



The Regional Municipality of Durham

COUNCIL INFORMATION PACKAGE

April 3, 2020

Information Reports

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- 2020-INFO-27** Commissioner of Finance – re: Ontario's Action: Responding to COVID-19, March 2020 Economic and Fiscal Update
- 2020-INFO-28** Commissioner of Planning and Economic Development – re: Carruthers Creek Watershed Plan Update, Impact of COVID-19 Pandemic on Public Consultation
- 2020-INFO-29** Commissioner of Finance - Economic Update – Updated Risks and Uncertainty as of April 1st, 2020

Early Release Reports

There are no Early Release Reports

Staff Correspondence

- 1 **Gary Muller, Director of Planning** – re: Notice of Cancellation of Public Meeting of the Planning and Economic Development Committee on Tuesday, April 7, 2020 regarding the Application to Amend the Durham Regional Official Plan File Number: OPA 2020-001
- 2 **Gary Muller, Director of Planning** – re: Notice of Cancellation of Public Meeting of the Planning and Economic Development Committee on Tuesday, April 7, 2020 regarding the Application to Amend the Durham Regional Official Plan File Number: OPA 2020-002
- 3 **Letter from Gioseph Anello, Acting Director, Waste Management Services, Region of Durham and Laura McDowell, Director, Environmental Promotion and Protection, Region of York and Matthew Neild, Facility Manager, Covanta Durham York Renewable Energy Limited Partnership** – re: Durham/York Energy from Waste Project, 2019 Durham York Energy Centre Annual Report, Environmental Compliance Approval Condition 15(1), MECP File #: EA-08-02

Durham Municipalities Correspondence

1. **Township of Scugog** – re: Resolution passed at their Council meeting held on March 23, 2020, regarding Mixed Waste Transfer, Pre-Sort & Anaerobic Digestion Organics Processing Facility – Region of Durham

Other Municipalities Correspondence/Resolutions

1. **Municipality of Chatham-Kent** – re: Resolution passed at their Council meeting held on March 23, 2020, in support of the Ban of Single Use Disposable Wipes
2. **Municipality of Chatham-Kent** – re: Resolution passed at their Council meeting held on March 23, 2020, in support of AMO's position on Legislative Changes in Bill 132 with respect to the *Aggregate Resource Act* and *Safe Drinking Water Act*

Miscellaneous Correspondence

1. **Ministry of Agricultural, Food and Rural Affairs** – re: the administration of the Line Fences Act has transitioned from the Ministry of Municipal Affairs and Housing (MMAH) to the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)

Advisory Committee Minutes

There are no Advisory Committee Minutes

Members of Council – Please advise the Regional Clerk at clerks@durham.ca, if you wish to pull an item from this CIP and include on the next regular agenda of the appropriate Standing Committee. Items will be added to the agenda if the Regional Clerk is advised by Wednesday noon the week prior to the meeting, otherwise the item will be included on the agenda for the next regularly scheduled meeting of the applicable Committee.

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The Regional Municipality of Durham Information Report

From: Commissioner of Works
Report: #2020-INFO-26
Date: April 3, 2020

Subject:

Long-Term Waste Management Plan 2021-2040 Development Schedule

Recommendation:

Receive for information.

Report:

1. Purpose

1.1 The purpose of this report is to provide Regional Council with information on the development of the anticipated schedule and milestones for the Long-Term Waste Management Plan 2021–2040.

2. Background

2.1 At its meeting of January 30, 2019, Regional Council directed staff to begin developing an updated Long-Term Waste Management Plan 2021–2040 (Plan) as part of the 2019 Solid Waste Management Servicing and Financing Study (Report #2019-COW-3).

2.2 The Solid Waste Management 2020 Strategic Issues and Financial Forecast (2020-COW-3) expanded on the previously outlined vision for the new Plan to enhance the Regional Municipality of Durham's (Region) reduce, reuse, recycle principles and incorporate a vision to utilize waste as a resource as a foundation of the Plan.

3. Long-Term Waste Management Plan 2021-2040 Anticipated Schedule and Milestones

- 3.1 A project kick-off meeting was held with HDR, the project consultant, on February 28, 2020. The purpose of this meeting was to review the proposed project schedule and consultation plan.
- 3.2 Currently, consultation is planned for the spring and summer of 2020 with:
 - a. Regional staff from the Works, Planning and Finance Departments and the CAO's Office;
 - b. Local area municipality staff;
 - c. Regional advisory groups; and
 - d. The public via pop-up booths and a Public Information Centre.
- 3.3 The focus of these consultations will be to develop draft objectives, targets and the vision statement for the Plan.
- 3.4 Due to unforeseen circumstances surrounding the coronavirus, alternative formats of consultation are being considered for both Regional staff and local area municipality staff consultation. In-person outreach to the Region's advisory groups and the public will commence when safe. Alternative formats may also need to be considered.
- 3.5 Early consultations will inform the development of a proposed Plan Outline that will be presented to Regional Council in the Fall of 2020.
- 3.6 If approved, the Plan Outline will form the basis for the development of a draft Plan and a Five-Year Action Program. Public consultation on the draft Plan and Five-Year Action Program is anticipated to occur in the Spring of 2021.
- 3.7 The draft Plan and Five-Year Action Program will be revised to reflect appropriate comments received from public consultation after which a proposed final Plan with the Five-Year Action Program will be presented to Regional Council for endorsement in late fall 2021 or early 2022. A summary of consultation activities will be included in the final draft of the Plan.
- 3.8 Following Regional Council's endorsement of the new Long-Term Waste Management Plan 2021–2040, staff will focus on promoting the new Plan and commence implementation of the Five-Year Action Program in 2022.

3.9 The Long-Term Waste Management Plan 2021–2040 is an important strategic planning document for the Region as it will inform future waste management initiatives as well as future operating and capital budgets.

4. Conclusion

4.1 Initial work on the new Long-Term Waste Management Plan has commenced with strategies to consult with Regional Municipality of Durham staff, local area municipalities, Regional advisory groups and the public at multiple points during the development of the Plan.

4.2 The development of the Long-Term Waste Management Plan is anticipated to take place over two years with implementation commencing in 2022.

4.3 For additional information, please contact Gioseph Anello, Acting Director of Waste Management Services at 905-668-7711, extension 3445.

Respectfully submitted,

Original signed by:

Susan Siopis, P.Eng.
Commissioner of Works



The Regional Municipality of Durham Information Report

From: Commissioner of Finance
Report: #2020-INFO-27
Date: April 3, 2020

Subject:

Ontario's Action Plan: Responding to COVID-19, March 2020 Economic and Fiscal Update.

Recommendation:

Receive for information.

Report:

1. Purpose

- 1.1 This report provides highlights and potential impacts to Durham Region of the Province's "Ontario's Action Plan: Responding to COVID-19 (March 2020 Economic and Fiscal Update)", which was tabled in the Ontario Legislature on March 25, 2020 in place of the planned 2020 budget.

2. Background

- 2.1 On March 18, 2020 Rod Phillips, Ontario Minister of Finance, announced that the Province would release an economic and fiscal update in place of the planned spring 2020 Provincial budget due to the major changes to economic outlook caused by COVID-19.
- 2.2 On March 25, 2020 the Province released "Ontario's Action Plan: Responding to COVID-19 (March 2020 Economic and Fiscal Update)". The Action Plan detailed specific investments in the health care system, as well as both direct and indirect funding to support people and businesses. It also provided a one-year outlook based on the latest economic projections.
- 2.3 The Province has committed to introduce a full budget no later than November 15, 2020 and regular updates of the Province's fiscal and economic outlook throughout the year.

3. Highlights

- 3.1 The Action Plan's spending measures total \$7 billion in direct funding and an additional \$10 billion in tax measures including:
- \$3.3 billion in additional health care resources: \$2.1 billion for COVID response including \$1 billion COVID-19 contingency fund for health care and \$1.2 billion to improve the health care system (e.g. investments to increase the number of hospital beds).
 - \$3.7 billion to directly support people and to protect jobs.
 - \$10 billion made available to individuals and businesses through the deferral of business tax, WSIB expenses for employers and municipal education property tax payments and other deferrals to improve cash flow.
- 3.2 The Province is projecting a deficit of \$9.2 billion in 2019–20, an improvement of \$1.1 billion relative to the 2019 Budget.
- 3.3 As a result of the response to the COVID-19 outbreak, the government is planning for a deficit of \$20.5 billion in 2020–21. The 2020-21 forecast spending includes a \$2.5 billion reserve which is the largest in Ontario's history and an increased contingency fund of \$1.3 billion.

4. Highlights of the Ontario's Action Plan 2020

The following is a summary of key highlights of Ontario's Action Plan 2020: Responding to COVID-19.

4.1 Health Care Investments

- Investments of \$935 million for the hospital sector, including \$594 million to accelerate progress on the government's commitment to address capacity issues.
- \$341 million for an additional 1,000 acute care and 500 critical care beds and additional assessment centres.
- Investing \$75 million to supply personal protective equipment and critical medical supplies to front-line staff to tackle COVID-19.
- Increasing public health funding by \$160 million to support COVID-19 monitoring, surveillance, and laboratory and home testing.
- \$61 million for publicly funded vaccines in support of the province's immunization program.
- \$80 million for ambulance and paramedic services.
- Targeted investments beginning in 2020-21 to build hospital and community capacity in Durham, Scarborough and London – three regions with among the highest levels of hallway health care.

4.2 Long-term Care

- \$243 million for long-term care emergency capacity and new virus containment measures – this includes funding for 24/7 screening, more staff to support infection control and supplies and equipment
- Additional long-term care funding of \$80 million to improve and maintain quality of care and resident experience as well as increase long-term care capacity and access for residents.
- \$23 million for minor capital program to support the ongoing repair of homes and to support modernization.

4.3 Social Services

- \$148 million directly to Consolidated Municipal Service Managers and District Social Service to enhance funding for charitable and non-profit social services organizations, for example food banks, homeless shelters, churches and emergency services such as the Red Cross, to improve their ability to respond to the COVID-19 outbreak.
- Investing \$52 million to expand access to the emergency assistance program administered by Ontario Works to provide financial support to people facing economic hardship and help them with basic needs, such as food and rent during this public health emergency.

4.4 Municipal Transfers

- An investment in the Municipal Modernization Program to support 405 small and rural municipalities invest in service delivery reviews and projects aimed at increasing municipal efficiency, and funding for disaster relief assistance.
- Investment in the Ontario Municipal Partnership Fund (OMPF) was \$505 million in 2019-2020 and will be reduced to \$501.9 million in 2020-2021.

4.5 Provincial Gas Tax Funding for Municipalities for Transit

- Gas Tax revenue is projecting a slight decrease in 2020-21 versus 2019-20.
- Like new measures for most Provincially-administered taxes, there will be no penalties for late filing for a period of five months.

4.6 Childcare

- Providing emergency childcare options to enable parents who are front-line workers to report for work, such as health care workers, police officers, fire fighters and correctional officers.
- A one-time \$200 payment per child up to 12 years of age, and \$250 for those with special needs including kids enrolled in private schools to help parents with the cost of daycare and school closures.

4.7 Property Tax Initiatives

- \$1.8 billion in education property tax deferrals as a result of deferring the upcoming quarterly June 30 remittance of education property tax to school boards by 90 days. The deferral will assist lower tier municipalities with cash flow who were required to remit school taxes on specific dates regardless of whether they billed, collected or deferred the school taxes.
- Planned property tax reassessments postponed creating tax stability for individuals and businesses. Property assessments for the 2021 property taxation year will continue to be based on the same valuation date that was in effect for the 2020 property taxation year with no date set for the reassessment.

4.8 Justice Sector

- Equipping essential first responders and front-line staff in the justice sector with the necessary personal protective equipment and other critical supplies required to ensure the safety and security of all people in Ontario during the COVID-19 outbreak.
- Funding to support the Provincial strategy to combat human trafficking.

4.9 Other Measures to Provide Relief to Individuals and Businesses

- Additional \$1.6 billion in funding to address pressures in electricity cost relief programs, including the cost of the new Ontario Electricity Rebate for eligible residential, farm and small business consumers and expanding Low-income Energy Assistance Program (LEAP) eligibility.
- Pausing OSAP payments for 6 months.
- Doubling the Guaranteed Annual Income System (GAINS) payment for six months for low-income seniors.
- Regional Opportunities Investment Tax Credit, a new 10 per cent refundable Corporate Income Tax credit for capital investments to support regions lagging in employment growth. Durham Region is not listed in 'eligible communities'.
- \$1.9 billion in financial relief for businesses through the six-month deferral of WSIB payments.

5. Fiscal Highlights

5.1 Fiscal Position

- 5.1.1 As of December 31, 2019, the government was projecting a deficit of \$9.0 billion in 2019–20, unchanged since the 2019 Ontario Economic Outlook and Fiscal Review. The fiscal update revised the projected deficit to \$9.2 billion in 2019-20 and 20.5 billion in 2020-21.

5.1.2 In 2020–21, program expenses are expected to be \$161.1 billion, representing an increase of \$8.0 billion relative to the 2019–20 interim estimate.

Table 1: Ontario's Fiscal Plan as Stated in the March 2020 Economic and Fiscal Update

Ontario's Fiscal Plan

(\$ Billions)

	Actual 2018–19	Interim ¹ 2019–20	Plan 2020–21
Revenue	153.7	156.7	156.3
Expense			
Programs	148.8	153.1	161.1
Interest on Debt	12.4	12.6	13.2
Total Expense	161.1	165.7	174.3
Surplus/(Deficit) Before Reserve	(7.4)	(9.0)	(18.0)
Reserve	–	0.2	2.5
Surplus/(Deficit)	(7.4)	(9.2)	(20.5)
Net Debt as a Per Cent of GDP	39.5%	39.9%	41.7%
Accumulated Deficit as a Per Cent of GDP	25.3%	25.3%	26.8%

¹ Interim represents the March 2020 Economic and Fiscal Update projection for the 2019–20 fiscal year.

Note: Numbers may not add due to rounding.

Sources: Ontario Ministry of Finance and Treasury Board Secretariat.

5.1.3 Revenue projections have been adjusted to reflect past experience in periods when there was a sudden slowdown in economic activity. Projected 2020–21 revenues of \$156.3 billion are \$3.5 billion lower than at the time of the 2019 Budget and \$0.4 billion lower than projected revenue for 2019–20. The estimated overall impact on revenues of the COVID-19 outbreak is about \$5.8 billion in 2020–21 including:

- Personal Income Tax revenue to decline by 0.8 per cent
- Sales tax revenue to decline by 0.2 per cent
- Corporate tax revenue expected to decline by 1.7 per cent

5.2 Sensitivities Tied to Economic Assumptions

5.2.1 The Ontario Ministry of Finance is assuming Ontario's economic growth will improve in the second half of 2020 and into 2021. Variances on some key assumptions would have significant impacts on projections including:

- \$700 million revenue change for each percentage point change in nominal GDP growth which is forecast to remain unchanged (0 per cent growth) on an annual basis in 2020 and advance by 2.0 per cent in 2021.
- \$440 million revenue change for each percentage point change in growth in compensation of employees. Growth in compensation to employees projected to decrease from 4.1 per cent in 2019 to 2.7 per cent in 2020, increasing back to 4.3 per cent in 2021.

- \$197 million revenue change for each percentage point change in growth of household consumption expenditures which is projected to bounce back in 2021.
- \$100 million revenue change for each percentage point change in growth of net corporations operating surplus. Assumed corporate profits will increase by 8.3 per cent in 2021 after declining this year.
- A 1% change in debt interest rates (anticipated at 2.7 per cent) equates to approximately \$400 million.
- Unemployment rate is projected to increase by one percentage point to 6.6 per cent in 2020 and maintain that rate for 2021. Employment growth projected to increase by only 0.5 per cent in 2020, after 2.9 per cent estimated for 2019.

6. Next Steps

- 6.1 Finance staff will continue to monitor the fiscal and economic statements tabled by senior levels of government and highlight financial or service implications or new initiatives to ensure challenges are highlighted. Additionally, Finance staff will work in consultation with all departments to identify and maximize any opportunities for additional funding for Regional programs. Any opportunities or additional economic and fiscal developments will be reported to Committee and Council as appropriate.

Respectfully submitted,

Original Signed By

Nancy Taylor, BBA, CPA, CA
Commissioner of Finance

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2564



The Regional Municipality of Durham Information Report

From: Commissioner of Planning and Economic Development
Report: #2020-INFO-28
Date: April 3, 2020

Subject:

Carruthers Creek Watershed Plan Update, Impact of COVID-19 Pandemic on Public Consultation, File: D07-17-01

Recommendation:

Receive for information

Report:

1. Purpose

1.1 The purpose of this report is to advise Council that due to the COVID-19 pandemic, the Public Open House for the Carruthers Creek Watershed Plan Update that was scheduled to be held on Thursday April 30th, is being postponed. Additionally, an assessment will be made no later than Friday June 5th on whether it will be necessary to extend the June 16th deadline for the receipt of written comments.

2. Background

2.1 On March 13, 2020 a draft of the Carruthers Creek Watershed Plan Update was released to Council and the public for a 90-day review and comment period, (see [Commissioner's Report #2020-INFO-18](#)).

2.2 Over the past three weeks there has been an escalation of closures and measures by all levels of government in response to the COVID-19 pandemic, including the prohibition of organized public events and social gatherings of more than five people.

3. COVID-19 Impacts on Public Consultation

- 3.1 With the release of the draft Carruthers Creek Watershed Plan Update on March 13, 2020, the project entered the final stage of planned public consultation. This final stage includes a 90-day public review and comment period (ending June 16, 2020) as well as a planned Public Open House scheduled for April 30, 6 to 9 pm at the Audley Recreation Centre in Ajax.
- 3.2 In order to observe applicable public orders, efforts to limit crowds, and practice physical distancing, **the planned April 30th Public Open House is being postponed.** Durham staff will work with the project team at the Toronto and Region Conservation Authority (TRCA), as well as staff at the Town of Ajax and City of Pickering in the coming weeks to develop an alternative approach to conducting the planned in-person Public Open House. In early June, Staff will also evaluate the need to extend the deadline for receipt of public comments on the Watershed Plan Update.
- 3.3 Notice of the Public Open House cancellation will be distributed via TRCA's social media platforms and posted on the [Carruthers Creek project website](#). This notice will also be sent by TRCA staff to all individuals who previously provided comments on the Watershed Plan Update and/or those who requested to be notified of project progress.

