Greenbelt Foundation

Economic Impact Assessment

Final Report

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Disclaimer

Ernst & Young LLP ("EY") has been engaged by the Greenbelt Foundation ("Greenbelt Foundation") to perform an economic contribution assessment of the economic activities supported by the Greenbelt's natural assets. In preparing this document (the "Report"), EY relied upon unaudited information from the Greenbelt Foundation and publicly available data. EY did not audit or independently verify the accuracy or completeness of this information and therefore accepts no responsibility for errors, omissions, losses or damages because of any persons or entity relying on this Report for any purpose other than that for which has been prepared. Accordingly, EY expresses no opinion or other forms of assurance regarding this information and reserves the right to revise any analyses, observations or comments should additional supporting documentation become available.

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1. Executive Summary

1. Executive Summary

Located in the heart of the Greater Golden Horseshoe ("GGH") in Southern Ontario, the Greenbelt makes up over 2 million acres of protected lands, forests, wetlands and coastal waters. The Greenbelt was established in 2005 to safeguard quality of life in the GHH in anticipation of continued population growth and urbanization. The Greenbelt Plan has several objectives:

► protection against loss and fragmentation of the agricultural land base and preservation of agriculture as the predominant land use;

► protection of water resource systems; and

► sustenance of economic and social activities associated with local communities, agriculture, tourism, recreation and resource use.

Purpose of the Report

Ernst & Young LLP ("EY") has been engaged by the Greenbelt Foundation to assess the regional and provincial economic contribution of sectors supported by the Greenbelt. The scope of this report includes the following:

► Identification of sectors and sub-sectors that are directly or indirectly supported by the Greenbelt;

► Estimation of economic contributions of activities in identified sectors to the Greenbelt region and the province of Ontario;

► Estimation of public revenue contributions of activities in identified sectors and subsectors; and

► Presentation of detailed economic contribution results by sector and region.

To estimate the economic contributions of key sectors at the regional level, EY carried out detailed geospatial analysis to understand the geographic integration of municipalities with the Greenbelt. Additionally, following detailed analysis of macroeconomic and labour market data for relevant municipalities, EY developed custom regional multipliers to capture the regional contributions of activities in each identified sector.

Summary of Findings

The results from the analysis are categorised into primary and secondary sector contributions. The Greenbelt directly supports economic activity in certain primary sectors in the region. Operations in these sectors are more likely to locate within the Greenbelt, or are sufficiently integrated with these protected lands. These primary sectors consist of:

i.   agriculture, forestry and fishing; and
ii. tourism and hospitality related industries, such as arts, entertainment and recreation, and accommodation and food services.

Secondary sectors, on the other hand, include industries in the region that may indirectly depend on the Greenbelt for their operations as some of their supply chain activities rely on the primary sectors in the Greenbelt. Secondary sectors considered in this analysis include:

i.   food manufacturing;
ii.   wholesale and retail trade; and
iii. transportation and warehousing industries.

Results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 19.6 billion** in gross output, **CAD 9.6 billion** in Gross Domestic Product ("GDP"), **CAD 6.1 billion** in labour income, and sustain approximately **177,700 FTEs** at direct, indirect and induced levels in the Province of Ontario (*Table 1* below).

Table 1. Summary of **Province-Wide Contributions from Primary Sectors**

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	10,643.9	4,886.5	3,557.8	126,901
Indirect	5,498.7	2,686.0	1,592.9	30,755
Induced	3,466.1	2,042.5	963.8	20,055
Total	19,608.7	9,615.0	6,114.6	177,711

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Additionally, secondary sectors contribute an estimated total of **CAD 7.7 billion** in gross output, **CAD 3.3 billion** in GDP, **CAD 2.1 billion** in labour income, and sustain approximately **34,300 FTEs** in the Province of Ontario (*Table 2*).

In addition to economic contributions by sector, this analysis also estimates government revenue generated through primary and secondary sector activities for various levels of government. Results suggest that activities in the primary sectors contribute an estimated total of **CAD 2.98 billion** in total government revenue. Activities in the secondary sectors in the Greenbelt contribute an estimated total of **CAD 1.35 billion** in total tax revenues (*Table 3*).

Table 2. Summary of Province-Wide Contributions from Secondary Sectors

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Secondary Sectors				
Direct	4,565.4	1,871.3	1,072.0	16,198
Indirect	2,104.0	780.5	663.4	11,252
Induced	1,056.6	624.2	318.7	6,850
Total	7,726.0	3,276.0	2,054.2	34,300

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 3. Tax Contributions from Primary and Secondary Sectors

Government Revenue Contributions ($mn)

	Primary Sectors	Secondary Sectors
Federal	1,574.4	774.7
Provincial	1,038.9	485.3
Local	361.8	91.9
Total	2,975.1	1,351.9

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

2. Overview of Greenbelt's Economy

2.1. Overview of Ontario's Greenbelt

2.2. Greenbelt's Role in the Regional Economy

2.1. Overview of Ontario's Greenbelt

Located in the heart of the Greater Golden Horseshoe ("GGH") region in Southern Ontario, the Greenbelt makes up over 2 million acres of protected lands, forests, wetlands and coastal waters. The Greenbelt was established in 2005 to safeguard quality of life in the GGH in anticipation of continued population growth and urbanization. The Greenbelt Plan has several objectives:

