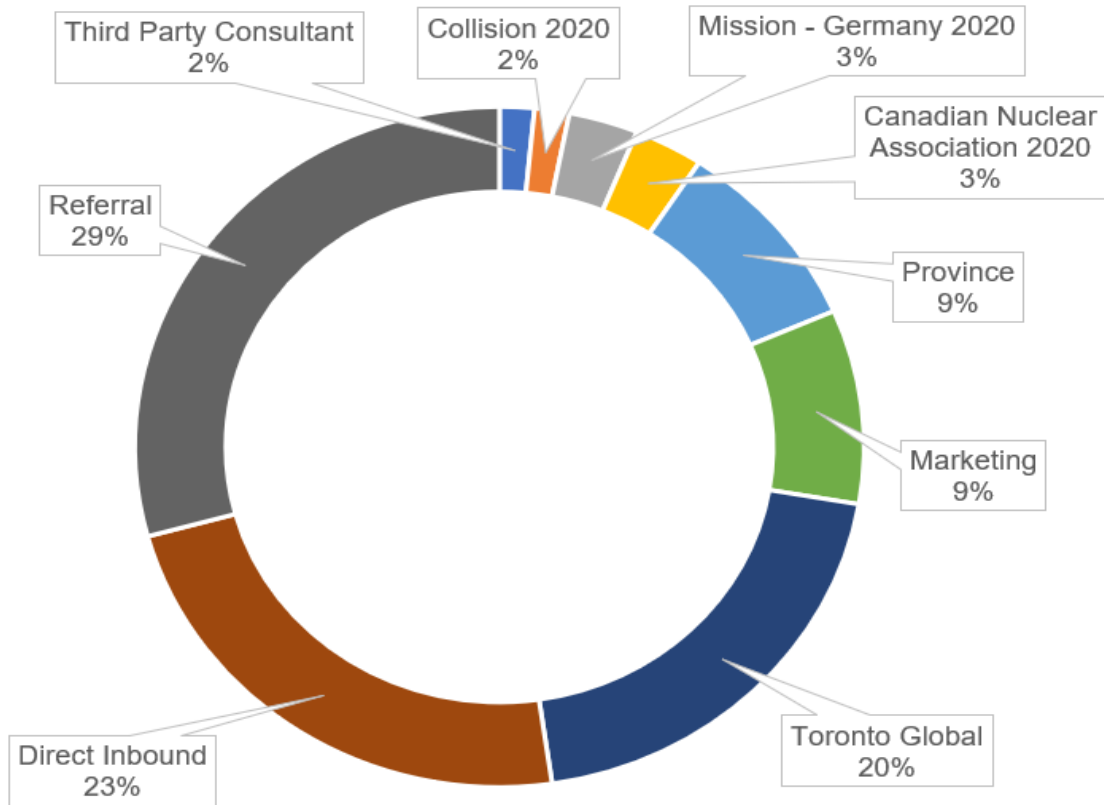
S.No.	Lead Name	Industry	Deal Stage	Source
50	Food distribution facility	Food & Beverages	Closed hold	Referral
51	Food manufacturing facility	Food Production	Closed hold	Referral
52	Production facility from a European manufacturer	Construction	Closed hold	Toronto Global
53	Chinese focused private school	Primary/Secondary Education	Closed Lost	Direct
54	Automotive industrial plant	Automotive	Closed Lost	Direct
55	Personal Protective Equipment manufacturing facility	Hospital & Health Care	Closed Lost	Direct
56	Facility for production of electronic safety products	Electrical/Electronic Manufacturing	Closed Lost	Mission - Germany 2020
57	Confectionary facility	Food Production	Closed Lost	Province
58	Snack food manufacturing facility	Food Production	Closed Lost	Province
59	Glass processing plant	Glass, Ceramics & Concrete	Closed Lost	Referral
60	Logistics company relocation	Transportation/Trucking/Railroad	Closed Lost	Referral
61	Cannabis extraction facility	Mechanical or Industrial Engineering	Closed Lost	Referral
62	Large distribution facility	Warehousing	Closed Lost	Referral
63	Refrigerant recycling plant	Chemicals	Closed Lost	Referral

S.No.	Lead Name	Industry	Deal Stage	Source
64	Laboratory for red blood cells production	Biotechnology	Closed Lost	Toronto Global
65	A large-scale fulfilment centre and warehousing facility	Logistics and Supply Chain	Win	Marketing