4. Additional Data and Information

- 4.1 Following the release of the draft Carruthers Creek Watershed Plan Update and supporting technical reports, requests were received by TRCA staff for additional underlying data and information that support the management recommendations, (e.g. Geographic Information System (GIS) mapping layers, and certain data and models used in the analysis). The information requested, while included in the supporting technical reports to the Watershed Plan, was not initially made available in a digital format.
- 4.2 TRCA staff are in the process of making the additional information available. A statement has been posted on the [Carruthers Creek project website](#) advising of the availability of additional information and how to submit a request. All interested members of the public and agencies will be provided with the equal opportunity to access the underlying data and information.

5. Conclusion and Next Steps

5.1 Given the current COVID-19 situation, it is appropriate to **postpone the planned April 30th, 2020 Public Open House.**

5.2 Once new arrangements have been made, details will be communicated in a future Council Information Report.

5.3 A copy of this report will be forward to the Toronto and Region Conservation Authority, the Town of Ajax and the City of Pickering.

Respectfully submitted,

Original signed by

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



The Regional Municipality of Durham Information Report

From: Commissioner of Finance
Report: #2020-INFO-29
Date: April 3, 2020

Subject:

Economic Update – Updated Risks and Uncertainty as of April 1st, 2020

Recommendation:

Receive for information.

Report:

1. Purpose

1.1 The Regional Finance Department monitors economic conditions on an ongoing basis and prepares periodic summary reports to Regional Council. The economy is undergoing a time of significant uncertainty with economic conditions and policies changing on a daily basis. The following summarizes the changes that have occurred over the period of March 26 – April 1, 2020.

2. Federal Government

2.1 On March 25th, the federal government unveiled an enhanced income replacement fund for people affected by the COVID-19 pandemic that replaces the previously announced Emergency Care Benefit and the Emergency Support Benefit. The Canada Emergency Response Benefit (CERB) program will provide \$2,000 a month to individuals who have lost income due to COVID-19. Payments would run for as long as four months and can be claimed by people regardless of whether they are eligible to receive unemployment benefits. This program adds an additional \$25 billion in spending to phase one of the COVID-19 Economic Response Plan, bringing the total to \$107 billion.

2.2 On Friday March 27th, the federal government announced phase two of the COVID-19 Economic Response Plan, which includes significant support to small and medium sized businesses.

2.3 The plan includes increasing the previously announced small business wage subsidy (for up to three months) from 10 per cent to 75 per cent. The subsidy is

capped at \$847 per week per employee, or 75 per cent of the first \$58,700 of an employee's salary. The subsidy is available to employers that can demonstrate a 30 per cent loss in revenue as a result of COVID-19.

- 2.4 The federal government also established a \$25 billion Canada Emergency Business Account which will provide \$40,000 loans to small businesses and non-profit institutions with payrolls between \$50,000 and \$1.0 million. The loans will be interest free for the first year and will be forgivable up to 25 per cent (up to \$10,000) if paid back by before the end of 2022.
- 2.5 Another program launched by federal government is the Small and Medium-sized Enterprise Loan and Guarantee program which will make available an additional \$40 billion in guaranteed loans to small businesses through the Business Development Bank and Export Development Canada.
- 2.6 In addition to the increased spending, the federal government will allow businesses and self-employed individuals to defer all GST, HST, and custom duty payments until June 2020.
- 2.7 On March 29th, the federal government announced additional social service supports, including providing \$7.5 million to Kids Help Phone to provide mental health supports for children and youth. The government also announced \$9 million for local organizations, through United Way Canada, to support practical services to seniors, including the delivery of groceries, medications, or other needed items, as well as personal outreach to assess individuals' needs and connect them to community supports.
- 2.8 In terms of much needed medical supplies and equipment, the federal government announced, on March 31st, a \$2 billion investment to support diagnostic testing and to purchase ventilators and protective personal equipment, including bulk purchases with provinces and territories. The government has also set aside \$50 million for the Next Generation Manufacturing Supercluster to develop and scale-up new, in-demand technologies, equipment, and medical products.

3. Ontario Government

- 3.1 On March 25th, the provincial government released *Ontario's Action Plan: Responding to COVID-19*. The plan includes \$7 billion in direct financial assistance and \$10 billion in tax and other deferrals. The details of the plan will be outlined in the companion report to Council.
- 3.2 On March 30th, the provincial government announced \$10 million to help community organizations with the coordination of subsidized deliveries of meals, medicines and other necessities to seniors. This funding doubles the initial commitment set out in the Province's COVID-19 Action Plan.

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- 3.3 On March 31st, the provincial government announced an additional \$25 million funding allocation to Ontario's publicly funded colleges and universities. The funding is to help with the most pressing needs associated with COVID-19, such as deep cleaning, purchasing medical supplies or offering mental health supports.
- 3.4 In addition to the funding for post-secondary institutions, the government announced relief for post-secondary students. As announced in the Province's COVID-19 Action Plan, the government will defer payments on Ontario Student Assistance Program (OSAP) loans for a six-month period. Students will not be required to make any loan payments, and interest will not accrue on any loans, until September 30th, 2020.
- 3.5 In terms of enforcement, the provincial government announced strict new measures to prevent businesses and individuals from inflating the prices of necessary products during the COVID-19 pandemic. Any individual found charging unfair prices for necessary goods could receive a ticket of \$750 or, if convicted in court, a fine of up to \$100,000. A corporation could face fines of up to \$10 million, while the company director could be fined up to \$500,000 and could face a year in prison.
- 3.6 On March 31st, the provincial government took further measures to mitigate the spread of COVID-19 by extending the emergency declaration in the province to April 13th, 2020. This extends the closure of all non-essential businesses for an additional two-week period. Additionally, the closure of public schools was extended until at least May 4th, 2020 with further extensions possible if necessary.

4. Monetary Policy

- 4.1 The Bank of Canada announced a series of new measures aimed at providing further liquidity to the credit market in order to help stabilize the economy.
- 4.2 On March 27th, the Bank of Canada cut its key overnight lending rate by an additional 50 basis points to 0.25 per cent. This marks the third time that the bank cut rates in one month and brings the key interest rate in line with central bank rates offered by the other G7 nations. The Bank of Canada has stated that 0.25 per cent represents the effective lower bound, meaning no further rate cuts are expected. The last time the overnight rate was at 0.25 per cent was during the financial crisis in 2009.
- 4.3 In addition to the interest rate cut, the Bank of Canada announced it will be purchasing a minimum of \$5 billion per week of Government of Canada securities in the secondary market. The Bank did not set a timeline for purchases but rather stated that the purchases will continue until the economic recovery is well underway. This marks the first time the Bank of Canada has undertaken this type of quantitative easing.
- 4.4 The Bank of Canada also announced a Commercial Paper Purchase Program whereby, over the next 12 months, the Bank will conduct primary and secondary

market purchases of commercial paper issued by Canadian firms, municipalities, and provincial agencies. Commercial paper is a short-term debt instrument used by corporations and public authorities to help meet short term liabilities, such as payroll and inventory.

5. Financial Markets

- 5.1 The U.S equities market experienced a slight bounce back during the week of March 23 – 27, as the S&P 500 Index rose 10.3 per cent for the week. The Dow Jones Industrial Average also rose 12.8 per cent for the week, capping off its best week since 1938. Despite these increases, the S&P 500 and Dow Jones Industrial Average were down 20 and 23 per cent respectively in the first quarter of 2020, marking this the worst first quarter performance on record.
- 5.2 The Toronto Stock Exchange also rose approximately 7 per cent for the week of March 23 – 27. Despite the increase, the Toronto Stock Exchange finished off the first quarter of 2020 down approximately 22 per cent.
- 5.3 As investors slowly begin to move back into equities, bond yields are beginning to recover from their all-time lows. On March 30th, the 10-year Government of Canada Benchmark Bond closed at a yield of 0.75 per cent. This is up from the 0.53 per cent yield on March 9th.
- 5.4 Oil prices continue to collapse with the price for Alberta's Western Canadian Select (WCS) trading around US\$5 per barrel. Last week, the price of WCS fell to US\$3.82, which is the lowest price on record. The price of West Texas Intermediate (WTI) is also trading at 18-year lows of approximately US\$20 per barrel.
- 5.5 The lack of oil demand resulting from COVID-19 is also causing storage capacity issues. According to energy analysts from Rystad Energy, world oil supply is already above 75 per cent storage capacity. If current production rates remain unchanged, it is estimated that oil storage will be at full capacity by the end of June 2020.
- 5.6 Despite falling oil prices, the Canadian dollar is beginning to rebound from its most recent lows. Last week (March 23 – 27), the loonie experienced a 3.1 per cent rise against the U.S dollar which marks the largest single week rise since 2009. The Canadian dollar is currently hovering around the US\$0.70 - US\$0.71 range.

6. Global Economy

- 6.1 As China begins to emerge from the COVID-19 lockdown, there are signs that Chinese economic output is beginning to expand. After manufacturing output, as measured by the Purchasing Managers Index (PMI), fell to an all-time low of 35.7 in February, the index rose sharply to 52.0 in March. Manufacturing output is considered to be expanding with a PMI reading above 50.0.

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- 6.2 While China begins to emerge, the world's largest economy continues to struggle from the effects of COVID-19. In the United States, the U.S Department of Labour reported a record 3.28 million people filed for unemployment insurance during the week of March 16th. This represents approximately 2 per cent of their labour force.
- 6.3 According to estimates from the Bank of Montreal, the unemployment rate in the United States could hit 9 per cent over the next two months, with approximately eight million layoffs. Prior to the COVID-19 outbreak, the U.S was experiencing record low unemployment with the unemployment rate at 3.5 per cent.
- 6.4 Many other countries throughout the world are continuing to put measures in place to moderate the economic impact of COVID-19. On March 30th, the Australian Government announced its third round of economic stimulus with an additional AUD\$130 billion (US\$80 billion) package. The package includes a monthly AUD\$1,500 per worker wage subsidy paid directly to businesses bi-weekly.
- 6.5 India recently announced a 1.7 trillion rupee (US\$22.5 billion) economic stimulus package aimed at assisting low-income households during the country's 21-day lockdown. The package will be distributed through a combination of food security measures and direct cash transfers.
- 6.6 Japan is proposing a ¥60 trillion (US\$554 billion) stimulus package to stabilize the Japanese economy. The plan includes a number of loans to businesses and cash payouts to families. This package would surpass the ¥56.8 trillion stimulus provided during the financial crisis of 2008.
- 6.7 In South Korea, even as the country has largely been able to contain the spread of COVID-19, the government announced another round of stimulus in the form of direct cash payments to households. The announcement was made on March 30th and is in addition to the 11.7 trillion won (US\$9.8 billion) package announced in early March.
- 6.8 As a result of the increasing spread of COVID-19, S&P Global has downgraded its global growth forecast for 2020 to 0.4 per cent, down from 3.3 per cent before the pandemic. Global economic growth of 0.4 per cent would be the worst global economic performance since 1982.
- 6.9 Moody's Investors Services shares a similar outlook with global GDP projected to grow by 0.5 per cent in 2020 before rebounding to 3.2 per cent in 2021.

7. Conclusions

- 7.1 The economy is experiencing increasing volatility with uncertainty around the spread of COVID-19. Economic conditions are changing on a daily basis as policy makers continue to navigate this uncharted territory.

7.2 The Regional Finance Department will continue to monitor economic conditions with the assistance of the CAO's Office and the Economic Development Division and provide timely updates as required.

Respectfully submitted,

Original Signed By

Nancy Taylor, BBA, CPA, CA
Commissioner of Finance and Treasurer



Notice of Cancellation

Planning and Economic Development Committee Meeting

Application to Amend the Durham Regional Official Plan

Regional File Number: OPA 2020-001

The Regional
Municipality
of Durham

Planning and Economic
Development Department

Planning Division

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

As a result of COVID-19, the World Health Organization's declaration of a pandemic and Ontario Government's decision to issue a ministerial order to close non-essential businesses, the Region of Durham has taken decisive action.

To protect the health and safety of our residents, to help facilitate social distancing and to help prevent the spread of COVID-19, the Region of Durham has **cancelled** the Planning Act Public Meeting of the Planning and Economic Development Committee meeting on **Tuesday April 7, 2020**.

The Public Meeting will be rescheduled at a later date and when regular business resumes. You will receive notification when the meeting is rescheduled.

Thank you for your patience,

Gary Muller

Gary Muller,
Director of Planning
Planning and Economic Development Department



If this information is required in an accessible format, please contact Planning Reception at 1-800-372-1102, extension 2602.



The Regional
Municipality
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Notice of Cancellation

Planning and Economic Development Committee Meeting

Application to Amend the Durham Regional Official Plan Regional File Number: OPA 2020-002

As a result of COVID-19, the World Health Organization's declaration of a pandemic and Ontario Government's decision to issue a ministerial order to close non-essential businesses, the Region of Durham has taken decisive action.

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Planning and Economic Development Department

"Service Excellence
for our Communities"

If this information is required in an accessible format, please contact Planning Reception at 1-800-372-1102, extension 2602.

If you require this information in an accessible format, please contact The Regional Municipality of Durham at 1-800-372-1102 ext. 3560.



March 30, 2020

Celeste Dugas, Manager, York Durham District Office
Ministry of the Environment, Conservation and Parks
230 Westney Road South, Floor 5
Ajax, Ontario L1S 7J5

Dear Ms. Dugas:

**RE: Durham/York Energy from Waste Project
2019 Durham York Energy Centre Annual Report
Environmental Compliance Approval Condition 15(1)
MECP File #: EA-08-02**

In accordance with Condition 15(1) of the Durham York Energy Centre (DYEC) Environmental Compliance Approval (ECA), The Regional Municipality of Durham and The Regional Municipality of York (Regions) and Covanta respectfully submit the 2019 DYEC Annual Report (Annual Report) covering the 2019 calendar year.

The Annual Report includes the information required to be submitted as per ECA Condition 15(1) items a) through r). A copy of the 2019 DYEC Annual Report will be retained at the DYEC site and posted on the [DYEC project website](http://www.durhamyorkwaste.ca) (www.durhamyorkwaste.ca). The report will also be submitted to the Energy from Waste Advisory Committee for information.

A table listing the reports submitted to the Ministry of the Environment, Conservation and Parks (MECP) in 2019 is included in the Annual Report as Appendix 1.

We trust that this meets the MECP's expectation. If you require additional information, please contact the undersigned.

Sincerely,

Original signed by:

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Director (Acting), Waste Management
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- P. Dunn, Senior Environmental Officer, MECP
- J. Butchart, Special Projects Coordinator, MECP
- P. Martin, Supervisor, Air, Pesticides and Environmental Planning, MECP
- G. Battarino, Special Project Officer, Project Coordination, MECP
- T. Bell, Environmental Resource Planner and EA Coordinator, Air, Pesticides and Environmental Planning, MECP
- A. Huxter, Environmental Specialist, Covanta
Energy from Waste Advisory Committee (EFWAC)
- C. Raynor, Regional Clerk, The Regional Municipality of York
- R. Walton, Regional Clerk, The Regional Municipality of Durham

Enclosure



Township of Scugog Staff Report

To request an alternative accessible format, please contact the Clerks Department at 905-985-7346.

Report Number: DEV-2020-013

Prepared by: Kevin Heritage, MCIP, RPP
Director of Development Services

Department: Development Services

Report To: Council

Date: March 23, 2020

Reference: Strategic Direction #5 – Natural Environment
Strategic Direction #6 – Community Engagement

Report Title: **Mixed Waste Transfer, Pre-Sort & Anaerobic Digestion Organics Processing Facility
Region of Durham**

Recommendation:

1. **That** Report DEV-2020-013, entitled “Mixed Waste Transfer, Pre-Sort & Anaerobic Digestion Organics Processing Facility, Region of Durham” be received; and
 2. **That** Report DEV-2020-013, be forwarded to the Region of Durham for information.
-

1. Background:

This report has been prepared to provide Council with a summary of the Region’s recommended proposal and process to develop a mixed waste transfer, pre-sort & anaerobic digestion organics processing facility on lands owned by the Region.

Currently, the organics and recyclables that are included in the Region's mixed waste collection is combusted at the Durham York Energy Centre (DYEC) which is located south of Highway 401, east of Courtice Road, in Clarington.

In 2019, the Region conducted a Waste Composition Study to determine the composition of the mixed waste originating from single family and multi residential households. The Study found that, among other matters, that the organics fraction of the mixed waste from single family dwellings and multi-residential dwelling units exceeded 40%. In addition, the organics fraction from mixed waste included pet and sanitary waste.

Based on the above results and the Region's intent to develop a long term organics management solution, the Region in June 2019, approved the development of a co-located mixed waste transfer, pre-sort & anaerobic digestion organics processing facility. The proposed facility will achieve increased waste diversion, green energy production, and resource recovery of non-combustibles. Similar to the DYEC, a private corporation will be responsible to design, build, operate and maintain the proposed facility. The facility will accept all residual garbage from single family and multi residential households and then separate out the recyclables and organics. The recyclables will be sent to market while the sorted organics will be processed by the anaerobic digester along with Green Bin organics and converted into energy and fertilizer. The remaining residual waste will be processed at the DYEC.

The mixed waste transfer and pre-sort system are intended to divert recyclables and organics currently processed at the DYEC and create the necessary capacity to accommodate the increase in waste garbage created by projected population growth. The Region's current diversion rate and target is 64% and 70% respectively.

According to the Region, the proposed facility will not trigger the requirement for an Environmental Assessment (EA). However, the Region has implemented a methodology consistent with an EA process for the site selection of the proposed facility.

The Region has prepared the following siting criteria for the proposed facility:

- prevention, reduction, and elimination of impacts to the environment;
- protection and conservation of natural resources and ecologically sensitive areas; and
- integration of social and economic considerations.

The following exclusionary site identification criteria identified by the Region are based largely on the technical requirements of the facility. If a site fails to meet all the requirements set out in the exclusionary criteria listed in the table below, it will be excluded from further consideration.