► protection against loss and fragmentation of the agricultural land base and preservation of agriculture as the predominant land use;

► protection of water resource systems; and

► sustenance of economic and social activities associated with local communities, agriculture, tourism, recreation and resource use.[1]

In a recent report commissioned by Green Infrastructure Ontario Coalition ("GIO") and supported by the Greenbelt Foundation, the economic contributions of green infrastructure in the provincial economy were evaluated. The study concluded that green infrastructure in Ontario contributed an estimated total **of CAD 8.6 billion** in gross output, **CAD 4.6 billion in GDP**, and sustained **84,400** FTEs in the year 2018. The report also brings to light Greenbelt Foundation's contribution to projects relating to green infrastructure, including the enhancement and protection of natural heritage assets.[2]

The Greenbelt provides natural capital to sustain complex ecological systems and also contributes to activities in various sectors through its abundant natural resources. The Greenbelt's natural assets also provide opportunities for local businesses to generate economic activity and employment in sectors including agriculture, forestry, recreation, and accommodation and food services, among others.

Owing to the rich natural resource base in the Greenbelt, agriculture and food emerge as key economic sectors in the region. The Greenbelt has abundant agricultural and animal produce, and includes the province's two specialty crop areas, namely the Niagara Peninsula Tender Fruit and Grape Area and the Holland Marsh. The region also has strengths in tourism and recreation; the Greenbelt's trails provide residents and visitors with a way to explore nature and engage in activities such as cycling and skiing, generating income for tourism and recreation businesses in the area.

Key sectors in the Greenbelt also benefit from their proximity to major urban centers in the GGH. Farms that enjoy the advantage of the Greenbelt's location include sod farming, tree nursery operations and Christmas tree production. Additionally, certain farm types enjoy a natural advantage owing to the Greenbelt's soil and climate. These include vegetable production in Holland Marsh and tender fruit, grape and wine production in the Niagara region.[3]

The Greenbelt overlaps with several municipalities or census subdivisions ("CSD"s) in the region. **Figure 1** below displays a heat-map of municipalities in the GGH region and their respective degree of overlap with the Greenbelt. Certain municipalities and counties are geographically integrated with the Greenbelt to a greater extent compared to others. Given that the Greenbelt's boundaries do not align with official municipal boundaries, a novel approach is adopted to map the Greenbelt to its regional economy and estimate economic contributions. The geographic overlap of the Greenbelt with municipal boundaries is a key input to this analysis. The analysis approach is further discussed in **Section 3.1** of this report.

Figure 1. Overview of Greenbelt Overlap with Census Subdivisions
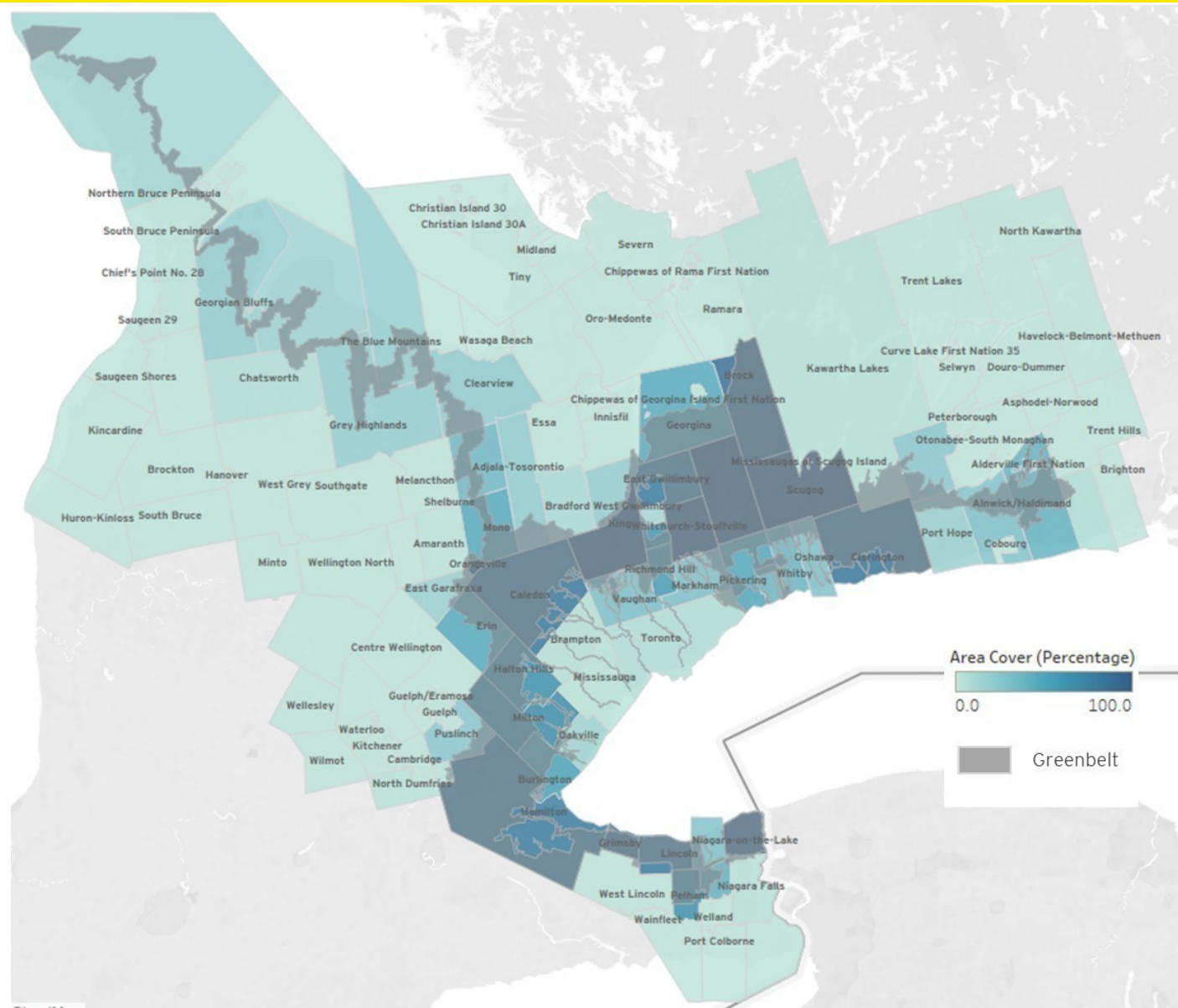
Sources: Ontario GeoHub, Statistics Canda, EY analysis.