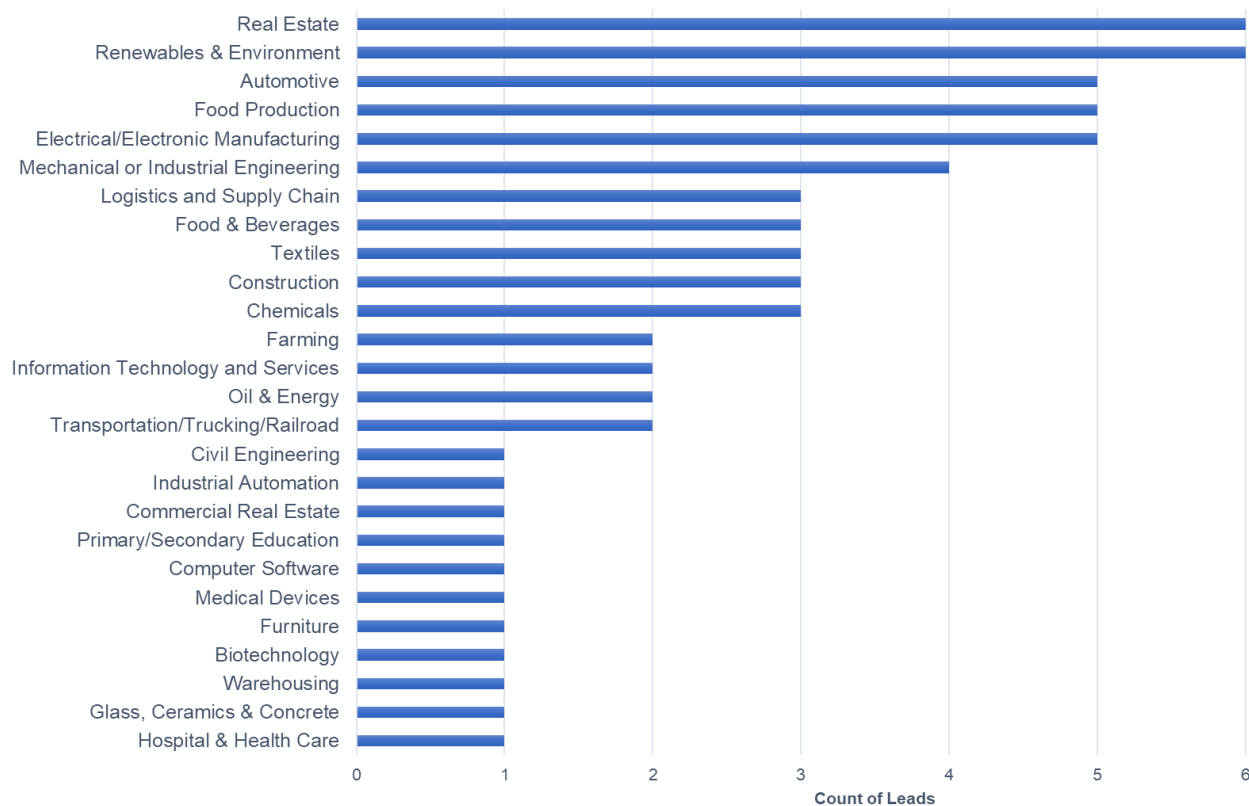
Appendix 3: 2020 Investment Leads by Month



Appendix 4: 2020 Investment Leads by Source



Appendix 5: Leads in 2020, by Industry



Appendix 6: Missions and Events, 2020

Missions/Events	Dates	Purpose	Mode	Partner	Meetings	Leads
World Ag Expo 2020 (Event)	February 10-12	Investment	In-Person	Ontario Food Cluster	18	0
Canadian Nuclear Association 2020 (Event)	February 26-28	Investment and relationship building	In-Person	None	14	2
Germany 2020 (Mission)	March 9-13	Investment	Virtual	Third-Party Consultant	8	3
Collision 2020 (Event)	June 23-25	Investment	Virtual	None	5	1

Appendix 7: Delegations to Durham

Delegation	Partner	Purpose	Outcome
Guyana Consulate	None	Relationship Building	Invest Durham team hosted a delegation from Guyana Consulate in Toronto and showcased business development opportunities for Guyanese businesses, particularly in the Cleantech sector. The team facilitated meetings with Regional Gov't leadership, Ontario Tech University, 1855 Accelerator and Centre for Food at Durham College. Thereafter, the team provided information on other assets in the region, including Spark Centre's Pioneer Program.
Autonomous Mobility technology company with global HQ in France	Toronto Global	Investment	Facilitated meetings with Ontario Tech University, where collaboration opportunities in autonomous mobility technology were discussed. The company showcased their projects portfolio. Invest Durham Region staff presented on the technology ecosystem and opportunities in regional transportation. Ontario Tech highlighted their research in autonomous mobility and the ACE Climatic Tunnel. Company's plans in were affected by COVID-19.
Korean Trade Investment Promotion Agency (KOTRA)	Toronto Global	Relationship Building	Delegation from KOTRA met with a group from the Durham region, comprised of Invest Durham, 1855 Accelerator, and Ontario Tech University. Invest Durham staff facilitated the meeting and presented on the technology sector, talent, assets, etc. Ontario Tech showcased the research and development capabilities and 1855 Whitby informed the

Delegation	Partner	Purpose	Outcome
			delegation about the business support available at the Accelerator.
Swedish Chamber of Commerce	None	Relationship Building	Durham Regional staff hosted a delegation from Swedish-Canadian Chamber of Commerce for a roundtable discussion on potential business collaboration opportunities in the fields of cleantech, transit, and waste management. Invest Durham team holds periodic meetings with the Swedish-Canadian team to discuss future business development opportunities in Durham Region.