Factor	Criteria/Indicator	Rationale
Technical	<p>Site Suitability</p> <ul style="list-style-type: none"> • Meets minimum size requirements (8-15 ha) • Meets minimum buffer area requirements to sensitive receptors • Must be land owned by the Region of Durham or Local Area Municipality within the Region of Durham <p>Utilities and Services</p> <ul style="list-style-type: none"> • Availability to connect utilities and services 	<p>The facility must ensure that the site is suitable for construction and operation from a size, location and site constraints perspective.</p> <p>The site must be owned by the Region of Durham or Local Area Municipality within the Region of Durham with minimal existing development on the site.</p> <p>The facility requires connections to municipal services and other utilities for both construction and operation.</p>
Social/ Environmental/ Cultural	<p>Transportation</p> <ul style="list-style-type: none"> • Neighbourhood traffic impacts including increased haul route traffic, distance travelled <p>Land Use Compatibility</p> <ul style="list-style-type: none"> • Minimize impact to sensitive receptors 	<p>Truck traffic associated with the facility may affect residents, businesses, and institutions in the site vicinity. Upgrades to the surrounding road network may be required.</p> <p>The facility has the potential to affect local sensitive</p>

	<ul style="list-style-type: none"> • Minimize impact to natural heritage elements including Designated Greenlands, Source Water Protection Areas • Minimize impact to Class 1 and Class 2 Agricultural Areas • Minimize impact to Cultural Heritage / Archaeological Potential Areas • Minimize impact to Wetlands, Floodplains and Water Bodies 	<p>receptors from a nuisance perspective</p> <p>The facility may remove or disturb the functioning of natural heritage habitats and protected water sources</p> <p>Agricultural land may be displaced by the facility</p> <p>Archaeological and Cultural Heritage resources are nonrenewable cultural resources that can be permanently displaced by the facility.</p> <p>The facility may disrupt natural surface drainage patterns and may alter runoff and peak flows. The presence of the facility may also affect base flow to surface water.</p>
--	--	--

The Region used the above noted criteria to reduce the long list of sixteen (16) sites to the six (6) locations on the short list. The six sites on the short list (which include two sites in the Township of Scugog) include the following:

- West Scugog: Scugog Regional Depot, 10 Goodwood Road
- East Scugog: Regional Waste Management Facility, 1623 Reach Street, Port Perry
- North Clarington: Former Darlington Landfill, 9293 Woodley Road
- South Clarington; Adjacent to Durham York Energy Centre, 1797 Megawatt Drive, Courtice

- Oshawa: Regional Waste Management Facility, 1640 Ritson Road North
- Whitby: Regional Waste Management Facility, 4600 Garrard Road

On February 19, 2020, area municipal staff were advised of the sites on the short list. On February 27, 2020, the Region held a Public Information Centre to display a summary of the project background and the six sites on the shortlist. The Region's comparative evaluation

South Clarington – Near DYEC



The rationale for this selection is generally based on the following considerations:

- no off-site sensitive receptors (i.e. residences) are within 500 metres of the site;
- no policy conflicts from a provincial policy / plan perspective (i.e. Oak Ridges Moraine, Greenbelt, etc.);
- no wetlands on site and limited areas of Source Water Protection Plan designations;
- consistent with existing, proposed and surrounding land uses and land use designations (Regional Official Plan – Employment Area; Clarington Official Plan – Business Park);
- to build on the energy related character of the Energy Park;
- synergies with existing solid waste management infrastructure, including DYEC where mixed waste residuals would be processed;
- the road network to the site has been upgraded to accommodate traffic volumes that would be generated for the proposed use;
- no archaeological significance;
- utilities and servicing are available on-site with nearest natural gas line in close proximity; and
- lower transportation costs, thereby reducing transportation emissions as waste material outputs from the facility would be in very close proximity to the DYEC.

3. Financial Implications:

There are no financial implications regarding the selection of the preferred site.

4. Communication Considerations:

It is anticipated that the Regional Planning Committee will consider Regional staff's recommended site on April 15, 2020 which will then be forwarded to Council on April 29, 2020 for final approval.

5. Conclusion:

The Region's recommended site for the Mixed Waste Transfer, Pre-Sort & Anaerobic Digestion Facility is the South Clarington site. The site selection process was based on an extensive analysis of 6 sites throughout the Region, two of which were located within the Township of Scugog. Due to a number of factors including transportation; provincial, regional, and local planning policy; and servicing and utility infrastructure, the two Scugog sites did not qualify as high priority sites.

Once a recommended site is approved by Regional Council, further detailed work and approvals will be required.

Respectfully Submitted by:

Reviewed By:

Kevin Heritage, MCIP, RPP
Director of Development Services

Paul Allore, MCIP, RPP
Chief Administrative Officer

Attachment:

Attachment 1: Siting Report: Mixed Waste Transfer / Pre-Sort and Anaerobic Digestion
Organics Processing Facility



Siting Report

Mixed Waste Transfer / Pre-Sort and
Anaerobic Digestion Organics
Processing Facility

Regional Municipality of Durham
Waste Planning and Technical
Services

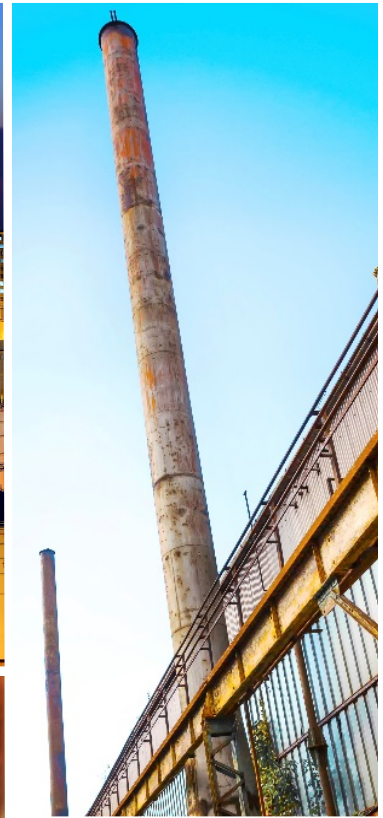


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1. Introduction

On June 26, 2019, the Regional Municipality of Durham (Region) Council granted approval to proceed with the Region's preferred long-term organics management technology solution, with the capital project to include both a mixed waste transfer and pre-sort facility and an anaerobic digestion (AD) organics management processing facility (Facility).

In order to facilitate the development of the Facility, a suitable site within the Region is required. With this in mind, the Region engaged GHD Limited to undertake a siting exercise to evaluate and identify a preferred site that would be brought forward and recommended to Council. The siting process includes the following three steps:

1. **Develop Siting Methodology and Evaluation Criteria** – Determine the search area and minimum site requirements, and develop a siting methodology along with a series of criteria to evaluate potential sites.
2. **Long-List Evaluation** – Apply an initial set of evaluation criteria to the list of candidate sites to arrive at a short-list of sites.
3. **Short-List Evaluation** – Comparative evaluation of short-listed sites against additional evaluation criteria. Assess the advantages and disadvantages of developing a facility on each site, and perform a comparative ranking to determine the recommended site.

This report provides an and description, summary of the site selection methodology with evaluation criteria, establishment of a long-list of potential sites, evaluation of the long-list of sites, generation and comparative evaluation of the short-list of sites, and a recommended site for future development of the Facility.

2. Facility Need and Background

The Region manages municipal solid waste within its jurisdiction serving single-family residences, multi-family residential properties (multi-residential), and business improvement areas from eight municipalities: Pickering, Ajax, Clarington, Brock, Scugog, Uxbridge, Whitby, and Oshawa. The Region is responsible for non-hazardous municipal solid waste management programs, including collection, processing, diversion, haulage, and disposal of Blue Box recycling. The Region maintains responsibility of garbage, Source Separated Organics (SSO), and leaf and yard waste for all municipalities except for the Town of Whitby and City of Oshawa.

The Region adopted its first Long-Term Waste Management Strategy Plan in 1999. One of the main goals of the strategy plan was to divert at least 50 percent of the residential waste from disposal by 2007. In spring 2019, Regional Council directed staff to begin working on a new Long-Term Waste Management Plan 2021 – 2040, that will include new waste diversion goals over that time horizon.

In 2017, the Region determined a need to focus on an Organics Management Strategy in order to ensure future organics processing capacity would be achieved, particularly in light of the Provincial Organics Action Plan (OAP)¹. Through additional work completed by the Region, it is evident that

¹ Region of Durham Report, Report #2017-COW-180, June 7, 2017

there are several key drivers to ensure the Region provides adequate organics processing capacity to its residents, including:

- Current Diversion Rates – Small increments are required to move the needle on diversion in order for Durham to achieve 70 percent diversion. Increasing capacity for recovery of organics will assist in the Region in making incremental steps to the overall diversion goal.
- Growth in the Region – The Region continues to experience significant and rapid single-family and multi-residential growth, thereby increasing the amount of organic material generated for processing within the Region.
- Other Waste Management Infrastructure – The removal of organics and recyclables from other waste management infrastructure, for example, the Durham York Energy Centre (DYEC) will preserve capacity for materials that cannot be diverted.
- Legislation – The Province has implemented the Food and Organic Waste Action Plan and Policy Statement, which sets targets for the Region with respect to recovery and processing of food and organic waste.

With this in mind, expanded organics capacity through AD and mixed waste processing (MWP) pre-sort technologies will allow the extraction of organics from both single-family households and the multi-residential residual stream, and help increase the Region's diversion rate, while ensuring the legislative requirements are also met.

The Region's SSO program currently accepts all food wastes, household plant clippings, paper fibre wastes, and potting soils. In 2018, a waste composition study was conducted on single and multi-family residential waste samples from within the Region. The waste composition results indicated that the residual waste stream from both single-family and multi-residential households includes up to 40 percent of uncaptured organics materials, which could potentially be diverted through the Facility.

Up to 25,000 tonnes of the Region's SSO are processed by Miller Waste Systems Inc. at a composting facility on Squires Beach Road in Pickering, Ontario. In addition, up to 20,000 tonnes of the Region's SSO are processed by Walker Environmental - All Treat Farms at a composting facility on Wellington County Road in Arthur, Ontario. The Region's SSO are processed aerobically in an in-vessel technology to generate compost that meets the current Ontario Composting Guidelines for "AA" grade compost. Aerobic composting introduces limitations because, in order to produce "AA" compost, it cannot accept difficult to compost materials such as animal waste, and hygiene and incontinence products. It also cannot accept more contaminated organics that could be generated in the multi-residential sector or from community centres, civic facilities, fairs and festivals, and other sources of organics with relatively high contamination. This limits the Region's ability to reach its waste diversion goals by limiting the amount of waste the Region can divert from disposal.

While the Region does provide collection of SSO for low-to medium density multi-residential residences, there is limited SSO collection by the Region at high-density multi-residential residences (e.g., high-rise apartments). There are unique challenges in the collection of SSO from high-density multi-residential residences based in part on the lack of infrastructure for separation of the waste stream. The Region is not considering the expansion of the SSO program to include high-density multi-residential residences at this time.

Mixed waste is sent to the DYEC for thermal processing and generation of electricity. Thermal processing in Ontario does not count towards diversion metrics, and is treated as an alternate form of disposal.

There are a number of drivers being encountered by the Region that dictate moving towards the Facility. The additional components to the existing system are in part dictated by the Region's waste profile and existing assets, the Region's goals, and the additional drivers and opportunities generated by new legislation (i.e. the *Food and Organic Waste (FOW) Action Plan* and the *Food and Organic Waste Policy Statement*).

With respect to the drivers, this Facility will achieve the following alignment:

- The Facility can harvest organics and recyclables from the mixed waste that will decrease the amount of materials that need to be processed by the DYEC. This preserves capacity at the DYEC for current and future volumes of waste, accommodates growth in the Region, and extends the timeline for expansion of this asset.
- The Facility can harvest organics and recyclables that are currently being sent for disposal at the DYEC and will help increase diversion for the Region on its road towards a 70 percent diversion goal. It is expected that the implementation of this type of system, which is the only viable approach for isolating organics from mixed waste, as part of the Region's completed integrated waste management system would increase diversion towards the Region's goal.
- The Facility can harvest incremental volumes of recyclables and organics, which can then be used to demonstrate greenhouse gas (GHG) reductions. Reducing GHG emissions from solid waste through such diversion and alternative treatment options (including energy from waste) is a strategy included in the Region's Community Climate Change Local Action Plan 2012. The Regional Council also declared a climate emergency in January 2020, thereby recognizing environmental sustainability and climate change as strategic priorities for the Region.
- The Facility can successfully cull organics from mixed waste, attending to the requirements that could be imposed when/if an organics disposal ban is implemented.

The application of an organics management system consisting of the Facility to supplement the Region's existing waste management infrastructure is expected to generate a number of positive outcomes, including the following:

- More than doubling the amount of organics captured compared to the Region's current baseline, adding an initial 27,000 tonnes per year of organic material into the Region's diversion stream. This material will necessitate additional processing and represents a new diversion stream. This approach will further isolate approximately 3,000 tonnes per year of additional recyclable materials.
- Decrease the total amount of waste sent to the DYEC creating excess capacity.
- It is estimated that the Facility would create technical employment opportunities for approximately 30 to 40 highly-skilled staff during full-time operations. For comparison, the DYEC currently employs approximately 40 full-time staff to operate the facility under the Region's supervision for the lifecycle of the Facility (up to 30 years).

- Additional benefits could be driven from advanced technologies such as AD, which can produce energy streams that can be commoditized.

There are two key components to the Facility proposed by the Region. The first is the mixed waste/transfer pre-sort process that isolates the recyclables and organics from the mixed waste. Recyclables are typically sorted, baled, and sent to secondary markets. The isolated organic fraction from the mixed waste will be sent to the organics processing system. SSO from the curbside Green Bin program will also be sent to the organics processing system (See Figure 1).

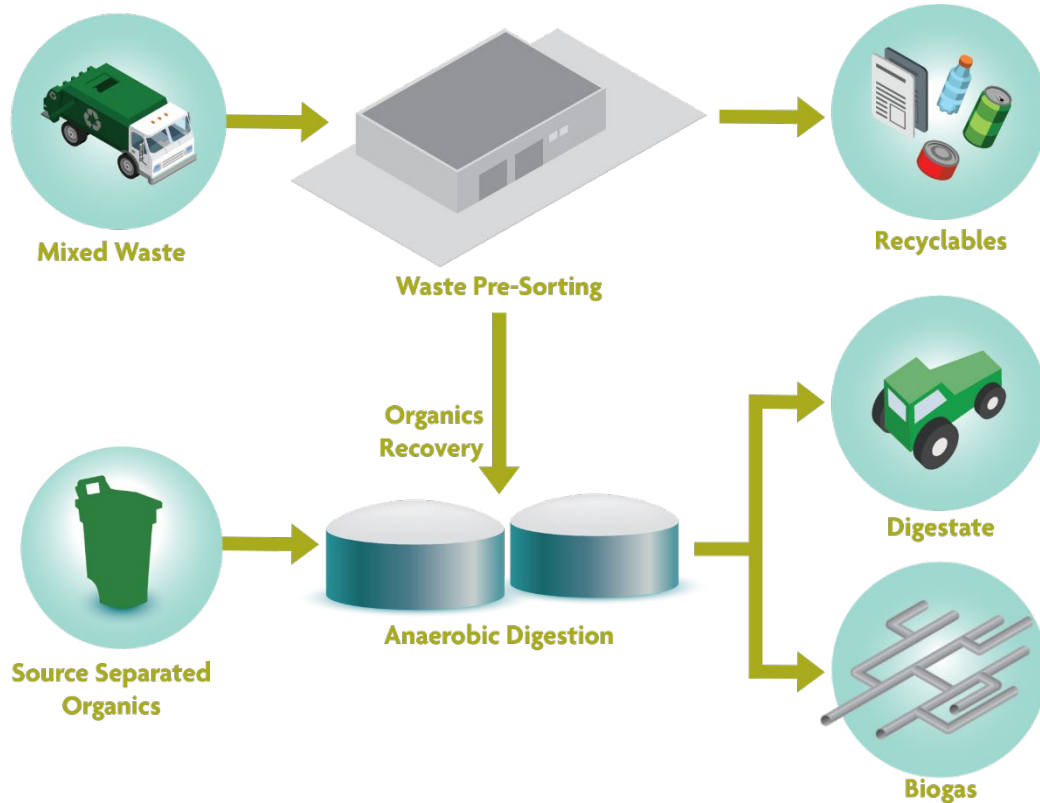


Figure 1 - Facility Process Flow Chart

Mixed waste transfer/pre-sort processing of mixed waste, removes hazardous, dangerous, or oversized materials using equipment or manual sorting, and then utilizes mechanical equipment to separate organics and recyclables. Once organics are removed from the waste stream, the remaining waste is sent to mechanical automated equipment that can sort a variety of recyclable products: metals, aluminum, fibre, different grades of plastics, glass, etc. These commodities can then be sent into the recyclables market to reduce the use of virgin materials in manufacturing. Currently, the organics and recyclables in the mixed waste are combusted in the DYEC. The organic materials culled from the mixed waste can then be processed using the organics processing system.

Wet AD was approved as the Region’s technology for processing organic materials including SSO and the separated organics from mixed waste processing, which is also referred to as facility separated organics (FSO). Wet AD technology includes continuously-stirred or plug-flow type, anaerobic digesters where the digestate can be pumped through pipes to the subsequent processing steps. AD occurs in the absence of oxygen and organic materials breaking down in the

absence of oxygen create biogas, which is rich in methane (i.e., natural gas but biologically-based). This methane can be used to create a variety of products such as electricity, renewable natural gas for injection into the natural gas distribution system, vehicle fuel for fueling vehicles, and possibly for liquid fuels to supplement ethanol blend requirements. The production of a fuel product further displaces fossil-based fuels and can generate revenues as a low-carbon fuel or from cap-and-trade offsets. Finally, AD can produce a variety of final products, including digestate, liquid fertilizer, solid fertilizer, or compost. Specific AD technologies have the ability to generate quality final organic products that can be beneficially-utilized, increasing diversion metrics.

3. Facility Description

The Region's service delivery approach for implementing the Region's long-term organics management solution includes public ownership of the Facility with a long-term (estimated to be for 20 years) single contract to be obtained from the private sector to design, build, operate, and maintain (DBOM) the Facility.