2.2. Greenbelt's Role in the Regional Economy

Ontario's Greater Golden Horseshoe ("GGH"), where the Greenbelt is located, is a vibrant and fast growing region in Canada. The historical significance of the GGH economy was owed to its location and proximity to United States markets, and more recently the competitive advantages in this region, including a diverse and skilled workforce and its knowledge-based economy. The regional economy of the GGH is forecasted to grow to 13.5 million people and 6.3 million jobs by 2041, contributing largely to Canada's economy. In addition to this, the GGH is home to abundant natural resources including the Greenbelt protected lands. These regional natural assets are an anchor for resource-dependent industries and provide a landscape for tourism and recreational activities.[iv]

The Greenbelt's importance stems from its sustenance of key ecological systems in Ontario, contributions made by the protected region towards human and ecological health, and economic activities supported by it in agriculture and tourism related industries. It has been observed that the Greenbelt's ecological assets bring recreational value to Ontarians and provides improvements in air quality. Wetlands in the Greenbelt provide protection to human property from flood damage, the value of which has been estimated at **CAD 224 million** a year. Ecological services also include sequestration of greenhouse gas and carbon storage[1] in the Greenbelt's forests, wetlands and farms, valued at **CAD 11.17 billion**.[v]

As noted above, the Greenbelt is a significant contributor to the region's agriculture economy. While the Greenbelt accounts for 6.1% of Ontario's farmland, it contains 9.6% of Ontario's farms. Greenbelt farms are highly productive, generating nearly 68% higher farm cash receipts per acre than farms in the rest of Ontario. Home to nearly 53% of Ontario's fruit acreage, including more than 80% of Ontario's acreage in peaches, plums, prunes, apricots and grapes, the Greenbelt is a major supplier of the province's fruits. Most of these fruit crops are grown in the Niagara Peninsula, one of two specialty crop areas. The Greenbelt accounts for 11% of Ontario's vegetable acreage, most of which are grown in the other speciality crop area, the Holland Marsh.[iv]

While specialising in horticulture activities, the Greenbelt also contributes to Ontario's animal agriculture and livestock production, with 8% of broiler chicken production, 8% of sheep and lambs, and 6% of beef cows.[iii] The Greenbelt also supports a vibrant value-added agriculture and agri-tourism economy, with numerous farmers' markets, on-farm markets, pick-your-own operations, and breweries, wineries, and cideries.

In addition to agriculture and related activities, the Greenbelt also provides abundant natural resources for tourism and recreational activities. These include cycling along the protected countryside on the 475 kilometre long Greenbelt Route ranging from Northumberland to Niagara, multiple regional trails as well as long-distance trails including the Bruce Trail, Trans Canada Trail, and Oak Ridges Moraine trail, and skiing in the Blue Mountains, among others.[vi] These activities contribute

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[1] Sequestration refers to the rate at which carbon is captured; and carbon storage is a cumulative measure of all previous sequestration.

to the regional and provincial economy by generating jobs, income and business opportunities.

Having access to a large consumer base in the major metropolitan centers in Ontario also benefits business activity in the Greenbelt region, as consumers (as well as producers in the supply chain) can use the Greenbelt's resources and output for their own activities. Such locational advantages are seen in increased land area devoted to Christmas tree production over time (27% increase in acreage from 2011 to 2016); additionally, the share of provincial activity attributed to the Greenbelt has also grown. For instance, 17% of Ontario's ponies and horses reside in the Greenbelt and 45.6% of the province's nursery crop acreage is located in the Greenbelt.[vii]

3. Approach and Methodology

3.1. Geospatial Analysis

3.2. Economic Activity in the Greenbelt

3.3. Input-Output Modelling Methodology Overview

3.1. Geospatial Analysis

The Greenbelt spans across several census divisions in Ontario's GGH, and covers over two million acres of protected land and coastal wetlands in the region. As the Greenbelt boundaries do not align with Statistics Canada's regional boundaries, we use Geographic Information System ("GIS") tools to conduct detailed geospatial analysis of areas that intersect with Ontario's Greenbelt to better understand the regional economic impact.