Appendix 8: Supported Successful Investments 2020

Project	Regional Role	Partner	CapEx, Size, Jobs	Description
Amazon Fulfilment Centre (Ajax)	Supporting	None	1,000 jobs 1,100,000sq ft	Amazon's new location in Ajax will cater to fulfilment of e-commerce orders for large items. Regional staff did not act in a lead role, instead supporting the investment through many early conversations with the owners and developers of the property, and supported early queries about available real estate options. The facility is expected to commence operations in 2021.
Atlantic Packaging (Whitby)	Lead	Town of Whitby	100 jobs 150,000sq ft (approx.)	<p>The Durham Region Economic Development team led in supporting local business Atlantic Packaging with their expansion plans. The business was assessing options in both Canada and the US, and with the support of staff throughout their investment decision process, Durham was selected as the investment location.</p> <p>This major construction project to install a new 100% recycled paper machine inside a new facility will be Atlantic's second recycled paper machine in Whitby, and is being built adjacent to their current machine which has been operational since the 1990s.</p> <p>The new machine will be one of the most technologically advanced machines in North America</p>

Project	Regional Role	Partner	CapEx, Size, Jobs	Description
				producing 400,000 tons per annum of high performance light weight medium and liner.



The Regional Municipality of Durham Report

To: Planning and Economic Development Committee
From: Commissioner of Planning and Economic Development
Report: #2021-EDT-3
Date: April 6, 2021

Subject:

Overview of Specialty Crops Workshop Series

Recommendation:

That the Planning and Economic Development Committee recommends:

That this report be received for information.

Report:

1. Purpose

1.1 The purpose of this report is to provide an overview of the 'All About Specialty Crops Workshop Series', a 4-part virtual workshop series covering topics related to the production of specialty crops.

2. Background

- 2.1 The All About Specialty Crops Workshop Series was organized and hosted by the Region's Economic Development and Tourism staff (from the Agriculture and Rural Affairs section), in partnership with Durham Farm Fresh, the Regional Municipality of York, York Farm Fresh and the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA).
- 2.2 The intent of the Series was to provide agri-food producers with information, resources and tools to assist with diversifying their crops, expanding business

product offerings and better understanding culturally appropriate crops to align with evolving market demand.

- 2.3 During the initial planning of the workshop series, Regional staff worked with crop specialists at OMAFRA to develop an online survey. The survey was distributed to members of Durham Farm Fresh and York Farm Fresh to identify the topics and types of specialty crops they would be most interested in learning about.
- 2.4 OMAFRA staff used the survey responses to develop targeted presentations and resources for producers to assist them with diversifying their product offerings.

3. Previous Reports and Decisions

- 3.1 Hosting the workshop series represents the completion of an action item identified in the [Local Food Business Retention and Expansion Project Action Plan](#). The Local Food BR&E Action Items were reprioritized in October, 2020 due to evolving industry needs, see Report [#2020-EDT-8](#).

4. All About Specialty Crops Workshops

- 4.1 Details on the four workshops offered as part of the Series are as follows:
 - a. January 14: Overview of Specialty Crop Production
 - b. January 21: Lavender, Hops, Cannabis and Industrial Hemp
 - c. January 28: Specialty Fruits and Nuts
 - d. February 4: Specialty Vegetables
- 4.2 A total of 302 people participated in the Series which was held on the Microsoft Teams Platform.
- 4.3 Workshop registrations were tracked on Eventbrite and each workshop was recorded so that the reach and impact of the educational content could be maximized. Recordings and presentations from the workshops were distributed to all participants.
- 4.4 Following the completion of the final workshop, an online survey was sent to participants requesting their feedback on the overall Series. Survey responses were very positive and indicated that:
 - a. Most respondents were from Durham Region and York Region with a smaller number from the United Kingdom, the United States, Prince Edward Island, Saskatchewan and British Columbia.

- b. 70% of respondents will use the information gathered to make strategic decisions about what crops they plant.
- c. 88% of respondents felt the Series was valuable.
- d. 100% of respondents were satisfied or highly satisfied with the quality of the Series.
- e. There is an overall appetite for additional specialty crops workshops in the future and input was provided to indicate what other types of crops would be of interest to agri-food producers.

5. Relationship to Strategic Plan

5.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

- a. Goal 3: Economic Prosperity
 - Item 3.5: Provide a supportive environment for agriculture and agri-food industries.

6. Conclusion

6.1 This workshop series represents a successful partnership between the Region of Durham, Durham Farm Fresh, York Region, York Farm Fresh and the Province of Ontario, to deliver valuable educational content in support of the agriculture and agri-food industry.

Respectfully submitted,

Original signed by

Brian Bridgeman, MCIP, RPP
Commissioner of Planning and
Economic Development

Recommended for Presentation to Committee

Original signed by

Elaine C. Baxter-Trahair
Chief Administrative Officer