The Facility will be sited to accommodate a design for the projected 20-year processing capacity requirements of mixed waste and SSO. FSO recovered from the mixed waste along with the SSO will be sent for AD to the organics processing system. The Facility will be designed with space allocated for the potential transfer of waste to and from the Facility allowing for the potential transfer of mixed waste, SSO, recyclables, and leaf and yard waste.

After having identified the need and the preferred technology, it is important to find an appropriate site to accommodate the type of Facility and preferred technology (i.e. different technologies or approaches to organics management require different footprint sizes and mitigation measures for nuisances). A key consideration for the selection of a site is the approximate size of the lands required to accommodate the Facility. The preliminary sizing of the Facility is based on the mass balance previously developed by GHD for a 20-year and 50-year processing capacity. The mass balance was developed using information provided by and previously presented to the Region. The information provided by the Region included the growth projections and waste composition data.

The preliminary sizing of the buildings/facility includes tip floors, mixed waste pre-sort area, organic pre-processing and AD facilities, residue management area, and material transfer areas. The general assumptions and area assumption used to generate the site sizing requirements resulted in a site footprint ranging from 8 to 15 hectares.

4. Siting Process

With the above context in mind, GHD developed a methodology for the siting of the Facility. In order to ensure that the optimal location is identified, the siting process should:

- Follow a clearly defined methodology.
- Meet all applicable regulations and standards.
- Be consistent with best practices.
- Consider relevant evaluation criteria.

The goal of this Section of the report is to establish a practical siting methodology with associated evaluation criteria that will be undertaken in a step-wise process, which ultimately leads to a recommended site for developing the Facility.

4.1 Regulatory Framework

As part of the siting and development process, it is important to highlight the appropriate legislative framework that applies to waste management in Ontario and, specifically, the development and operation of supporting infrastructure. The mandate of the Ministry of Environment, Conservation and Parks (MECP) is to ensure protection, and where degraded, rehabilitation occurs of the natural environment, and the conservation of environmental and material resources for the enjoyment and benefit of present and future generations of people, as well as for other users of the environment. This mandate is supported by several pieces of applicable Ontario legislation, including:

Managing Waste in Ontario

- (1) Waste-Free Ontario Act, 2016
- (2) Resource Recovery and Circular Economy Act, 2016
- (3) Waste Diversion Transition Act, 2016
- (4) Food and Organic Waste Policy Statement, 2018
- (5) A Made-in-Ontario Environment Plan, 2018
- (6) Reducing Litter and Waste in Our Communities: Discussion Paper, 2019

Siting and Development of Waste Infrastructure

- (1) Environmental Assessment Act
 - Ontario Regulation 101/07 (Guide to Environmental Assessment Requirements for Waste Management Projects)
- (2) Environmental Protection Act
 - Ontario Regulation 347 (General Waste Management)
 - Ontario Regulation 419/05 (Air Pollution – Local Air Quality)
 - Ontario Regulation 419/05 and Guide for Applying for Approval (Air and Noise), S.9 EPA, November 2005, Guideline 4174e
- (3) Ontario Water Resources Act

Land Use Planning

- (1) The Planning Act
 - Provincial Policy Statement, 2014 (PPS)
 - Growth Plan for the Greater Golden Horseshoe, 2017
 - Oak Ridges Moraine Conservation Plan, 2017

These Acts, along with the Regulations under them, are used to establish and detail the authority and responsibility of the MECP as well as the legal requirements for proponents of various proposals. These Acts detail the obligations of facility owners with respect to their impact on public health and the environment, along with the rights of residents of Ontario.

Approvals or permits must be obtained prior to implementation of proposals with a potential for impact on public health or the environment. The residents of Ontario also have the right to be made aware of the proposal, so that the public has the opportunity to comment. Applications for MECP approvals go through the Environmental Bill of Rights public posting (30 days), during which time they are displayed publicly for comment on the material. The MECP and the Facility proponent must take due account of all comments and respond in a reasonable fashion.

4.1.1 Managing Waste in Ontario

The *Waste-Free Ontario Act, 2016*, which is comprised of the *Resource Recovery and Circular Economy Act, 2016* and the *Waste Diversion Transition Act, 2016* replaces the *Waste Diversion Act, 2002*. It and the accompanying *Strategy for a Waste Free Ontario – Building the Circular Economy* (Strategy), set goals for the waste sector with interim targets of 30 per cent diversion by 2020, 50 per cent diversion by 2030, and 80 per cent diversion by 2050. The legislation and Strategy seek to transform our current linear take-make-dispose consumption model that treats our resources and energy as limitless and disposal as inexpensive, to a circular model whereby wastes are reduced and what remains is captured and returned as productive resource inputs into our economy. The *Strategy for a Waste Free Ontario – Building the Circular Economy*, identifies food and organic wastes as an action item to ensure the volume going to landfill is reduced (*Action 10: Implement an action plan to reduce the volume of food and organic wastes going to landfill*). The Strategy acknowledges that there is a lack of regional infrastructure capacity, including organics processing capacity as it relates to the diversion targets.

The *Resource Recovery and Circular Economy Act, 2016* establishes a new waste diversion framework, which includes allowing the Province to provide direction related to resource recovery and waste reduction activities through policy statements and provincial interests. Municipal Official Plans must be consistent with policy statements and zoning bylaws must conform within three years of changes to Official Plans. These requirements are similar to those in the Planning Act.

The first Policy Statement established pursuant to Section 11 of the *Resource Recovery and Circular Economy Act* was the FOW Policy Statement. The FOW Policy Statement provides (amongst other items) policy direction across the production chain including the Province, municipalities, and the private sector. The *Resource Recovery and Circular Economy Act, 2016* requires relevant instruments (e.g. environmental approvals, municipal by-laws and Official Plans) to be consistent with appropriate policies in the FOW Policy Statement. Section 3(8) of the *Planning Act* now includes a provision that a Policy Statement issued under s. 11 of the *Resource Recovery and Circular Economy Act* is deemed to be a policy statement for the purpose of s. 3(1) of the *Planning Act*, ensuring that there is a “consistency” requirement for policy statements.

The FOW Policy Statement contains direction on *supporting resource recovery infrastructure* (Section 6), which seeks to ensure the Province as a whole develops the infrastructure required to address the increased food and organic waste processing capacity needs. Section 6 of the FOW Policy Statement describes this as follows:

“As the province, municipalities and the private sector take action to increase resource recovery of food and organic waste, Ontario will face significant demand for new or expanded resource recovery systems. Ontario will need to support existing resource recovery systems and develop additional capacity to process food and organic waste. These facilities must be well-planned and suitably sited to ensure the long-term effectiveness of our resource recovery systems.”

The FOW Policy Statement establishes direction based on the language used (i.e., 'shall' - clear direction, 'should' - moderate direction, and 'encourage' or 'may' which is minimal direction). The following would apply to the Region under the FOW Policy Statement:

- Municipalities that currently provide green bin collection **shall**:
 - Achieve a performance target of 70 per cent waste reduction and resource recovery of food and organic waste generated by its single-family dwellings by 2023.
 - Achieve a performance target of 50 per cent waste reduction and resource recovery of food and organic waste generated by multi-residential building owners by 2025.
 - Ensure that official plans are consistent by end of period determined under section 26(1) of the *Planning Act*, while municipal bylaws must be amended within three years after official plan amendment.
 - Ensure that approvals for new or expanded resource recovery systems address the D-Series Land Use Compatibility Guidelines and the Guideline for the Production of Compost in Ontario.
- Municipalities that currently provide green bin collection should:
 - Ensure official plans, zoning bylaws, plan or subdivision approvals and site plan approvals support resource recovery of food and organic waste.
 - Protect existing and planned resource recovery systems from incompatible uses and plan for new systems, where appropriate, to meet projected needs.
- Municipalities that currently provide green bin collection **are encouraged**:
 - To engage in additional waste reduction and resource recovery efforts to achieve their target with respect to additional types of organic waste, including personal hygiene wastes, sanitary products, shredded paper, additional paper fibre products, compostable products and packaging and pet food/wastes.

With respect to mixed waste processing, the FOW provides guidance for those municipalities, such as the Region, that already provide curbside collection of SSO to meet food and organic waste diversion targets (Section 4.1 of FOW):

“Municipalities that, as of the effective date, provide curbside collection of source separated food and organic waste shall maintain or expand these services to ensure residents have access to convenient and accessible collection services.”

i. In addition to curbside collection of source separated food and organic waste, other collection methods, such as directing disposal streams to mixed waste processing, may be used to support collection of additional food and organic waste.

As the Region has an established curbside program in place, the proposed Facility will expand the Region’s services and assist in increasing the overall diversion rate, while ensuring the proposed

facility is in keeping with the FOW Policy Statement. Other parameters around mixed waste processing within the FOW Policy Statement that the Region has considered includes:

6.12 When undertaking mixed waste processing, owners and operators of resource recovery systems should only accept source separated food and organic waste in instances when contamination or availability issues arise.

6.13 When undertaking mixed waste processing, owners and operators of resource recovery systems should demonstrate that recovered organic resources will regularly meet all applicable environmental quality standards.

6.14 When undertaking mixed waste processing, owners and operators of resource recovery systems should send recovered organic resources for further processing, such as composting or anaerobic digestion, where necessary.

In concert with the need for developing the necessary infrastructure to accommodate the goals and targets for food and organic waste diversion from landfill, the FOW Policy Statement also discusses the importance of both timely approvals to develop the facilities, as well as developing the facilities within close proximity to the generated material:

“Municipal and provincial approvals (e.g. land use and environmental approvals) ensure that resource recovery systems are designed, sited and developed to address matters related to the environment, economy and society. A strategic and collaborative approach will help facilitate timely decisions for these essential facilities.

6.5 The province, municipalities and other planning authorities should co-ordinate and complement approaches to provincial and municipal approvals, wherever possible, to facilitate timely decisions for resource recovery systems.

6.9 Owners and operators of resource recovery systems are encouraged to reduce greenhouse gas emissions generated from their operations, where feasible. Food and organic waste should be managed as close to the source as is realistically possible to limit greenhouse gas emissions resulting from transportation and haulage.”

The *Made-in-Ontario Environment Plan* and subsequent *Reducing Litter and Waste in Our Communities: Discussion Paper*, specifically speaks to improving the organics diversion program in Ontario, ensuring the FOW Policy Statement moves forward and that *“The province will look for opportunities to support the localized management of organic waste such as on-site management or small-scale composting.”*

The discussion paper also touches on the potential for an organics landfill ban, which would require *“the development of additional resource recovery systems”*. With this in mind, the Province is currently in an organics processing deficit from an infrastructure perspective, particularly if they want to meet key diversion targets within the FOW Policy Statement and implement a food waste ban. Note that under the FOW Policy Statement/Framework, there is a focus on improving the approvals process – but only in the context of streamlining Environmental Compliance Approvals (the “ECAs”).

In order to implement the FOW Policy Statement and Action Plan, the Province will require the development of additional infrastructure to divert from landfill and process the material.

With the above in mind, the Region's proposed facility will facilitate the development of the necessary infrastructure to meet the diversion targets, as well as ensuring the management of the food and organic waste occurs as close to the generated source as possible. Providing context around how Policy is shaping the development of infrastructure is important when developing and applying a siting methodology that will move rapidly to determine an appropriate site to facilitate the achievement of key FOW Policy goals.

4.1.2 Environmental Assessment Act

The Ontario Environmental Assessment Act (EA Act) is a provincial statute that sets out a planning and decision-making process to evaluate the potential environmental effects of a proposed undertaking. In March of 2007, the Ontario Government enacted Ontario Regulation (O. Reg.) 101/07, the Waste Management Projects Regulation, made under the EA Act. The purpose of the Regulation was to bring greater clarity as to which types of waste projects require an EA to be completed under the EA Act.

The Regulation provides for three waste project EA processes:

- Projects exempt from Part II of the EA Act (generally small scale and known through past experience to have insignificant environmental effects).
- Projects exempt from Part II of the EA Act, subject to the legal requirement of completion of the Environmental Screening Process (generally moderate in scale, considered to have predictable environmental effects that can be readily reduced to acceptable levels).
- Projects designated under the EA Act that must undergo an Individual EA (usually more complex and major in scale with potentially far-reaching environmental effects requiring significant levels of assessment and mitigation. This process requires both a Terms of Reference and an EA).

If a proposed undertaking has not been designated or defined under the EA Act or O. Reg. 101/07, then the legislation does not apply. We have reviewed O. Reg 101/07 as well as the accompanying *Guide to Environmental Assessment Requirements for Waste Management Projects* and based on the assumed volumes², the potential facility will not transfer, on an annual basis, an average of more than 1,000 tonnes of waste per day from the site for final disposal (including to the DYEC). Therefore, it will not require any EA Act approvals as it is not designated as an undertaking to which the EA Act applies.

It should be noted, however, that as an application under the Environmental Protection Act (EPA), the public has the opportunity to request that the application be subjected to a discretionary hearing and/or be designated under the EA Act.

4.1.3 Environmental Protection Act

Under EPA Regulation 347, various Environmental Compliance Approvals (ECA) or Amendments to existing ECAs will be required for the potential facility. ECAs typically required for this type of facility

² Preliminary Facility Siting – Mixed Waste Processing and Anaerobic Digestion Facility Integrated Waste Management System – Pre-sort and Anaerobic Digestion, GHD, August 7, 2019

include: a Waste Disposal Site ECA; an Air and Noise ECA; and a Stormwater Management ECA under Section 53 of the Ontario Water Resources Act.

The statutory requirement for an ECA for a Waste Disposal Site is contained under Part V, Section 27 of the EPA. Section 27 requires that approval be obtained from the Director of the Environmental Assessment & Permissions before using, operating, establishing, altering, enlarging, or extending a waste management system or a Waste Disposal Site. For clarification, this type of a facility is considered under the legislation as a Waste Disposal Site even though it does not necessarily correspond with the conventional definition of waste *disposal* (i.e., landfill, incineration). Supporting information and documentation typically required for a Waste Disposal Site ECA includes a Design and Operations Report, a Site Drainage Report, and a Waste Analysis Plan. For the proposed facility, the Part V approval would typically set out limits on incoming material, define on-site traffic patterns and delivery schedules, identify storage and processing functions, and quantify residual wastes produced.

Air and Noise ECAs are required for facilities that release emissions into the natural environment (excluding water). Section 9 of the EPA requires equipment, structures, or processes that may discharge a contaminant to the atmosphere to be approved before construction, alteration, extension, or replacement of any equipment or structure of any ongoing operation. For the proposed facility, a Section 9 approval typically relates to treatment of process air through abatement systems such as biofilters, and describes possible noise sources such as shredding and screening equipment.

Section 33 of Ontario Regulation 419/05 states that emissions of any air contaminant may not cause discomfort to persons, cause loss of enjoyment of normal use of property, interfere with the normal conduct of business, or cause damage. Although no specific odour limits are set out in the Regulation, an odour criterion/guideline of 1 odour unit (o.u.) at the property line is routinely required by the MECP and defined in the Section 9 approval. Generally, compliance with this criterion is assessed using a source testing methodology at the odour source (such as a biofilter) and then modeled to estimate the odour profile at the property line and at sensitive receptors.

Supporting information and documentation typically required for Air and Noise ECAs includes a full and detailed air and noise analysis, and a summary of emission calculations in an Emission Summary and Dispersion Modeling (ESDM) Report.

4.1.4 Ontario Water Resources Act

The Environmental Assessment & Approvals section of the MECP issues ECAs under the Ontario Water Resources Act (OWRA) for the treatment and disposal of sewage by municipal and private systems. An ECA is required for any facility that discharges contaminants to groundwater and/or surface water. Section 53 of the OWRA requires that an ECA be obtained in order to establish any sewage works (sewage works are defined as works used for the collection, transmission, treatment, or disposal of wastewater) including stormwater management facilities.

If any surface water discharge were to be directed to an existing sanitary system, an OWRA approval will likely be required. However, discharging surface water directly to a sanitary system is not a common practice or generally employed methodology. Discharge of process water to the sanitary sewer is regulated by the municipal sewer use by-laws, but requirements for a Section 53

ECA should be examined, especially where surface water is utilized in the facility as make-up water. Any discharge of process water to the natural environment requires either a new Section 53 ECA or an amendment to an existing one. Supporting information and documentation typically required for a Sewage Works ECA includes an Environmental Study report (including a hydrogeological assessment and drainage study). The particular area of consideration for the proposed Facility is the requirement to adequately control any stormwater management on-site.

4.1.5 Other Approvals

Aside from the MECP, requirements under the following authorities and standards may also be applicable for the Site works:

- Ministry of Natural Resources and Forestry.
- Ministry of Transportation.
- Technical Standards and Safety Act.
- Ontario Building Code.
- Occupational Health and Safety Act.
- Ontario Fire Code.

Standard municipal approvals such as building permits and Site Plan approval will also be required for the potential Facility. The Planning Act establishes land use by means of Official Plans at both the upper tier municipality (Region) and the lower tier municipality (City/Township), and zoning by-laws at the lower tier municipal level.

4.1.6 Guidelines

In addition to the Regulations noted above, existing Guidelines were reviewed with respect to the siting and development of waste management facilities of a similar type, including:

- "Guideline for the Production of Compost in Ontario: Companion to the Ontario Compost Quality Standards"³ which provides recommendations regarding planning, design and operational practices for composting facilities, including site selection considerations (e.g., separation distances from sensitive receptors and buffer zones), site and facility design considerations, operating procedures during each stage of material handling, feedstock management (e.g., acceptance of plastic bags, compostable plastic bags, disposable diapers and sanitary items), and odour prevention and control measures.
- "Technical Document on Municipal Solid Waste Organics Processing"⁴ developed by Environment Canada. The document provides insight on many aspects of organics processing, including: the science and principles of aerobic and anaerobic processing, processing technologies, system selection, facility siting and design considerations, supporting infrastructure

³ Ontario MECP, Waste Management Policy Branch, July 25, 2012
<http://www.ontario.ca/environment-and-energy/guideline-production-compost-ontario-companion-ontario-compost-quality>).

⁴ Government of Canada, 2013
<http://ec.gc.ca/Publications/default.asp?lang=En&xml=6CC55580-0271-46F0-99CC-CADD171C1976>.

and equipment, procurement approaches, odour control and management, and market considerations.