Greenbelt boundary files are obtained from Ontario GeoHub[8], whereas the latest Intercensal Census Subdivision Digital Boundary files for 2019 are obtained from Statistics Canada. GIS tools are used to overlay Greenbelt boundaries over in the GGH region to identify census divisions ("CD"s) and CSDs that overlap with the Greenbelt.

A list of census divisions which intersect with Ontario's Greenbelt is provided below:

- ► Bruce County
- ► Dufferin County
- ► Durham Region
- ► Grey County
- ► Halton Region
- ► Hamilton City
- ► Kawartha Lakes
- ► Niagara Region

- ► Northumberland County
- ► Peel Region
- ► Peterborough
- ► Simcoe County
- ► Waterloo Region
- ► Wellington County
- ► York Region

Spatial Overlay Analysis

Two levels of geography are considered for this analysis: CDs, and CSDs. CSDs define municipalities and municipal equivalent areas, while CDs are defined as a group of neighbouring municipalities joined together for regional planning and service management purposes (also referred to as counties).[9]

As Greenbelt protected areas do not constitute a large proportion of land mass in several CDs in the GGH, a more granular geospatial analysis is conducted at the CSD level to identify smaller geographic areas where economic activity may be directly or indirectly supported by Ontario's Greenbelt.

An analysis of regional area coverage is performed to understand the extent of overlap between the Greenbelt boundaries and CSD boundaries. Since all CSDs in the region do not have a significant overlap with the Greenbelt, the analysis focuses on regions where economic activity is sufficiently integrated with the Greenbelt.

For the purposes of this analysis, a minimum of 20% area cover is used as a qualifying criteria to include a CSD in the 'Greenbelt economy'. In addition to this, certain CSDs are included in this list which may not meet the 20% cut-off, as industries in these subdivisions, such as tourism and agriculture, benefit from their proximity to these environmentally protected lands.

A list of CSDs used to represent the 'Greenbelt economy' is provided in **Table 14** in *Appendix A1*. Economic activity by industry is quantified for each selected CSD, as explained further in *Section 3.2*.

3.2. Economic Activity in the Greenbelt

Industries in Greenbelt

The Greenbelt overlaps with several CDs in the GGH region. The economy of the GGH supports activities along all stages of the food systems supply chain, including agricultural food production, food processing and manufacturing, and retail, food service and restaurants.[10] Of these, the Greenbelt accounts for a significant proportion of economic activity in certain sectors. For instance, 53% of Ontario's fruit acreage, and nearly 11% of Ontario's vegetable acreage is in the Greenbelt.[11]

Following detailed industry analysis and stakeholder feedback, a list of industries was developed for this analysis. The detailed list of industries whose operations are supported by the Greenbelt's natural assets is provided in **Table 15** in *Appendix A2*. Economic activity by North American Industry Classification System ("NAICS") codes is mapped to sectors in the Input-Output framework, and economic contribution results are categorised into a set of summary sectors outlined in **Table 4** below.

Of the summary sectors displayed in in **Table 4**, certain activities in agriculture, forestry and fishing; arts, entertainment and recreation; and accommodation and food services are defined as primary sectors. The Greenbelt is expected to directly support economic activity in these sectors by providing necessary inputs for the sectors' operations. These may include (but are not limited to) farmers making use of land in the Greenbelt for agriculture, and tourism operators using the Greenbelt's natural assets for guided tours and other tourism related activities.

Additionally, certain activities in food manufacturing, trade, and transportation are categorised as secondary sectors for the purposes of this analysis. These sectors include industries in the region that may indirectly depend on the Greenbelt for their operations. Secondary sectors are expected to source their raw materials and other inputs from primary sector outputs, which can include activities such as food manufacturers sourcing the Greenbelt's agricultural products for their operations, and other related activities.

Given that the secondary sectors depend on primary sectors identified above, contributions in secondary sectors are adjusted based on intermediate and industry supply chain linkages between these sectors. Specifically, the analysis discounts secondary sector contributions to the extent that these sectors source goods and services produced by primary sectors in the Greenbelt. This helps reduce the risk of overstating the economic contributions associated with secondary sectors that may be driven by supplier activities in the primary sector, as those activities are captured within the primary sector contributions. However, despite these adjustments, we advise that primary and secondary sectors are evaluated separately to avoid double counting due to other unobservable supply chain linkages between these sectors.

Table 4. Economic Impact Sectors

Summary Sector	Sectors included
Agriculture, forestry and fishing	Crop and animal production; forestry and logging; fishing, hunting and trapping; support activities for agriculture and forestry
Manufacturing, trade and transportation	Food manufacturing; wholesale trade; retail trade; transportation and warehousing
Arts, entertainment and recreation	Arts, entertainment and recreation ;Travel arrangement and reservation services
Accommodation and food services	Accommodation and food services

Sources: Statistics Canada Input-Output Tables, stakeholder consultations, EY analysis.