4.2 Siting Methodology - Overview

With the above Regulatory and Guidance Documents in mind, the following represents an overview of the siting methodology utilized to develop, evaluate, and recommend a site for the Facility within and under the current control of Durham Region.

1. Determine search area / minimum site requirements.
2. Identify list of candidate sites based on minimum site requirements.
3. Develop evaluation criteria for candidate / long list of sites and short-list of sites.
4. Apply evaluation criteria to the long list of sites to determine a short-list of sites.
5. Stakeholder consultation – municipal (February 19, 2020) and public (February 27, 2020).
6. Apply evaluation criteria to short-list of sites to undertake a comparative evaluation to establish advantages / disadvantages between sites.
7. Identify preferred site

A summary of each of the steps highlighted above is presented below.

As there is not one set of guidelines or approach to siting this type of infrastructure in Ontario, a number of complementary policies, technical guidance documents and approaches to siting facilities were reviewed to establish a transparent and traceable siting methodology. One overarching element utilized in establishing the methodology was to model the general approach after the MECP's Statement of Environmental Values (SEV), which is considered whenever decisions that might significantly affect the environment are made by the MECP. The SEV outlines the MECP's vision for an "*Ontario with clean and safe air, land and water that contributes to healthy communities, ecological protection, and environmentally sustainable development for present and future generations*". In this regard, the siting and development of the Facility will be based on the:

- Prevention, reduction, and elimination of impacts to the environment.
- Protection and conservation of natural resources and ecologically sensitive areas.
- Integration of social, economic, and other considerations.
- Provision of opportunities for consultation.

Incorporating these principles throughout the siting process will assist in identifying the optimal site that not only satisfies the objectives of the Facility, but accomplishes it in a manner that is both efficient and fully approvable. The siting methodology should also be well defined to ensure that the site selection process itself runs smoothly, and that the decisions being made are traceable and defensible.

In addition to the incorporating the SEV into the evaluation methodology, the siting process proposed includes elements of the Ontario EA Act. On September 20, 2019, the Region submitted a letter to Ms. Barb McMurray at the MECP requesting to meet with the Partnerships unit to discuss

the Facility. On August 16, 2019, the Region submitted a letter to Ms. Heather Malcolmson at the MECP to receive confirmation from the MECP that the proposed Facility would not be considered an undertaking under the *Ontario Environmental Assessment Act*. The MECP confirmed that an EA is not required for the Facility. Although the proposed facility is exempt from the EA Act requirements, the siting process undertaken was modelled after the EA Act by utilizing the broad definition of "environment" under the EA Act as the basis for developing the site evaluation criteria, as well as incorporating a comparative evaluation of the advantages and disadvantages of each of the sites commonly utilized in an EA process.

4.2.1 Define the Search Area and Establish Candidate Sites

The first step in the siting process was to define the search area within which the Facility will be located. The search area included all of Durham Region, encompassing all eight member municipalities. It is the Region's desire to develop the Facility within the Region's boundaries to be able to better manage the waste generated therein.

A list of Region-owned sites was provided by the Region for consideration, based on an inventory of existing sites. The list of candidate sites were limited to Region-owned properties only, which included opened/closed waste management facilities, operations facilities, or vacant lots that are currently undeveloped. It was important for the Region to conduct this high level candidate list generation early in the planning process to focus the siting efforts and resources within potentially suitable areas. As discussed in Section 3, the Region has set and prioritized goals to increase diversion to 70 percent, preserve capacity at the DYEC, and extend the timeline for expansion of the DYEC. Thus, the Region is on a tight procurement timeline for this Facility and aims to release the Request for Prequalification (RFPQ) in early 2020 that includes information on the selected site.

Region-owned sites can offer significant advantages over privately-owned sites, with the potential to simplify the siting process and to decrease capital costs. Siting the Facility on Region-owned property is an effective way to maximize the use of resources, and provides an opportunity to build a facility that complements the Region's existing infrastructure. The Region's open and closed waste facilities may have the required regulatory framework in place for a waste management site such as permits and ECAs, simplifying the approvals process and avoiding potential delays. It is also likely that the zoning and land use considerations for these sites are consistent with the surrounding properties, limiting exposure of the Facility to sensitive receptors. Region-owned sites helps mitigate the exposure to risk and liability that could arise during the procurement of a private site. For the abovementioned reasons and as per the Region's direction, privately-owned facilities were excluded from consideration.

Most parcels of land in Ontario are assigned a unique Property Identification Number (PIN), which is associated with information such as: legal ownership, geographic location (municipal street address and/or lot and concession numbers), size, and boundaries. PINs are maintained through the Province of Ontario Land Registration Information System (POLARIS) and associated mapping database, which is managed by Teranet Enterprises Inc., under an agreement with the Ontario government (Land Information Ontario), and the Municipal Property Assessment Corporation (MPAC).

PINs for each site were provided by the Region and included in the list of Region-owned sites for consideration.



4.2.1.1 Candidate/ Long List of Sites

Based on the search details outlined above, a total of 16 sites were identified for consideration in siting the Facility. A complete listing of the candidate sites is provided in Table 1.

Table 1 – List of Candidate Sites

ID	Municipality	Address	PIN	Size (ha)
1.	Brock	133 Main St., Beaverton, ON	720380119	3.82
2.	Pickering	West of Whites Road and South of Granite Court southerly along East side of Canadian National Railway (CNR) tracks, designated as Bayly St. 40M-1334 City of Pickering	263110524	1.96
3.	Clarington	3094 Liberty St. N.	266930067	0.21
4.	Clarington	339 Courtice Road, Courtice	266050113	3.26
5.	Clarington	1797 South Service Road, Courtice (now named 1797 Megawatt Drive)	266050114	7.67
6.	Clarington	1797 South Service Road, Courtice (now named 1797 Megawatt Drive)	266050116	4.90
7.	Clarington	1835 Energy Drive, Clarington	266050111	12.12
8.	Pickering	Seaton Lands South of Highway 7, ON	263860136	2.96
9.	Scugog	#10 Regional Road No. 21 (full address is 10 Goodwood Rd, Port Perry, ON L9L 1B5)	268190095	41.35
10.	Clarington	9293 Woodley Rd, Municipality of Clarington, ON	267430092	8.49
11.	Oshawa	1640 Ritson Road North, City of Oshawa, ON	162700206	32.37
12.	Brock	C22480 Side Road #17, Township of Brock, ON	720230047	42.06
13.	Scugog	1623 Reach Road, Port Perry, ON	268040072	119.02

ID	Municipality	Address	PIN	Size (ha)
14.	Scugog	3590 Edgerton Road, Blackstock, Township of Scugog, ON	267460002	1.98
15.	Uxbridge	12630 Concession 6, Township of Uxbridge, ON	268720016	1.60
16.	Whitby	4600 Garrard Road, Whitby, ON	162650054	19.87

4.2.2 Develop and Apply Exclusionary Criteria

Once the candidate/long list of sites was established, a list of exclusionary criteria was established in order to reduce the long list of sites down to a manageable short-list for further evaluation. These criteria can be considered as "must pass", which a given candidate site must satisfy in order to be carried forward for further evaluation.

The exclusionary criteria are based largely on the technical requirements of the facility that meet the program needs set out by the Region. If a site generally failed to meet all of the requirements set out in the exclusionary criteria listed above, it was excluded from further consideration. Each of the sites considered are presented in a tabular and mapped format to show the results of the preliminary evaluation. Table 3 shows those sites that meet all of the exclusionary criteria and are therefore carried forward to form the short-list of sites for further evaluation.

The final list of exclusionary criteria, was developed by GHD with input from the Region. Prior to applying the exclusionary criteria to the long- list of candidate sites, available information on existing conditions and spatial data was collected and reviewed from a variety of sources. The information collected was focused on the criteria and indicators for both the exclusionary criteria, as well as the further, more detailed criteria established for the short-list of sites. The most current GIS data from the Region, Conservation Authorities, and the lower tier municipalities were obtained, including:

- Property parcel information including size/dimensions, boundaries, and locations.
- Waterbodies/watercourses.
- Location of existing Provincially Significant Wetlands (PSW).
- Environmentally Significant Areas (ESA).
- Location/extent of Areas of Natural and Scientific Interest (ANSI).
- Presence of significant wooded areas.
- Oak Ridges Moraine.
- Regulated floodplains.
- Source Water Protection Areas, including: Wellhead Protection Areas, Intake Protection Zones, Vulnerable Aquifers, and Significant Groundwater Recharge Areas.

- Draft/approved development.

In addition, existing guidance documents and regulatory requirements information was obtained, including:

- Region of Durham Official Plan.
- Official Plans of lower-tier municipalities.
- Greenbelt Protection Plan.
- Provincial Policy Statement.
- Ministry of Natural Resources Natural Heritage Reference Manual.
- Oak Ridges Moraine Conservation Plan.
- Ontario Clean Water Act.
- Region of Durham Draft Strategic Communications and Public Consultation Plan.

The available existing conditions information collected was incorporated into a GIS database and model to assist in the generation and evaluation of candidate sites and short-listed sites.

In order to assess the long-list of candidate sites against the exclusionary criteria, GIS layers (as identified above) were compiled and mapped in conjunction with the site locations and boundaries as defined by their property boundaries. Each site was assessed to determine which criteria, if any, would exclude it from being considered further. To assist in the analysis, ortho-imagery from Google Earth was utilized to gain a better understanding of the local site conditions and the regional context.

If a site was affected by multiple criteria, it was eliminated based on the criterion that had the most significant impact or would be the most difficult to overcome when considering the development of the Facility (e.g., constructing the facility in a wetland).

The exclusionary criteria were developed based on other complimentary processes that utilize criteria as part of their evaluation process. This includes past siting experiences by GHD as well as a review of the various guidance documents identified in Section 4.1.6.

The exclusionary criteria developed by GHD that was applied to the long list of sites has been grouped by component (mirroring the broad definition of environment under the Ontario EA Act) and is accompanied by a statement of rationale for each criterion – see Table 2.

Table 2 – Exclusionary Criteria Grouping

Component	Criteria/Indicator	Rationale
Technical	Site Suitability <ul style="list-style-type: none"> • Meets minimum size requirements (8-15 ha) • Meets minimum buffer area requirements to sensitive receptors (e.g., residential areas, parks, recreational areas, and institutions) 	The facility must ensure that the site is suitable for construction and operation from a size, location and site constraints perspective. The site must be owned by the Region of Durham with minimal existing development on the site.

Component	Criteria/Indicator	Rationale
	<ul style="list-style-type: none"> Must be Regional owned land within the Search Area 	
Social/ Environmental/ Cultural	<p>Utilities and Services</p> <ul style="list-style-type: none"> Availability to connect utilities and services including hydro, water, sewer, etc.) <p>Land Use Compatibility</p> <ul style="list-style-type: none"> Avoids sensitive receptors (number and distribution of) Avoids natural heritage elements including Designated Greenlands (Oak Ridges Moraine, Greenbelt Areas, etc.), Source Water Protection Areas Avoids Class 1 and 2 Agricultural Areas Avoids Cultural Heritage/ Archaeological Potential areas Avoids Wetlands, Floodplains and Water Bodies 	<p>The facility requires connections to municipal services and other utilities for both construction and operation.</p> <p>The facility has the potential to affect local sensitive receptors from a nuisance perspective.</p> <p>The facility may remove or disturb the functioning of natural heritage habitats (terrestrial and aquatic, species at risk) and protected sources of water.</p> <p>Agricultural land may be displaced by the development of the facility.</p> <p>Archaeological and Cultural Heritage resources are non-renewable cultural resources that can be permanently displaced by the development of the facility.</p> <p>The construction of the facility may disrupt natural surface drainage patterns and may alter runoff and peak flows. The presence of the facility may also affect base flow to surface water.</p>

An ideal site carried forward in the evaluation process is one that is completely clear of potential conflicts with exclusionary criteria. However, if through the evaluation, it is determined that a majority of sites are affected or a part of the site is partially affected by at least 1 exclusionary criteria, GHD determined if the site should be carried forward for further analysis in the short-list evaluation. If a site is partially affected by an exclusionary criteria, but the remainder of the site still meets the minimum size requirements, with no further potential conflicts, the site will be carried forward to the short-list. If the potential conflicts can be rationalized in a way that would still allow for the development of the facility, then the site will be carried forward to the short-list for further evaluation. This does not necessarily signify that the criteria in question would not ultimately rule the site out, but merely that it should be exposed to further scrutiny during subsequent analyses.

4.2.2.1 Exemptions

Certain exemptions were considered during the application of the evaluation criteria. Sites that were exempt from meeting a given criteria passed the exclusionary criteria, though will be evaluated in greater detail when reviewing the short-list of sites.

Size

With respect to site size, individual sites were assessed in conjunction with adjacent sites if they could be combined to meet the minimum size requirement of 8 ha. For example, adjacent sites with respective areas of 7 ha and 2 ha would not meet the minimum size requirement if assessed individually; however, since the total area of both sites exceeds the minimum size requirement, these sites would be combined and carried forward as a single site. In cases where it was not advantageous to combine adjacent sites to meet the minimum size requirement (e.g., adjacent sites with respective areas of 1 ha and 9 ha), then these sites were evaluated on an individual basis.

Agricultural

Although the Provincial Policy Statements (PPS), 2014, state that Prime Agricultural Areas should be protected for long term use for agriculture (which includes Specialty Crop Areas, followed by Class 1, 2 and 3 lands, in that order of importance), some sites affected by this criteria were carried forward through to the short-list for further analysis. Exclusionary criteria relies heavily on secondary source information, which in this particular case includes mapping from Canada Lands Inventory (CLI), which the Region utilizes for their Official Plan mapping. The CLI mapping is a significant database of information, but does not necessarily reflect land use changes over the years. Further, the CLI mapping itself is based largely on secondary sources. Therefore, to be prudent, certain site(s) were carried forward to the long list of sites to ensure that the sites could be assessed further in subsequent screening to confirm the agricultural use(s) on-site. For example, some exemptions included lands that have not been farmed in the last 10 years, or lands that have been historically used for a purpose other than agriculture (e.g., quarries, waste management facilities). Therefore, some exempted sites passed the exclusionary criteria, and were assessed in greater detail by confirming the current land use and the Official Plan designation of the lower-tier municipality.

Source Water Protection

Certain sites are constrained with a number of Source Water Protection designations, as well as other surface water features, such as watercourses and unevaluated wetlands, which can result in a potential site being excluded from further evaluation. However, certain site(s) were exempt from meeting this criteria based on existing zoning or previously disturbed land use and were carried forward from the long list to the short-list of sites. It should be noted that none of the sites evaluated as part of this process fall within the Wellhead Protection Area (WPA) designation under the Source Water Protection Plan, as this designation represents the most vulnerable areas and significant threats to drinking water. Sites with other Source Water Protection Plan designations were carried forward, including Intake Protection Zones (IPZ), Highly Vulnerable Aquifers (HVA) and Significant Groundwater Recharge Areas (SGRA).

4.2.3 Short-List Evaluation (Develop and Apply Evaluation Criteria)

The purpose behind this step is to ensure that each site's characteristics are adequately defined to ensure the comparative evaluation is consistent across all short-listed sites. Table 5 presents additional criteria that were applied to the short-list of sites.

Once the application of the more detailed evaluation criteria occurred, a review of the relative advantages and disadvantages of each site was undertaken in order to determine which site was the optimal in comparison to all other short-listed sites. A recommended site will be presented to Council.

It should be noted that for the recommended site, further investigative work will be required.

5. Site Evaluation and Results

5.1 Long List to Short-Listed Sites

An ideal site carried forward in the evaluation process was one that was completely clear of potential conflicts with exclusionary criteria. However, it should be noted that some sites contained at least some areas that were affected by the exclusionary criteria. In these cases, the sites passed the exclusionary criteria if the remaining area of the site with no potential conflicts was large enough to meet the minimum size requirement of 8 ha. This analysis was only required in a fraction of the sites, as most were affected by at least one criteria, or the remaining area of the site free from conflicts was too small.

Final assessment considered the exemptions noted in Section 4.2.2.1. If the potential conflicts could be rationalized in a way that would still allow for the development of the Facility, then the site was carried forward for further evaluation. This did not necessarily signify that the criteria in question would not ultimately rule the site out, but merely that it should be exposed to further scrutiny during subsequent analyses.

Table 3 shows which sites meet all of the exclusionary criteria and which ones were excluded from being carried forward to the short-list of sites for further evaluation.

Table 3 – List of candidate sites carried forward to the short-list

ID	Municipality	Address	PIN	Size (ha)	Decision
1.	Brock	133 Main St., Beaverton, ON	720380119	3.82	Excluded from Short List as the minimum site size requirement is not met.
2.	Pickering	West of Whites Road and South of Granite Court southerly along East side of CNR tracks, designated as Bayly St. 40M-1334 City of Pickering	263110524	1.96	Excluded from Short List as the minimum site size requirement is not met.

ID	Municipality	Address	PIN	Size (ha)	Decision
3.	Clarington	3094 Liberty St. N.	266930067	0.21	Excluded from Short List as the minimum site size requirement is not met.
4.	Clarington	339 Courtice Road, Courtice	266050113	3.26	Amalgamated into one site to meet the minimum site size requirement. Carried forward to Short List.
5.	Clarington	1797 South Service Road, Courtice (now named 1797 Megawatt Drive)	266050114	7.67	
6.	Clarington	1797 South Service Road, Courtice (now named 1797 Megawatt Drive)	266050116	4.90	
7.	Clarington	1835 Energy Drive, Clarington	266050111	12.12	Excluded from Short List as the property contains DYEC, which will not be displaced.
8.	Pickering	Seaton Lands South of Highway 7, ON	263860136	2.96	Excluded from Short List as the minimum site size requirement is not met.
9.	Scugog	#10 Regional Road No. 21 (full address is 10 Goodwood Rd, Port Perry, ON L9L 1B5)	268190095	41.35	Carried forward to Short List.
10.	Clarington	9293 Woodley Rd, Municipality of Clarington, ON	267430092	8.49	Carried forward to Short List.
11.	Oshawa	1640 Ritson Road North, City of Oshawa, ON	162700206	32.37	Carried forward to Short List.
12.	Brock	C22480 Side Road #17, Township of Brock, ON	720230047	42.06	Excluded from Short List as the minimum site size requirement is not met following avoidance of environmental constraints covering site.
13.	Scugog	1623 Reach Road, Port Perry, ON	268040072	119.02	Carried forward to Short List.
14.	Scugog	3590 Edgerton Road, Blackstock, Township of Scugog, ON	267460002	1.98	Excluded from Short List as the minimum site size requirement is not met.
15.	Uxbridge	12630 Concession 6, Township of Uxbridge, ON	268720016	1.60	Excluded from Short List as the minimum site size requirement is not met.
16.	Whitby	4600 Garrard Road, Whitby, ON	162650054	19.87	Carried forward to Short List.