Output by Industry

Since data relating to direct output by industry is not available at detailed geographies like CSDs, we employ a widely used technique to estimate regional economic activity. This involves the use of provincial labour productivity by industry as well as provincial and regional labour market information. An important consideration in this methodology is that the provincial economic structure for each sector is assumed to be representative of those sectors at sub-provincial regions and economies, which is suitable for the GGH as it generates approximately two-thirds of Ontario's total Gross Domestic Product ("GDP").[12]

Ontario's GDP by industry and employment data from the Statistics Canada 2016 Census are used to estimate GDP by industry for each CSD in focus. Statistics Canada's Input-Output ratios are then used to estimate the associated direct spending by industry for each region. The direct spending is an estimate of the operational and capital spending of sectors supported by the Greenbelt in each CSD and serves as the key input in the regional economic contribution estimation.

Business Locations

Further analysis relating to business and industry locations and their overlap with the Greenbelt allows for a more granular representation of the potential economic contribution of the Greenbelt to the regional economy.

Figure *2* describes the proportion of business establishments located within (and outside) the Greenbelt in the Durham region where the geographic area coverage by the Greenbelt for all CSDs is above the 20% threshold. Geospatial business registries data for municipalities is used to understand the distribution of business establishments within (and outside) the Greenbelt. The figure summarizes this analysis for the region of Durham where wide variation is observed across CSDs in terms of the degree of overlap between municipal boundaries and the Greenbelt.

Figure 2. Business Establishments, Durham Region
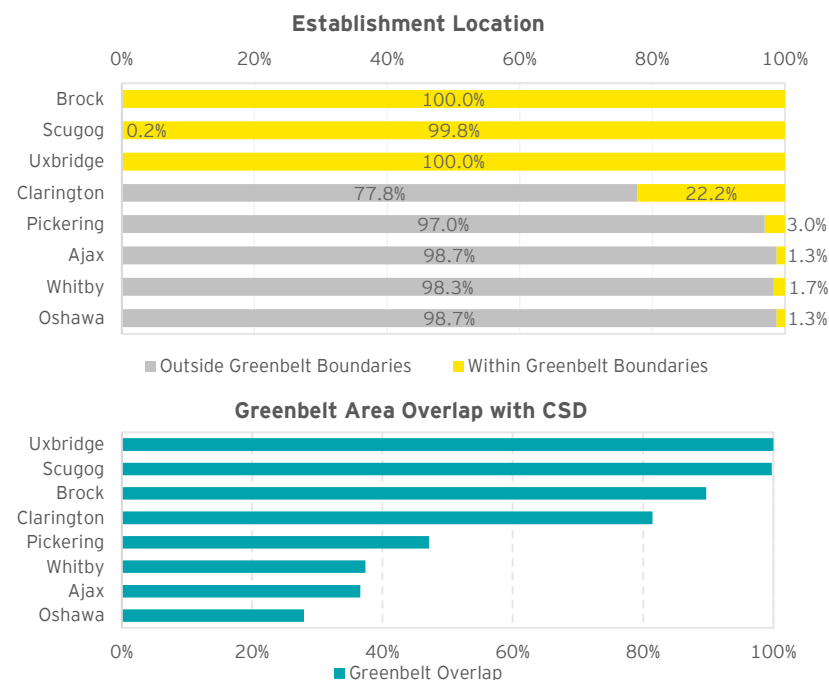
Sources: Regional Municipality of Durham, Planning and Economic Development Department, EY analysis.

As displayed in **Figure 2**, the majority of business establishments are located outside the Greenbelt regions in certain CSDs in Durham, specifically those with less than 50% area overlap. Hence, economic contributions supported by the Greenbelt could potentially be overestimated if it is assumed that the entire economic activity in those CSDs is associated with the Greenbelt's natural assets. However, while certain types of activity may depend on an establishment's physical presence in the Greenbelt, linkages in the supply chain may extend the

Greenbelt's economic contribution beyond its physical boundaries. Some businesses located outside the Greenbelt may still depend on its natural resources for their operations, and therefore, their economic contributions are supported by the Greenbelt. This includes businesses such as food manufacturing or restaurants located outside the Greenbelt who source local produce from Greenbelt farms.

This report aims to account for the contributions of such sectors as they relate to the Greenbelt by considering the following assumptions in the regional economic contribution assessment approach:

► For CSDs with 50% or greater area overlap with the Greenbelt, all direct spending in primary sectors under study is included in the contribution assessment. For secondary sectors, the extent of economic activity that is included in the analysis is informed and adjusted by the area overlap with Greenbelt boundaries, as well as the extent of their dependence on primary sectors in the Greenbelt;

► For CSDs with greater than 20% and less that 50% area overlap with the Greenbelt, direct spending is limited to the primary sectors, which are more likely to directly benefit from their proximity to the Greenbelt due to supply chain linkages.

► CSDs with less than 20% area overlap with the Greenbelt are not considered for this analysis.

Upon completion of the geospatial analysis and estimation of regional economic activity supported by the Greenbelt assets, direct spending by industry is mapped to the Input-Output model sectors detailed in **Table 4**, and regional and provincial economic contributions are estimated as described in *Section 3.3* below.

3.3. Input-Output Modelling Methodology Overview

To assess the economic contribution from activities supported by the Greenbelt's natural assets, EY performed an economic contribution assessment ("ECA") using inputs from Statistics Canada, Government of Ontario, and EY's proprietary economic modelling tools, which are founded on the principles of the Input-Output ("I-O") model.