The sites that comprise the short-list are summarized in Table 4. As outlined, a total of 6 sites were carried forward to the short-list evaluation.

5.2 Short-List of Sites

Six of the 16 candidate sites assessed through the application of Long-List to Short-List criteria were carried forward for comparative evaluation. The six short-listed sites are listed in Table 4 and include the remaining site size available for development following avoidance of environmental constraints (PSW, ESA, ANSI). A map showing the locations of these short-listed sites is provided as Figure 2. Individual maps of each of the short-listed sites are provided as Figures 2A to 2F.

Table 4 – List of Short-List Sites

ID	Municipality	Site Name	Address	PIN	Utilization	Remaining Site Size (ha)
1	Clarington	South Clarington	339 Courtice Road, Clarington	266050113	Vacant	12.45
	Clarington		1797 South Service Road, Clarington	266050114		
	Clarington		1797 South Service Road, Clarington	266050116		
2	Township of Scugog	West Scugog	#10 Regional Road No. 21	268190095	Scugog Depot Site - Balance Future Gravel Pit	41.35
3	Clarington	North Clarington	9293 Woodley Rd, Municipality of Clarington, ON.	267430092	Darlington Closed Landfill - Located within CLOCA conservation area. Currently being used by Flyers Club	8.49
4	Oshawa	Oshawa	1640 Ritson Road North, City of Oshawa, ON	162700206	Former City of Oshawa Landfill - current location of WMF	24.13
5	Township of Scugog	East Scugog	1623 Reach Street, Port Perry, ON	268040072	Closed Landfill - houses WMF - Parent property includes Water Pollution Control Plant (WPCP)	52.75
6	Whitby	Whitby	4600 Garrard Road, Whitby	162650054	Material Recovery Facility (MRF)	10

5.3 Short-List Evaluation Criteria

Information related to the short-list evaluation criteria was collected and reviewed from a variety of sources, including: the Region, conservation authorities, utility providers, other stakeholders, and through professional experience (e.g., technical and economic data). Additional information regarding select criteria is summarized below.

5.3.1 Region Greenlands

The 2017 Durham Regional Official Plan (OP) provides relevant policies and mapping related to the Region's Greenlands System. In 2019, the Region launched Envision Durham, which is a municipal comprehensive review of the 2017 OP. The status of the OP review is being monitored to ensure that any newly-approved policies that may apply are considered in the evaluation process.

During the evaluation process, GHD utilized Greenbelt Area and Oak Ridges Moraine (ORM) Conservation Plan Area mapping – both sets of Greenlands System mapping were utilized in the evaluation of the short-listed sites. At this point in time, it is recognized that further investigations and approvals may be necessary should the OP review result in new Greenlands System mapping prior to the development of the Facility.

It should be noted that sites that are currently designated or may be designated (under revised 2017 mapping) as Greenlands were carried forward for the short-list evaluation. Under 2017 OP policies, it is noted that infrastructure (such as a waste management facility) may be permitted within the Region Greenlands designation in accordance with the OP, which outlines how site alteration/development may take place on lands designated as Region Greenlands. Further, a number of criteria used in the site evaluation and selection process already considered certain elements that fall under the Region Greenlands designation, including ANSIs, species at risk (SAR), and significant wetlands (i.e., PSWs, evaluated and unevaluated wetlands).

With respect to completing further work on sites that are mapped as Region Greenlands (both approved and pending approval subject to 2017 OP revisions), following the identification of the preferred site(s), the Region will follow the processes and policies outlined in the applicable Region OP with respect to re-designating lands within the Region Greenlands designation. This includes consultation amongst internal departments, affected lower tier municipalities, and external agencies such as Conservation Authorities, to determine the required steps, including a scoped Environmental Impact Statement (EIS), which will be undertaken to support the land use planning applications.

5.3.2 Source Protection

In 2006, the provincial government passed the Clean Water Act, which aims to protect municipal drinking water in the province with a multi-barrier approach, starting with Source Protection (also referred to as Source Water Protection). Within the Region, Source Protection Committee approved the Source Protection Plan in March 2019, which outlines policies to address potential threats to drinking water in vulnerable areas:

1. Highly Vulnerable Aquifers (HVA) – An aquifer is an area underground that is highly saturated with water, enough so to be drawn for human use. A HVA is one that is particularly susceptible to contamination because of either its location near the ground's surface or because of the type of materials found in the ground around it (for instance, clay versus sand versus fractured rock).
2. Significant Groundwater Recharge Areas (SGRA) – These are areas on the landscape that are characterized by porous soils, such as sand or gravel that allow the water to seep readily into the ground and flow to an aquifer. A recharge area is considered significant when it helps maintain the water level in an aquifer that supplies a community with drinking water.

3. Wellhead Protection Areas (WHPA) – WHPA are areas on the land around a municipal well, the size of which is determined by how quickly water travels underground to the well, measured in years. WHPA designations range from WHPA-A to WHPA-D, which represent travel times between zero and 25 years, respectively.
4. Intake Protection Zones (IPZ) – IPZ are the area on the water and land surrounding a municipal surface water intake. The size of each zone is determined by how quickly water flows to the intake, in hours.

If a Waste Disposal Site is determined to be a significant threat to drinking water (e.g., located within a WHPA), then the proposed use would be prohibited in that particular location. For clarification, the proposed Facility is considered as a Waste Disposal Site under the legislation even though it does not necessarily correspond with the conventional definition of waste *disposal* (i.e., landfill, incineration). The definition of a Waste Disposal Site under Part V of the Environmental Protection Act means:

- a) Any land upon, into, in or through which, or building or structure in which, waste is deposited, disposed of, handled, stored, transferred, treated or processed.
- b) Any operation carried out or machinery or equipment used in connection with the depositing, disposal, handling, storage, transfer, treatment or processing referred to in clause (a).

With respect to the SGRA, HVA, WHPA, and IPZ designations, and in accordance with the *Technical Rules: Assessment Report* under the *Clean Water Act, 2006* (MOE, 2009)⁵, mapping must delineate three separate areas – Low, Medium, and High Vulnerability

In addition to the vulnerability of an area, potential threats, or more specifically, land use activities (such as a waste facility) are also factored into the decision making process to understand whether the proposed use would pose a Low, Moderate or Significant Threat to drinking water. The vulnerability scoring approach relies upon the extensive *Tables of Drinking Water Threats* created by the MECP to identify and rank drinking water threats.

The proposed Facility is categorized as a municipal Waste Disposal Site (Part V of Environmental Protection Act) and would fall under a Drinking Water Threat that involves the establishment, operation or maintenance of a Waste Disposal Site. In reviewing the *Clean Water Act, 2006*, Table 1 identifies a number of Drinking Water Threats with respect to the establishment, operation or maintenance of a Waste Disposal Site within the meaning of Part V of the Environmental Protection Act. However, all of the references to "Municipal Waste" only equate a threat to "Land Disposal" as defined in Section 1 of O. Reg. 347. "Land Disposal" means, with respect to a waste, the deposit or disposal of the waste upon, into, in or through land, including:

- a. The deposit of the waste at a dump.
- b. The landfilling of the waste.
- c. The discharge of the waste into a geological formation by means of a well.
- d. The landfarming of the waste, in the case of a petroleum refining waste.

⁵ Clean Water Act, 2006, Technical Rules: Assessment Report, 2009, Section 80-81, p. 35

It is clear based on the definition above that the proposed Facility does not involve land disposal. However, to be conservative, GHD reviewed Table 1 (Tables of Drinking Water Threats, Clean Water Act, 2006) for all references to Municipal Waste and Land Disposal⁶. The Tables of Drinking Water Threats under the Clean Water Act show that lands identified as HVA and SGRA have a Low Threat level in areas with a vulnerability score of 6. Therefore, it is conceivable that the facility could be located within the Low, Medium or High Vulnerability HVA or SGRA, as per the provincial legislation.

Notwithstanding the above, the Source Protection Policies contained within the Source Protection Plan would still need to be considered. The Source Protection Policies for waste disposal sites were reviewed and it was determined that the policies only apply to Waste Disposal Sites (including the transfer or processing of waste) that are a Significant Threat which has a vulnerability score of 8 to 10. Because the maximum vulnerability score of 6 is applied to SGRAs, (i.e., not a Significant Threat), the policies prohibiting a waste facility would not apply. This is in keeping with the provincial legislation, *Clean Water Act, 2006*, which deems Moderate to Significant Threats as having a vulnerability score of 7-10.

Given the review of the provincial legislation and the Source Protection Policies contained within the Source Protection Plan, coupled with the conservative approach taken with respect to SGRA, it was determined that sites with a Low Vulnerability HVA and SGRA should be carried forward for further evaluation.

5.3.3 Mapping

Maps were prepared for each of the six short-listed sites and organized by components as follows:

- Site size.
- Source Water Protection Plan designations.
- Soils classification.
- Locations of sensitive receptors/ residential areas with respect to potential air quality, odour, and noise criteria
- Natural Environment (SAR).

It should be noted that not all components, criteria, and indicators are shown in these figures (Figures 2A to Figure 2F – only those that are well-suited to mapping and available through existing sources of information. However, between the Site Review Summary Table (Table 5) and the maps, all components, criteria, and indicators are presented for each short-listed site.

5.3.4 Site Visits

To supplement the information from the desktop review, GHD conducted windshield survey site visits to each of the short-listed sites on Wednesday, January 15, 2020. The site visits were used to

⁶ Tables of Drinking Water Threats are provided a Reference Number – all Municipal Solid Waste projects reviewed for this proposed undertaking are identified as References 1639-1673.

confirm surrounding land uses and the presence of sensitive receptors. Photo logs for each site are provided as Appendix A.

5.3.5 Comparative Evaluation

The assessment and evaluation of the short-listed sites was conducted in two steps:

Step 1 – Apply additional evaluation criteria

Step 2 – Carry out the Comparative Evaluation focused on the relative advantages and disadvantages for each site and rank each site.

6. Evaluation and Results

With the methodology of assessing and evaluating the short-listed sites presented, the following sub-sections review the advantages and disadvantages for each of the short-listed sites. It should be noted that there are a number of common potential effects across the short-listed sites to which common mitigation measures can be applied. Therefore, a number of Best Management Practices (BMPs) have been developed relating to mitigation measures that are applicable to all sites. Key BMPs that were applied as mitigation measures are detailed in the sections that follow and would be revisited during subsequent approvals.

It should be noted that these BMPs are not exhaustive, but will be augmented and tailored to the preferred site(s), and final design. Further, the BMPs will be reviewed with key stakeholders and neighbours of the preferred site(s) for their input and recommendations during subsequent approvals.

Dust, Noise & Odour BMPs

- Mitigation through design will address dust, odour and noise, by ensuring that: all material is received and processed indoors; the building will operate under negative air pressure (areas handling SSO material); air pollution control systems and biological filtering are incorporated as required, etc.
- Perimeter plantings, berms or other wind screens will be implemented as required.
- Dust suppression and control through the paving internal roads, routine cleaning, and use of water for suppression as necessary.
- Ensure construction and operation equipment are inspected and in good working condition.
- Truck idling will be minimized.
- All construction equipment should meet the sound emission standards as set out by MECP Publication NPC-115.
- Hours of construction as well as operation will be defined and adhered to.
- Facility layout will be designed to the greatest extent possible to reduce the use of vehicle back-up beepers.

Surface Water BMPs

- Surface water controls will be put in place to manage run-off from impervious surfaces and directed to appropriate storage or conveyance areas. This will also mitigate any potential effects on groundwater as the surface water controls will protect groundwater. An on-site stormwater management pond is envisioned which will include Oil-Grit Separators (OGS).
- All process water will be contained, re-circulated, or collected and treated either on-site or trucked off-site.
- Emergency management measures will be developed and implemented to address potential accidental spills.
- Storage and refueling of equipment to prevent potential fuel, oil, and grit runoff.

Terrestrial/Aquatic BMPs

- Confirm through investigations that no Species at Risk are present, or where they are present, habitat is avoided, if possible.
- Minimize removal of vegetation and where vegetation is removed; identify plant material for possible salvage.
- Replace vegetation removed on a minimum 1:1 basis, either on-site or off-site.
- Install appropriate measures to protect trees beyond the clearing limits.
- Minimize grade changes/alterations to topography.
- Minimize loss of confirmed Class 1-3 soils (Prime Agricultural Lands).
- Wildlife management (in terms of vectors) includes ensuring all waste is stored in an enclosed area.

Visual BMPs

- Internal roadway should be designed to minimize site lines from the site entrance.
- Berms and vegetated buffers should be implemented as close to the facility as reasonable.

6.1 South Clarington Site

The application of the short-list evaluation criteria for the South Clarington Site includes the criteria mapping (see figures) and additional criteria application (see Table 5). Key aspects are summarized below.

Advantages

- The site meets the minimum criteria of 8 hectares and provides for flexibility due to the availability of area on adjoining parcels of property.
- There are no sensitive receptors within 500 metres of the site boundary.

- The site has the shortest waste transfer distance from the three contracted transfer stations to the site, with recyclables and residuals transferred to the DYEC adjacent to site; resulting in the lowest waste transfer costs from a transportation perspective.
- There will be minimal impact on local traffic as waste is currently sent to the adjacent DYEC.
- No significant road infrastructure upgrades are required for either Energy Drive or Megawatt Drive. There is a dedicated road for waste delivery trucks along the CNR track. Minimal traffic impacts expected as waste is currently transported to adjacent DYEC.
- There are synergies with the existing DYEC and WPCP within the Energy Park. The potential exists to build on the energy related character of the Energy Park through the development of this Facility and new energy production facilities, including District Energy and sustainable energy. It is adjacent to the existing DYEC where pre-sorted recyclables and Facility residue will be processed. It is adjacent to the WPCP which may be able to treat Facility effluent, thereby reducing wastewater treatment plant costs. As a result, this site will likely require minimal utility upgrades.
- There are no designated Greenlands or Oak Ridges Moraine Land Use areas on the site.
- There are no PSWs, ESAs, ANSI on site.
- The site is within the Municipal Official Plan designation of Business Park and the Regional Official Plan designation of Employment Area. With respect to Employment designation, this facility will provide employment in the range of 30-40 full time positions (estimated). The zoning designation is Industrial (M).
- No known areas of archeological significance or important cultural heritage were noted on any of the short-listed sites. Previous archaeological studies were completed for the Region on the site and on the adjacent DYEC site and determined no archaeological significance.
- The site is not in proximity to an airport; therefore there is no major concern from a safety perspective (i.e. site is compatible with the safe operation of an airport, and will not cause interference with aircraft signals/communications or collision with birds).
- From a cost perspective:
 - The site is undeveloped land, therefore no significant site demolition costs are required.
 - The site is not a closed landfill, thus no significant site remediation costs are required in contaminated waste and soil removal.
 - The nearest natural gas utility pipeline connection is approximately 1 km from the site, translating to a capital cost ranging from approximately \$2,000,000 to \$5,500,000. The Oshawa and Whitby sites have shorter pipeline connection distances; however, this site contains access to all other utility connections (water, hydro, and sewer).
 - The site has the lowest overall site remediation capital costs (i.e. utility connection, contaminated waste/soil removal, existing building demolition, and road upgrades) when compared to all short-listed sites.

Disadvantages

- A new waste and air/noise ECA will be required for this site.
- Vegetation on-site requires removal. Plantings and earthworks would be required for visual screening, as well as for dust and noise mitigation.
- The sites have an irregular shape, with Energy Drive bisecting the three amalgamated properties.
- The CLOCA Regulated Area covers portions of the site. Should the design of the facility require land within the Regulated Area, a permit would be required from CLOCA to alter or encroach upon the Regulated Area. Further studies would be required to make this determination, should the future design of a facility require CLOCA Regulated lands.
- There is a Significant Groundwater Recharge Area along the western edge of the 339 Courtice Road property.

6.2 West Scugog Site

The application of the short-list evaluation criteria for the West Scugog Site includes the criteria mapping (see figures) and additional criteria application (see Table 5). Key aspects are summarized below.

Advantages

- The site has a total of approximately 41 hectares available for development, which satisfies the minimum criteria of 8 hectares.
- There are 3 sensitive receptors within 500 metres of the site boundary. However, with the implementation of appropriate design and BMPs for odour, dust, and noise, net effects will be minimized. Further, on-site wind measurements should be collected to determine actual wind conditions (speed and direction) at the site.
- Limited natural environment constraints (PSWs, ESAs, ANSI) on site as per Kawartha Conservation Authority.
- No known areas of archeological significance or important cultural heritage were noted on any of the short-listed sites. However, each site can still have the potential for archaeological significance. A Stage 1 Archaeological Assessment can be completed on the preferred site.

Disadvantages

- The site is within the Municipal Official Plan designation of Oak Ridges Moraine Countryside Area and the Regional Official Plan designation of Oak Ridges Moraine Area. The zoning designation is Rural Industrial (ORM-M3). There is a policy conflict with ORM Conservation Plan as it covers part of site (countryside area) with respect to development of infrastructure. However, there are no designated Greenlands.
- The site has the second longest waste transfer distance from the three contracted transfer stations to the site, with recyclables and residuals transferred to the DYEC adjacent to site; resulting in the second highest waste transfer costs from a transportation perspective.

- A new waste and air/noise ECA will be required for this site.
- Highly Vulnerable Aquifer and Significant Groundwater Recharge Area covers the entire site except for a very small portion of northeast corner of the site.
- Displacement of existing Regional infrastructure may be required as it is an existing operations facility depot.
- The site is in proximity to proposed Pickering Airport and is within the Wildlife Hazard Zone (secondary bird hazard zone) as per Transport Canada's proposed drawings for the airport an airport. Therefore, there is a concern from a safety perspective (i.e. site is incompatible with the safe operation of an airport, and may cause interference with aircraft signals/communications or collision with birds).
- From a cost perspective:
 - Nearest municipal water supply and sanitary sewer connection is more than 9km from site, resulting in utility costs ranging from \$10,000,000 to \$18,000,000. Natural gas, hydro and telecommunication utilities are available on site.
 - The site is not a closed landfill, thus no significant site remediation costs required in contaminated waste and soil removal.
 - Road infrastructure upgrades are required on Goodwood Rd (widen left turning lane) to allow room for queuing and not block intersection, for which costs range from \$500,000 to \$1,000,000.