Economic contributions associated with activities supported by the Greenbelt's natural assets are captured through three distinct channels: direct, indirect, and induced contributions. These contributions individually and collectively represent how these economic activities ripple throughout the regional economy. Further detail regarding the methodology is provided in *Appendix A.3*.

Overview of the I-O Economic Framework

A static I-O model has been used to assess the economic contribution of Ontario's Greenbelt. The contributions are expressed in terms of the following economic indicators:

► **Gross Output:** The total economic value of goods delivered, and services rendered within a particular area;

► **GDP:** GDP, or value added, is a measure of the value of all final goods and services produced in a specific region;

► **Wages or labour income:** A component of the local value-added that measures total employee compensation (value of wages and benefits) and proprietor income; and

► **Full-time equivalent employment ("FTEs"):** This refers to the total number of employee jobs that are converted to full-time equivalence based on the average full-time hours worked.

Regional and Provincial Economic Contributions

To estimate the total economic contributions of activities supported by the Greenbelt, Statistics Canada's most recent economic multipliers from 2015 are used. These multipliers reflect how the interdependency among all industry sectors in the economy is tracked. Specifically, each of these multipliers is a number that describes the size of the total economic contributions for a given level of spending.

To develop custom regional economic multipliers for the CDs in and around Ontario's Greenbelt, data and information on industry concentrations, employment levels, and other microeconomic data is used from each CD that reflect its local economy. The economic multipliers developed using this methodology provide a more granular representation of how activities associated with the Greenbelt's natural assets contribute to both the Greenbelt region and the province of Ontario.

The regional contribution model is applied to all CDs in consideration for this analysis, and custom regional multipliers are developed for each CD to accurately estimate the regional contribution of economic activities supported by the Greenbelt's natural assets.

4. Economic Contributions from Greenbelt Sectors Operations

4.1. Summary of Economic Contribution Results

Economic contributions supported by the Greenbelt have been estimated for both the regional economy as well as for the Province of Ontario, and the results are presented for both geographic levels.

In particular, the results from the analysis are categorised into primary and secondary sector contributions. The Greenbelt directly supports economic activity in certain primary sectors in the region, for instance by providing farmland for agriculture. Additionally, primary sector activities also include the tourism and hospitality industries, where operations of RV parks and camps, lodges and hotels, as well recreational enterprises such as skiing facilities and golf courses are located in (and around) the protected countryside. Operations in these sectors are more likely to locate within the Greenbelt, or are sufficiently integrated with these protected lands. These primary sectors consist of:

iii.   agriculture, forestry and fishing; and
iv.   tourism and hospitality related industries, such as arts, entertainment and recreation, and accommodation and food services.

Secondary sectors, on the other hand, include industries in the region that may indirectly depend on the Greenbelt for their operations as some of their supply chain activities rely on the primary sectors in the Greenbelt. For instance, secondary sectors may source their raw materials and other inputs from primary sector outputs, or may be related to the primary sectors' activity further along the industry's value chain. This can include, for example, processing of raw materials such as milling of grains and oilseeds and activities of other primary and secondary processors in the food manufacturing industry, the warehousing and storage of farm products, food wholesalers and retailers, and sightseeing transportation. Secondary sectors considered in this analysis include:

iv.   food manufacturing;
v.   wholesale and retail trade; and
vi.   transportation and warehousing industries.

It is important to note that the analysis is restricted to certain relevant sub-sectors within the primary and secondary sectors identified above. Further details regarding specific industries and activities included in this analysis are provided in **Table** *15* in *Appendix A2*.

Greenbelt Economic Contributions in Ontario

Economic contributions supported by the Greenbelt are also estimated for the provincial economy.

Results show that on an annual basis, activities in the Greenbelt's primary sectors support an estimated total of **CAD 19.6 billion** in gross output, **CAD 9.6 billion** in GDP, **CAD 6.1 billion** in labour income, and sustain approximately **177,700 FTEs** at direct, indirect and induced levels in the Province of Ontario. Economic contribution results in Ontario are displayed for each primary sector in *Table 5*.

Accommodation and food services sector supports an estimated total contribution of **CAD 12.2 billion** in gross output, **CAD 5.8 billion** in GDP, **CAD 3.8 billion** in labour income, and sustains approximately **121,400 FTEs**. The arts, entertainment and recreation sector contributes **CAD 4.6 billion** in gross output, **CAD 2.5 billion** in GDP, **CAD 1.6 billion** in wages, and sustains approximately **40,100 FTEs**. Finally, the agriculture, forestry and fishing sector contributes **CAD 2.8 billion** in gross output, **CAD 1.3 billion** in GDP, **CAD 649 million** in labour income, and sustains approximately **16,200 FTEs.**

Table 5. Province-Wide Contributions from Primary Sectors

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Agriculture, Forestry & Fishing				
Direct	1,614.2	697.9	313.6	9,581
Indirect	878.8	427.1	238.7	4,617
Induced	348.3	205.3	97.0	2,012
Total	2,841.4	1,330.3	649.4	16,210
Arts, Entertainment & Recreation				
Direct	2,456.2	1,276.5	950.0	26,126
Indirect	1,228.0	680.5	436.5	8,812
Induced	895.9	529.7	249.7	5,184
Total	4,580.0	2,486.7	1,636.2	40,121
Accommodation & Food Services				
Direct	6,573.5	2,912.1	2,294.2	91,194
Indirect	3,391.9	1,578.3	917.7	17,327
Induced	2,221.9	1,307.5	617.1	12,858
Total	12,187.3	5,797.9	3,829.0	121,380
Grand Total				
Direct	10,643.9	4,886.5	3,557.8	126,901
Indirect	5,498.7	2,686.0	1,592.9	30,755
Induced	3,466.1	2,042.5	963.8	20,055
Total	19,608.7	9,615.0	6,114.6	177,711

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Economic contributions supported by activities in the identified secondary sectors are displayed in *Table 6*. Secondary sector activities supported by the Greenbelt contribute an estimated total of **CAD 7.7 billion** in gross output, **CAD 3.3 billion** in GDP, **CAD 2.1 billion** in labour income, and sustain approximately **34,300 FTEs** in the Province of Ontario. Results are further broken down by direct, indirect and induced contributions for secondary sectors in *Table 6*.

Table 6. Province-Wide Contributions from Secondary Sectors

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Food Manufacturing, Trade & Transportation				
Direct	4,565.4	1,871.3	1,072.0	16,198
Indirect	2,104.0	780.5	663.4	11,252
Induced	1,056.6	624.2	318.7	6,850
Total	7,726.0	3,276.0	2,054.2	34,300

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Greenbelt Economic Contributions to the Region

By using custom regional multipliers, the economic contributions supported by the Greenbelt have been estimated for all CSDs in consideration. The 'Greenbelt region' is defined as the sum of all lower tier municipalities or CSDs that meet the qualifying criteria detailed in *Section 3.1* (please refer to *Appendix A1* for a detailed list of CSDs included in this analysis). These results are estimated economic contributions that remain in the Greenbelt region, and do not include the leakages of activity to the rest of the province. Regional economic contributions are therefore lower than provincial contributions detailed above. Provincial contributions include the regional contributions as well as contributions to the rest of the province located outside the Greenbelt region. Total economic contributions supported by the Greenbelt in the region are displayed by sector in *Table 7* and *Table 8* below.

Table 7. Regional Contributions from Primary Sectors

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Agriculture, Forestry & Fishing				
Direct	1,614.2	697.9	313.6	9,581
Indirect	440.3	165.1	96.8	2,359
Induced	114.6	64.0	19.9	593
Total	2,169.2	927.0	430.3	12,534
Arts, Entertainment & Recreation				
Direct	2,456.2	1,276.5	950.0	26,126
Indirect	662.5	378.3	237.6	4,919
Induced	362.1	120.2	69.3	1,514
Total	3,480.7	1,775.1	1,256.9	32,559
Accommodation & Food Services				
Direct	6,573.5	2,912.1	2,294.2	91,194
Indirect	1,798.4	860.4	489.0	8,299
Induced	972.0	333.8	188.7	2,722
Total	9,343.9	4,106.2	2,971.8	102,215
Grand Total				
Direct	10,643.9	4,886.5	3,557.8	126,901
Indirect	2,901.2	1,403.8	823.4	15,577
Induced	1,448.7	518.1	277.9	4,829
Total	14,993.9	6,808.3	4,659.1	147,308

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 14.9 billion** in gross output, **CAD 6.8 billion** in GDP, **CAD 4.7 billion** in labour income, and sustain approximately **147,300 FTEs** at direct, indirect, and induced levels in the regional economy. Economic contribution results are displayed for each primary sector in *Table 7*.

Accommodation and food services sector is the largest contributor to the regional economy and supports an annual economic contribution of **CAD 9.3 billion** in gross output, **CAD 4.1 billion** in GDP, **CAD 2.9 billion** in labour income, and sustains approximately **102,200 FTEs**. It is followed by the arts, entertainment and recreation sector, which contributes an estimated **CAD 3.5 billion** in gross output, **CAD 1.8 billion** in GDP, **CAD 1.3 billion** in wages, and sustains approximately **32,600 FTEs**. Finally, the agriculture, forestry and fishing sector contributes **CAD 2.2 billion** in gross output, **CAD 927 million** in GDP, **CAD 430 million** in labour income, and sustains approximately **12,500 FTEs**. The difference in the level of economic contributions across the sectors mainly depend on the size of the sectors and the level of output and spending associated with each sector in the regional economy.

The regional economic contribution of activities in the identified secondary sectors supported by the Greenbelt are provided in *Table 8*. Secondary sectors contribute an estimated total of **CAD 5.8 billion** in gross output, **CAD 2.7 billion** in GDP, **CAD 1.5 billion** in labour income, and sustain approximately **24,500 FTEs** at direct, indirect and induced levels in the regional economy. Results are further broken down by direct, indirect and induced contributions for secondary sectors in *Table 8*.

Table 8. Regional Contributions from Secondary Sectors

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Food Manufacturing, Trade & Transportation				
Direct	4,565.4	1,871.3	1,072.0	16,198
Indirect	964.1	380.8	317.6	5,737
Induced	353.1	439.9	79.1	2,571
Total	5,882.6	2,692.0	1,468.7	24,506

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Possibility grows here.