6.3 North Clarington Site

The application of the short-list evaluation criteria for the North Clarington Site includes the criteria mapping (see figures) and additional criteria application (see Table 5). Key aspects are summarized below.

Advantages

- There are 2 sensitive receptors within 500 metres of the site boundary. However, with the implementation of appropriate design and BMPs for odour, dust, and noise, net effects will be minimized. Further, on-site wind measurements should be collected to determine actual wind conditions (speed and direction) at the site.
- Limited natural environment constraints (PSWs, ESAs, ANSI) on site within the CLOCA regulated area.
- The site is not in proximity to an airport; therefore there is no major concern from a safety perspective (i.e. site is compatible with the safe operation of an airport, and will not cause interference with aircraft signals/communications or collision with birds).
- Minimal traffic impact expected as Woodley Rd. is a dead end road with no through traffic. However, some little existing traffic volume due to Long Sault Conservation Area multi-use trail north of site.

- No known areas of archeological significance or important cultural heritage were noted on any of the short-listed sites. However, each site can still have the potential for archaeological significance. A Stage 1 Archaeological Assessment can be completed on the preferred site.

Disadvantages

- The site has a total of approximately 8 hectares available for development, which narrowly satisfies the minimum site size requirement for the Facility.
- There is a policy conflict with ORM Conservation Plan as it covers part of site (natural core area) with respect to the development of infrastructure. However, there are no designated Greenlands.
- Long Sault Conservation Area multi-use trail directly north of site and parking area, which is considered a passive sensitive receptor.
- The site has the fourth longest waste transfer distance from the three contracted transfer stations to the site, with recyclables and residuals transferred to the DYEC adjacent to site; resulting in the second highest waste transfer costs from a transportation perspective.
- Eastern 2/3 of site is within Highly Vulnerable Aquifer and Significant Groundwater Recharge Area covers the entire site. While this site has Source Water Protection Plan designations, it should be noted that it was previously disturbed.
- New waste and air/noise ECA will be required for this site.
- From a cost perspective:
 - The site has no utility connections available on site. There is no natural gas supply line in vicinity of site, with the nearest municipal water supply and sanitary sewer connection over 11km from site, resulting in utility costs ranging from \$43,000,000 to \$100,000,000. Some hydro connection costs are included as Hydro tower is approximately 350m south of site, and nearest telecommunication connection is 890m from site.
 - The site is a closed landfill with significant site remediation costs required in contaminated waste and soil removal, ranging from \$4,000,000 to \$14,000,000.
 - Road infrastructure upgrades are required on Woodley Rd to support traffic transfer trailer volume and loads. Vehicle turning lanes are likely required in east and east bound direction of Durham Regional Road 20. Costs range from \$1,000,000 to \$2,000,000.

6.4 Oshawa Site

The application of the short-list evaluation criteria for the Oshawa Site includes the criteria mapping (see figures) and additional criteria application (see Table 5). Key aspects are summarized below.

Advantages

- The site has a total of approximately 34 hectares available for development, which satisfies the minimum criteria of 8 hectares.

- The site has the second shortest waste transfer distance from the three contracted transfer stations to the site, with recyclables and residuals transferred to the DYEC adjacent to site; resulting in the second lowest waste transfer costs from a transportation perspective.
- Water, sewer, and hydro utility connections available on site.
- An amended waste and air/noise ECA will be required for this site.
- The CLOCA regulates west and northwest edge of the property, however most of the site is not within the regulated area.
- There are no designated Greenlands or Oak Ridges Moraine Land Use areas on the site.
- Limited natural environment constraints (PSWs, ESAs, ANSI) on site.
- No known areas of archeological significance or important cultural heritage were noted on any of the short-listed sites. However, each site can still have the potential for archaeological significance. A Stage 1 Archaeological Assessment can be completed on the preferred site.

Disadvantages

- There are a significant amount of off-site receptors and several residential neighbourhoods developed within 500 metres of the site boundary.
- There will be a great impact on local traffic as high traffic volumes are already experienced on Ritson Rd North due to residential properties in close proximity to site and existing WMF operations.
- The site is in proximity to proposed Oshawa Executive Airport and is within the flight path (within approach Surface Slope 1:50) as per Transport Canada's Oshawa Airport Zoning Regulations. Therefore, there is a concern from a safety perspective (i.e. site is incompatible with the safe operation of an airport, and may cause interference with aircraft signals/communications or collision with birds).
- Highly Vulnerable Aquifer covers 80% of the site (except a few pockets on the eastern boundary). Western portion of the site is within Intake Protection Zone 3.
- Displacement of existing Regional infrastructure will be required as it is an existing public waste drop-off / transfer site.
- There are no synergies with the existing WMF building as it is too small to be used for the pre-sort portion of the Facility.
- From a cost perspective:
 - The nearest natural gas supply line is 600m from the site, with utility connection costs ranging from \$1,000,000 to \$3,000,000.
 - The site is a closed landfill with significant site remediation costs required in contaminated waste and soil removal, ranging from \$4,000,000 to \$14,000,000.

- Road infrastructure upgrades are required on northbound Ritson Road (widen left turning lane) to allow room for queuing to support traffic transfer trailer volume and loads. Costs range from \$250,000 to \$500,000.

6.5 East Scugog Site

The application of the short-list evaluation criteria for the East Scugog Site includes the criteria mapping (see figures) and additional criteria application (see Table 5). Key aspects are summarized below.

Advantages

- The site has a total of approximately 120 hectares available for development, which satisfies the minimum criteria of 8 hectares.
- Limited natural environment constraints (PSWs, ESAs, ANSI) on site within the Kawartha CA regulated area.
- The site is not in proximity to a municipal airport; therefore there is no major concern from a safety perspective (i.e. site is compatible with the safe operation of an airport, and will not cause interference with aircraft signals/communications or collision with birds).
- Minimal traffic impact expected as there is little existing traffic volume on Reach Street. However, new development on Sherrington Drive south of site may increase traffic volumes in the near future.
- No known areas of archeological significance or important cultural heritage were noted on any of the short-listed sites. However, each site can still have the potential for archaeological significance. A Stage 1 Archaeological Assessment can be completed on the preferred site.
- An amended waste and air/noise ECA will be required for this site.

Disadvantages

- The site has the longest waste transfer distance from the three contracted transfer stations to the site, resulting in the highest waste transfer costs from a transportation perspective.
- There are Policy conflicts due to designated Greenlands – Protected Countryside with respect to infrastructure development.
- The property is affected by a number of Source Water Protection Plan designations. A portion of the property is designated as a Highly Vulnerable Aquifer along northeast boundary. 75% of site is within a Significant Groundwater Recharge Area, while a majority of site is within the Intake Protection Zone 3. While this site has Source Water Protection Plan designations, it was previously disturbed.
- Displacement of existing Regional infrastructure as there is an existing waste management facility on site.
- From a cost perspective:

- Nearest natural gas supply line is approximately 2.5km from site. Nearest municipal water supply is approximately 300m from site. Sanitary sewer costs are low as site backs onto WPCP. Resulting utility costs range from \$6,000,000 to \$15,000,000. Hydro and telecommunication connections are available on site.
- The site is a closed landfill with significant site remediation costs required in contaminated waste and soil removal, ranging from \$4,000,000 to \$14,000,000.
- Road infrastructure upgrades are required when approaching site from the west on Reach Street (widen left turning lane) to allow room for queuing, for which costs range from \$500,000 to \$1,000,000.

6.6 Whitby Site

The application of the short-list evaluation criteria for the Whitby Site includes the criteria mapping (see figures) and additional criteria application (see Table 5). Key aspects are summarized below.

Advantages

- Large areas of provincially significant wetlands within and adjacent to site. However, since the site is already developed/previously disturbed for waste management/processing, it can be modified as per Facility requirements.
- No amendments to the Regional and Municipal Official Plan and Zoning By-Law are anticipated.
- No known areas of archeological significance or important cultural heritage were noted on any of the short-listed sites. However, each site can still have the potential for archaeological significance. A Stage 1 Archaeological Assessment can be completed on the preferred site.
- An amended waste and air/noise ECA will be required for this site.

Disadvantages

- There are 8 sensitive receptors within 500 metres of the site boundary and proposed future residential development to occur north of site.
- The site is in proximity to proposed Oshawa Executive Airport and is within the flight path (within Outer Surface Elevation 180.0 ASL) as per Transport Canada's Oshawa Airport Zoning Regulations. Therefore, there is a concern from a safety perspective (i.e. site is incompatible with the safe operation of an airport, and may cause interference with aircraft signals/communications or collision with birds).
- The site has the third longest waste transfer distance from the three contracted transfer stations to the site, with recyclables and residuals transferred to the DYEC adjacent to site; resulting in the third highest waste transfer costs from a transportation perspective.
- Approval may be required from Ministry of Infrastructure for work under Hydro corridor.
- Highly Vulnerable Aquifer and Significant Groundwater Recharge Area covers the entire site. While this site has Source Water Protection Plan designations, the site was previously disturbed. Depending on area for development, proximity to on-site Wetlands may create potential effects.

- Displacement of existing Regional infrastructure as there is an existing material recovery facility on-site. With incoming Extended Producer Responsibility legislation, the material recovery facility may become a stranded asset.
- From a cost perspective:
 - Nearest natural gas supply line connection is 500m from site. Nearest sanitary sewer connection is 1.5km from site (currently using underground septic tank), resulting in utility costs ranging from \$2,000,000 to \$4,000,000. Hydro, municipal water, and telecommunication utilities are available on site.
 - The site is not a closed landfill, thus no significant site remediation costs required in contaminated waste and soil removal. However, the site has existing MRF buildings, which will need to either be demolished or remediated to account for new Facility. This will add site demolition costs of about \$2,000,000 to \$4,000,000.
 - Road infrastructure upgrades will likely require left and right vehicle turning lanes on Garrard Rd and Conlin Rd if used as entrance to site, for which costs range from \$2,000,000 to \$4,000,000.

6.7 Comparative Evaluation

The comparative evaluation results are summarized in the sections that follow, with additional details provided in the Comparative Evaluation Tables following the text – Table 7 presents the comparative evaluation for the Facility. Sites are ranked from most preferred to least preferred.

6.7.1 Environmental

Air Quality, Odour, Noise

A wind rose was generated based on 10-year hourly average wind data (March 6th, 2010 to January 19th, 2020) collected at the Oshawa Municipal Airport Station, which is considered central and representative for the short-listed sites. The average hourly wind speed was 3.97 m/s or 14.29 km/h and the prevailing wind blows was predominately coming from a northwesterly to southwesterly direction. The wind rose is included at the top left corner of Figure 6 and in Figures 6A to 6F for each of the short-listed sites to demonstrate which surrounding sensitive receptors are most susceptible to wind blows during construction and potential odours during Facility start-up/commissioning.

While this wind rose provides a general overview of historic wind data within the Region of Durham, further meteorological data should be collected to determine site-specific information using anemometer and vane equipment (for wind speed and wind direction respectively). For example, the wind directionality from the North Clarington site can vary from the South Clarington site, as it can be strongly influenced by local factors such as topography and the measurement location relative to large bodies of water. In other words, a higher percentage of southerly winds could be expected at the South Clarington site due to Lake Breeze effects.

All sites are expected to be within compliance from an air quality, odour and noise perspective (based on design specifications for the Facility), although a majority of the sites have sensitive receptors (residential neighbourhoods) within close proximity. The South Clarington Site and the North Clarington Site have significantly less number of sensitive receptors within close proximity.

Terrestrial

Affected Greenlands – East Scugog Site falls within Greenbelt area with Protected countryside. None of the other sites are affected by greenlands. ORM Conservation Plan Area covers part of West Scugog and North Clarington sites. None of the other sites are affected by ORM Land Use areas. Further study and analysis such as an Environmental Impact Statement (EIS) would be required to provide additional mitigation and compensation measures and to demonstrate that there would be no negative impacts to the natural features at the preferred site. This would be undertaken on the area of the site required for the Facility footprint.

Species of Special Concern, Threatened, and/or Endangered – Potential SAR habitat was identified by The Natural Heritage Information Centre (NHIC) on all short-listed sites. Recent records of SAR were identified at the West Scugog, Oshawa, and East Scugog sites. Through appropriate avoidance measures, the effects on SAR are likely low. Further detailed field investigations will be required to confirm presence (if any) of SAR on the preferred site. SAR potential mapping are included as Figures 8. Key SAR identification terms are as follows:

- END – Endangered
- THR – Threatened
- EXP – Extirpated
- SC – Special Concern
- NAR – Not at Risk
- DD – Data Deficient
- EXT – Extinct
- S2 – Imperiled
- S3 – Vulnerable
- S4 – Apparently Secure
- N – non-breeding

Aquatic

There are no aquatic SAR listed as potentially occurring at any of the sites.

Surface Water

The Oshawa, East Scugog, Whitby, and South Clarington sites have a number of surface water features on-site, which acts as a constraint for siting the facility. The East Scugog site contains the Nonquon River Water Pollution Control Plant and much of the site is within the Kawartha CA regulated area, which reduces the site size from 120 to 52 hectares. The CLOCA regulated area occupies a portion of the South Clarington site, which would require an approval from CLOCA to encroach or development within the Regulated Area (should this be required once a conceptual design is established). Based on this, the West Scugog and North Clarington sites are preferred from a surface water perspective.

Groundwater

Source Water Protection Areas – All of the short-listed sites either have Significant Groundwater Recharge Area or a Highly Vulnerable Aquifer covering a portion of the property, with East Scugog having an Intake Protection Zone (IPZ) designation. The site with the least amount of area designated under the Source Water Protection Plan is the South Clarington site. Further discussion on the approach to Source Protection Areas is provided in Section 5.3.2.

Agricultural

All sites have been either previously disturbed or have not been utilized for agricultural purposes in the recent past. The South Clarington site is Class 1, East Scugog site is Class 1 and 2 - Oshawa and Whitby are Class 2. West Scugog and North Clarington are Class 6.

Overall – Environmental

Based on the above and the comparative evaluation tables, the following sites are more preferred:

- South Clarington Site.
- Whitby Site.
- Oshawa Site.

6.7.2 Social

Sensitive Receptors

With respect to the Facility and sensitive receptors, the South Clarington, North Clarington, and East Scugog are the preferred sites due to the combination of the number of sensitive receptors within 500 metres of the site/Facility boundary and the proximity of those receptors (i.e., number of residences immediately adjacent to the site boundary, reduced buffers, etc.). The Oshawa site is least preferred as it is immediately surrounded by residential neighbourhoods. Although mitigation measures would be applied to this site, the relative setback distances from the proposed facility footprint are the lowest of all potential sites.

Land Use/Zoning

South Clarington site will not require any amendments to the current Regional and Municipal Official Plan and Zoning By Law as it currently permits the proposed use of the site for a mixed waste transfer and pre-sort facility with anaerobic digestion. A new waste and air/noise ECA will be required for this site. West Scugog site will also require a new waste and air/noise ECA. The South Clarington site also meets the Energy Park objectives, including energy related development, employment for energy related development, and ability for district energy/ sustainable energy.

For all remaining sites, an amendment to existing waste and air/noise ECAs will be required. Some ECAs are old/outdated and will require greater amendment efforts than others.

Transportation

From a transportation perspective, each site presents its own constraints with respect to the two indicators under this criterion, which relate to existing or required transportation infrastructure and neighbourhood impacts from traffic. Viewing the sites from a Facility-only perspective, the South

Clarington site is most preferred as it requires no major upgrades to nearby existing roads, and it will have a smaller impact on local traffic as waste is currently sent to the adjacent DYEC.

Visual

No discernible difference between sites from a visual perspective as each site would need to implement typical mitigation measures to ensure the sites are appropriately screened.

Overall – Social

Based on the above and the comparative evaluation tables, the following sites are more preferred:

- South Clarington Site
- Whitby Site
- Oshawa Site

6.7.3 Cultural

Archaeological

The only site to be cleared of archaeological significance is the South Clarington site as a previous archaeological investigation was completed. No known archeologically significant areas were found on or adjacent to any of the short-listed sites. However, each site can still have the potential for archaeological significance. A Stage 1 Archaeological Assessment can be completed on the preferred site.

Heritage

No known areas of important cultural heritage were found on or adjacent to any of the short-listed sites. North of the Oshawa site is a Class A (greatest historic interest) campground/scouts called Camp Samac, however it will not be affected as a result of developing the Facility, given the relative distance and mitigation measures proposed. The Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTC) may provide additional information as further studies are initiated on the preferred site.

Overall – Cultural

Based on the above and the comparative evaluation tables, no preference for a site from a Cultural Component perspective has been identified. Further work will be completed on the preferred site, as required by the MHSTC.

6.7.4 Technical

Permitting/Approvals

While most sites will require an amendment to existing waste, air/noise ECAs, the South Clarington and West Scugog sites will require new ECAs.

Safety

A commercial airport – the Oshawa Municipal Airport is located within Durham Region. In addition, Greenbank Airport is a small private airport within Durham Region. The Pickering lands, owned by

the Federal Government, were declared an “airport site” in August 2001. To protect Federal Lands for future aviation needs, the Pickering Airport Site Zoning Regulations (AZR) came into effect September 2005. The AZR restrict the height of buildings, structures and objects including natural growth on regulated lands and protect aircraft from potential hazards such as bird strikes and electronic signal interference for a distance of up to 15 km off the end of each runway.

The two national railroads that run through the study area are the main line of the Canadian National Railway (CNR) and the main line of the Canadian Pacific Railway (CPR).

From a safety perspective, the South Clarington site was identified as the most preferred over all other sites as it is not in proximity to an airport (i.e. site is compatible with the safe operation of an airport, and will not cause interference with aircraft signals/communications or collision with birds). A railroad track runs approximately 50 metres south of site, though there is a road in between (site access road for DYEC).

All other sites have another facility or a use that may allow for an interaction and increase the safety risk. This includes West Scugog site (proximity to proposed Pickering airport, within secondary bird hazard zone), North Clarington site (Long Sault Conservation Area multi-use trail), Oshawa site (proximity to Oshawa airport – flight path within approach surface slope), East Scugog site (proximity to Greenbank airport), and Whitby site (proximity to Oshawa airport - flight path within outer surface elevation).

Utilities and Services

Municipal Water – Municipal water connection information was provided by the Region. The West Scugog and North Clarington sites do not have nearby access to municipal water connection, with the nearest connection point being over 9km and 11km respectively.

Sanitary Sewer – Sanitary sewer connection information was provided by the Region. The West Scugog and North Clarington sites do not have nearby access to municipal water connection, with the nearest connection point being over 9km and 24km respectively. The Whitby site utilizes an underground septic tank(s), with the nearest connection being over 1km away. The East Scugog site contains the Nonquon River Water Pollution Control Plant, with the nearest connection being only 300m away.

Natural Gas – Enbridge was contacted to provide natural gas pipeline connection information for the short-listed sites. Enbridge has noted that the North Clarington site does not have existing gas network within proximity, with the nearest connection being over 11km away. Since the Facility will require an incoming natural gas pipeline for utility purposes and an outgoing renewable natural gas (RNG) pipeline, this makes the North Clarington site the least preferred from a cost perspective.

Enbridge requires a Non-Disclosure Agreement (NDA) to be signed so that information shared between Enbridge and GHD or the Region is classified as confidential. They have asked for a 7-year confidentiality agreement, the purpose of which would be to obtain a network connection assessment and cost estimates for pipe reinforcement and RNG injection station at the proposed site. Enbridge also requires additional information including but not limited to: RNG injection volume flow rate, and biogas outlet pressure and temperature, which has not been established at this stage of the Facility.

Enbridge will need to conduct a further detailed study to ensure proper gas supply is available for each site. RNG injection station will be required at each of the sites, with an additional cost of approximate \$1,000,000. Reinforcement to existing pipeline connection will also be required by Enbridge.

Hydro/Electricity – Hydro One and Oshawa Power were contacted to provide hydro related information for each of the short-listed sites, however, Hydro One was unable to provide information at this time. Oshawa Power confirmed power availability to supply the Oshawa Site from their existing overhead 13.8kV power lines on Ritson Road. Oshawa Power also noted that the maximum service that can be connected from the 13.8kV lines is a 1200A-600/347V main switch. Should the Facility require a service larger than 1200A-600/347V, the 44kV line up Ritson Road will need to be extended, which can be costly.

The North Clarington site has a hydro tower running 350m south of the property, and the Whitby site has a hydro tower passing through south of the property. Further investigation is required to retrieve accurate hydro information.

Telecommunication – Rogers and Bell were contacted to provide telecommunication related information for each of the short-listed sites. Bell has noted that they provide telecommunication services to all sites except for the North Clarington, for which the nearest connection point is 890m from the site.

Rogers has noted that there are no coax or fiber internet options available at these locations. However, Rogers is launching a new service at the end of February 2020 called a Fixed Wireless Internet solution. The concept will work off of the cell phone wireless network, and equipment would need to be installed on a building within the site. Rogers has provided a high-level cost estimate of \$500/month for each site, which translates to a lifecycle cost of \$150,000 for a 25-year operating Facility. This was used as a minimum cost for the North Clarington site. Should the Region wish to install underground cables, the cost will roughly be the same at around \$180,000 based on GHD experience (maximum cost scenario).

Suitability of Area

The South Clarington site was determined to be the most preferred from a suitability perspective as it has the greatest compatibility with existing adjacent DYEC waste infrastructure. Waste is currently hauled from the private transfer stations to the DYEC for incineration. Recyclables that will be pre-sorted at the Facility, and remaining residual waste from the Facility can easily be transported to the DYEC (i.e. waste can be transported via conveyor belts from Facility across to the DYEC site). Typically, MWP/AD facilities of this capacity require construction of separate wastewater treatment plants to treat high-strength effluent from the facility. Since there is a WPCP located south of the site, it may have the capacity to process Facility effluent with minimal new infrastructure requirements. At the very least, a new full-sized wastewater treatment plant will not be required.

Overall – Technical

Based on the above and the comparative evaluation tables, the following sites are more preferred:

- South Clarington Site.
- Whitby Site.

- Oshawa Site.

6.7.5 Economic

Capital Costs

From a capital cost perspective, the most preferred site is South Clarington, as it is not located on a closed landfill (low remediation costs), is undeveloped (no demolition costs), does not require upgrades to existing transportation infrastructure, and only requires connection to natural gas utility pipeline (existing water, sanitary sewer, hydro, and telecommunication utility connections are already in place). The North Clarington site is the least preferred site due as it being situated on a closed landfill and being a remote location, which translates to high utility connections costs, site remediation costs, and transportation infrastructure upgrades.

Further breakdown of all capital costs are attached separately as Table 6.

Utility Connection Costs – All sites require natural gas supply line connection costs. Based on GHD's experience, a gas pipeline costs \$1,500 per metre of pipeline construction (minimum cost scenario). However, with Enbridge being the natural gas provider for all of these sites, their participation will be required at an early stage. To account for Enbridge's stringent specifications, pipeline costs are expected to increase by at least 2.5 times base costs (maximum cost scenario). As noted earlier, Enbridge has noted that they will need to conduct a further detailed study to ensure proper gas supply is available for each site. An RNG injection station will be required at each of the sites, each with an additional cost of approximate \$1,000,000. Reinforcement to existing pipeline connection will also be required by Enbridge.

Municipal water supply and sanitary sewer connections are required at most of the short-listed sites. Based on GHD's experience, relevant pipeline construction unit costs range from \$500 to \$1,000 per metre and were used to develop minimum and maximum cost estimates respectively.

Hydro connection is available at all sites, except for the North Clarington site, for which the nearest connection point is 350m south of the property. Based on GHD's experience, hydro line installation unit costs range from \$500 per metre (minimum cost scenario) to \$1,000 per metre (maximum cost scenario). However, further investigation is required to retrieve accurate hydro information.

Telecommunication connection is available at all sites, except for the North Clarington site, for which the nearest connection point is 890m from the site. As noted earlier, costs are minor and range from \$150,000 to \$180,000 (based on unit costs of \$200/metre based on GHD experience).

Transportation Infrastructure Upgrade Costs – In order for waste to be transferred to and from the Whitby site, several major upgrades to the existing transportation infrastructure will be required. No major road improvements are required at the South Clarington site. All sites will require a traffic impact study.

Site Remediation Costs – In order for the Facility to be located at the North Clarington, Oshawa, and East Scugog sites, a significant quantity of contaminated waste and soil will require removal as they are situated on closed landfills, resulting in high site remediation costs. As the extent (depth) of waste at the closed landfills is unknown, site remediation costs were calculated on a per metre depth basis. The Region should note that the costs will double as the depth doubles. In order to incorporate a range of site remediation costs, a minimum cost scenario, whereby 30% of the building

footprint was estimated to require contaminated soil/waste removal was considered. A maximum cost scenario considered ultimate building footprint estimates as provided in Memo No. 1 for this project.

Site Demolition Costs – In order for the Facility to be located at the Whitby site, the former MRF and current MRF buildings will need to be demolished or remediated to include the new Facility due to the limited site size available. In order to incorporate a range of demolition costs, a minimum cost scenario, whereby the existing building demolition costs are considered negligible due to sales from existing building components was considered. A maximum cost scenario considered no re-sale value of existing building components.

For the West Scugog site, as it is a much larger site, a minimum demolition cost was not applied as it was assumed that the Facility could be constructed on other undeveloped parts of the site. Similar to the Whitby site, a maximum cost scenario of site demolition with no re-sale value of existing building components was considered.

Transportation / Waste Transfer Costs

From a transportation perspective, the South Clarington site was identified as the preferred site, as the site has the lowest waste transfer costs. The site has the shortest waste transfer distance from the three private transfer stations to the site (Miller's Squires Beach Transfer Station, Miller's Pebblestone Transfer Station, and the Waste Management of Canada Courtice Road Transfer Station), with the recyclables and residuals then transferred to the adjacent DYEC.

The next comparable site will cost more than twice as much for waste transfer on a per transfer trailer basis. The East and West Scugog sites are least preferred as these sites will cost more than 5 times for waste transfer, when compared to the South Clarington Site.

Transportation to markets and end users for the beneficial use end-product from the Facility depends on the type of technology used at the Facility and is the responsibility of the preferred Proponent. This aspect was not evaluated.

Employment

All sites offer the same employment opportunities (estimated to be between 30-40 full time jobs), however the South Clarington site meets specific objectives within the Energy Park plan, including providing for employment for energy related developments.

Overall – Economic

Based on the above and the comparative evaluation tables, the following sites are more preferred:

- South Clarington.
- Whitby.
- Oshawa.

7. Recommended Site

Based on a review of the advantages and disadvantages described in Section 6, the South Clarington Site is the Recommend site for development as it has a greater number of advantages than disadvantages when compared against all other short-listed sites from an Environmental, Social, Cultural, Technical, and Cost perspective.

The advantages of the South Clarington site in comparison to the other short-listed sites include:

- No off-site sensitive receptors within 500 metres of the site.
- No policy conflicts from a provincial policy/plan perspective (i.e. Oak Ridges Moraine, Greenbelt, etc.)
- No wetlands on site and limited areas of Source Water Protection Plan designations (small portion of site), particularly in comparison to all other short-listed sites
- Consistent with existing, proposed and surrounding land uses and land use designations and allows for an acceptable use within the land use planning context. The site is within the Municipal Official Plan designation of Business Park and the Regional Official Plan designation of Employment Area. With respect to Employment designation, this facility will provide employment in the range of 30-40 full time positions (estimated). The zoning designation is Industrial (M).
- The potential exists to build on the energy related character of the Energy Park through the development of this Facility and new energy production facilities, including District Energy and sustainable energy. The Facility fits into the Energy Park's sustainable development and design standards, and future opportunities in the renewable and alternative energy sector. This would also meet the Provincial objectives of ensuring facilities such as the Region's are well-planned and suitably sited to ensure long-term effectiveness of the resource recovery system and campus.
- Synergies with existing solid waste management infrastructure, including DYEC where mixed-waste residuals would be processed, will help create energy savings and environmental benefits. By removing the organic waste material (SSO and FSO) through the pre-sorting process at the Facility, which generally contains more moisture, the combustion process at the DYEC will become more efficient. Synergies with adjacent WPCP may be able to treat Facility effluent and utilize natural gas.
- Road network to the site has been upgraded to accommodate volumes of traffic that would be generated for the proposed use. There is a dedicated road for waste delivery trucks along the Canadian National railroad track.
- Previous archaeological studies were completed for the Region on the site and on the adjacent DYEC site and determined no archaeological significance.
- Utilities and servicing are available on-site with nearest natural gas line in close proximity
- Lowest Capital costs (remediation, demolition and utilities)

- Lowest transportation costs, thereby reducing transportation emissions as waste material outputs from the Facility could enter the DYEC in close proximity.

With the above in mind, the South Clarington site is the preferred site for the proposed Facility.

8. Municipal Staff and Public Consultation

Consultation was undertaken as follows:

Municipal Consultation

- February 19, 2020: Meeting with local municipal staff

Public Information Centre (PIC)

- February 27, 2020: PIC
- March 20, 2020: Close of PIC comment period

These consultation sessions allowed GHD and the Region to engage directly with members of the public. At the same time, these sessions also allow the public to provide their input, thoughts and perspectives to GHD and the Region, creating an open, two-way dialogue. For example, GHD will present their evaluation results from the long list of sites to the short-list, which is based on a number of Region and Region Council endorsed evaluation criteria. Members of the public will have the opportunity to provide site specific information from a historical and local perspective that may be important to include in the overall recommendation for the preferred site.

The results of the municipal staff and public consultation events, for the information presented in this Report, will be reviewed and addressed. This Report will be revised to incorporate all appropriate feedback and comments.

9. Next Steps

Prior to moving forward with further detailed work and further approvals on the preferred site for the Facility, Regional Council approval and endorsement of the preferred site will be sought. The Region anticipates undertaking the following steps once Regional Council have provided further direction on the preferred site for the Facility:

- Work Plans will be established for each technical discipline involved in further investigations on the site, which may include: planning justification report, geotechnical investigations, EIS, Traffic Impact Study, noise assessment, site plan, hydrogeological studies, archaeological studies etc. Timelines for data collection and assessment of findings will be established as part of the Work Plans.
- Further consultation with neighbouring landowners will occur, with discussion on potential further approvals required (i.e., land use, ECA), facility footprint location on the site, potential design/technology, mitigation measures, Best Management Practices, and anticipated schedule of major milestones. Discussion will also include details on how best to seek their input on future site design and selection of technology.

- Further public information/consultation sessions on Facility milestones and the procurement process.
- Initiation of the Planning approvals process, working in cooperation with both Regional planning staff and the host municipalities Planning staff.
- Advancing the site-specific design that will be put forward in the procurement process.
- Preparation of Request for Pre-Qualification (RFPQ) documents, followed by the preparation of Request for Proposal (RFP) documents as the procurement of processing technology is advanced.
- Continue to seek guidance from the MECP in preparation for submitting application(s) for ECA(s).

March 24, 2020

The Corporation of the Town of Bracebridge
1000 Taylor Court
Bracebridge ON P1L 1R6

Re: Support for Ban of Single-Use Disposable Wipes

Please be advised the Council of the Municipality of Chatham-Kent at its regular meeting held on March 23, 2020 considered the aforementioned topic and subsequent to discussion, the following was resolved:

Moved by Councillor Latimer, Seconded by Councillor Finn

That Council send a letter of support with respect to the Town of Bracebridge's Council resolution to support the ban of single-use disposable wipes.

If you have any questions or comments, please contact Judy Smith at 519-360-1998 Ext # 3200.

Sincerely,



Judy Smith, CMO
Director Municipal Governance
Clerk /Freedom of Information Coordinator

C

Right Honourable Prime Minister of Canada;
Honourable Premier of Ontario;
Minister of the Environment, Conservation and Parks;
Minister of Municipal Affairs and Housing;
Association of Municipalities of Ontario (AMO);
Local Members of Provincial Parliament;
All Municipalities in Ontario.

March 24, 2020

Municipality of West Nipissing
101-225, rue Holditch Street
Sturgeon Falls, ON P2B 1T1

Re: Support for Legislative Changes in Bill 132

Please be advised the Council of the Municipality of Chatham-Kent at its regular meeting held on March 23, 2020 considered the aforementioned topic and subsequent to discussion, the following was resolved:

Moved by Councillor Latimer, Seconded by Councillor Finn

That Council send a letter of support respect to the Municipality of West Nipissing's Council resolution to support AMO's position on the Legislative Changes in Bill 132 with respect to the *Aggregate Resources Act* and the *Safe Drinking Water Act*.

If you have any questions or comments, please contact Judy Smith at 519-360-1998 Ext # 3200.

Sincerely,



Judy Smith, CMO

Director Municipal Governance

Clerk /Freedom of Information Coordinator

From: [Ralph Walton](#)
To: [Lydia Gerritsen](#); [Afreen Raza](#)
Cc: [Cheryl Bandel](#)
Subject: Fwd: Line Fences Act / Loi sur les clôtures de bornage
Date: April 1, 2020 10:14:49 AM

Cip
Adv copy to planning please
Get [Outlook for iOS](#)

From: noreply@salesforce.com <noreply@salesforce.com> on behalf of Ag Info <ag.info.omafra@ontario.ca>
Sent: Wednesday, April 1, 2020 9:54:16 AM
To: Ralph Walton <Ralph.Walton@durham.ca>
Subject: Line Fences Act / Loi sur les clôtures de bornage



Dear Stakeholder:

I am writing to let you know effective today, the administration of the Line Fences Act (Act) has transitioned from the Ministry of Municipal Affairs and Housing (MMAH) to the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA).

As OMAFRA is tasked with specifically supporting agriculture and rural affairs in Ontario, it makes sense for the administration of this Act to be the responsibility of the Minister of Agriculture, Food and Rural Affairs.

OMAFRA also administers other Acts that support the sector and works with farmers and municipalities on a variety of files and has a proven track record in helping farmers and rural residents to find and build solutions to a variety of challenges they face.

We have worked closely with MMAH to ensure a seamless transition of the administration of the Act to OMAFRA. We will ensure the Act continues to be administered in an effective and efficient way. If you have any questions, please call the Agriculture Information Contact Centre: at

877-424-1300 or by email at: ag.info.omafra@ontario.ca.

We look forward to continuing to work with your organization on this and other matters.

Sincerely,

Carolyn Hamilton
Director, Rural Programs Branch
Economic Development Division
Ministry of Agriculture, Food and Rural Affairs

Madame, Monsieur,

Je désire vous informer qu'à compter d'aujourd'hui, l'administration de la *Loi sur les clôtures de bornage* (la Loi) est passée du ministère des Affaires municipales et du Logement (MAML) au ministère de l'Agriculture, de l'Alimentation et des Affaires rurales de l'Ontario (MAAARO).

Comme le MAAARO est chargé de soutenir spécifiquement l'agriculture et les affaires rurales en Ontario, il paraît sensé que l'administration de cette loi relève du ministre de l'Agriculture, de l'Alimentation et des Affaires rurales.

Le MAAARO administre également d'autres lois qui soutiennent le secteur et travaille avec les agriculteurs et les municipalités sur de multiples dossiers. Il a fait ses preuves en aidant les agriculteurs et les résidents des régions rurales à trouver et à élaborer des solutions à de nombreux défis auxquels ils doivent faire face.

Nous avons travaillé en étroite collaboration avec le MAML pour assurer une transition sans heurts de l'administration de la Loi au MAAARO. Nous veillerons à ce que l'administration de la Loi se poursuive de manière efficace et efficiente. Si vous avez des questions, veuillez communiquer avec le Centre d'information agricole par téléphone au

Nous espérons de continuer à travailler avec votre organisation sur ce sujet et sur d'autres questions.

Sincères salutations,

Carolyn Hamilton
Directrice, Direction des programmes pour les collectivités rurales
Division du développement économique
Ministère de l'Agriculture, de l'Alimentation et des Affaires rurales