Government Revenue Contributions

In addition to economic contributions by sector, this analysis also estimates government revenue generated through primary and secondary sector activities for various levels of government. Results suggest that on an aggregate basis, primary sector activities contribute an estimated total of **CAD 2.98 billion** in total government revenue. Additionally, secondary sector activities in the Greenbelt contribute an estimated total of **CAD 1.35 billion** in total government revenues. Results are broken down for each level of government in *Table 9*.

Table 9. Tax Contributions from Primary and Secondary Sectors

Government Revenue Contributions ($mn)

	Primary Sectors	Secondary Sectors
Federal		
Taxes on Products	191.2	50.3
Taxes on Production	5.3	1.3
Corporate Income Tax	304.0	153.0
Personal Income Tax	1,074.0	569.9
Provincial		
Taxes on Products	338.5	89.1
Taxes on Production	105.8	26.9
Corporate Income Tax	233.1	153.0
Personal Income Tax	361.6	216.3
Local		
Taxes on Products	5.4	1.4
Taxes on Production	356.4	90.5
Total	2,975.1	1,351.9

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Possibility grows here.

4.2. Economic Contribution Results by Sector and Region

The Greenbelt's regional economy is defined as the sum of CSDs or lower tier municipalities listed in **Table 14** in *Appendix A1* in this report. These CSDs are mapped to their corresponding counties, or CDs. For the purposes of this analysis, primary sectors refer to industries and activities that are more likely to locate within the Greenbelt, or are sufficiently integrated with these protected lands. On the other hand,

secondary sectors include industries in the region that may indirectly depend on the Greenbelt for their operations as some of their supply chain activities rely on the primary sectors in the Greenbelt.

Table 10 and *Table 11* display contributions by CD from primary and secondary sectors in the Greenbelt to the Province of Ontario. As detailed in *Section 3.2*, economic activity for secondary sectors is only considered for CSDs that have 50% or greater area overlap with the Greenbelt, hence *Table 11* displays the subset of CDs that meet these criteria.

Table 10. Province-Wide Contributions from Primary Sectors

Economic Contribution	Primary Sectors			
	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Census Division				
Bruce	44.5	22.0	14.1	406
Dufferin	350.3	170.5	107.6	3,159
Durham	4,012.9	1,967.2	1,257.3	36,595
Grey	194.6	94.7	56.9	1,603
Halton	2,095.2	1,030.9	662.6	19,279
Hamilton	3,511.0	1,713.6	1,084.7	31,689
Niagara	2,771.1	1,334.6	814.0	23,794
Northumberland	138.3	66.8	40.5	1,172
Peel	437.5	214.8	134.7	3,871
Peterborough	53.5	26.1	15.5	444
Simcoe	167.8	81.1	48.3	1,374
Wellington	180.7	88.7	53.4	1,461
York	5,651.3	2,803.9	1,824.8	52,864
Greenbelt Total	19,608.7	9,615.0	6,114.6	177,711

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 11. Province-Wide Contributions from Secondary Sectors

Economic Contribution	Secondary Sectors			
	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Census Division				
Dufferin	207.3	91.1	56.7	958
Durham	462.9	212.9	131.8	2,308
Halton	1,556.0	680.3	422.3	7,030
Hamilton	3,311.9	1,335.0	849.8	14,126
Niagara	558.4	247.1	152.5	2,523
Northumberland	69.0	27.9	17.9	307
Peel	393.0	165.4	103.6	1,708
York	1,167.5	516.3	319.6	5,341
Greenbelt Total	7,726.0	3,276.0	2,054.2	34,300

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Possibility grows here.

In particular:

► For CSDs with 50% or greater area overlap with the Greenbelt, all direct spending in primary sectors under study is included in the contribution assessment. For secondary sectors, the area overlap is used to inform the extent of economic activity that is included in the analysis.

► Additionally, for CSDs with greater than 20% and less that 50% area overlap with the Greenbelt, direct spending is limited to the primary sectors, which are more likely to directly benefit from their proximity to the Greenbelt due to supply chain linkages.

Aggregate regional contributions from primary and secondary sectors in each CD are provided in *Table 12* and *Table 13,* respectively. Contributions for each county are further broken down into direct, indirect and induced contributions in **Appendix A.4**.

Table 12. Regional Contributions from Primary Sectors

Economic Contribution	Primary Sectors			
	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Census Division				
Bruce	33.1	15.0	10.5	329
Dufferin	266.3	116.6	80.0	2,614
Durham	3,235.9	1,481.1	1,019.9	31,397
Grey	133.1	59.9	36.6	1,224
Halton	1,584.1	720.4	502.8	15,789
Hamilton	2,606.6	1,151.5	795.2	25,744
Niagara	1,979.7	888.9	562.1	18,763
Northumberland	103.8	46.3	28.9	956
Peel	347.9	157.4	106.6	3,235
Peterborough	40.8	18.0	11.5	365
Simcoe	124.8	56.5	34.0	1,108
Wellington	146.8	69.2	39.7	1,264
York	4,391.1	2,027.5	1,431.2	44,521
Greenbelt Total	14,993.9	6,808.3	4,659.1	147,308

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 13. Regional Contributions from Secondary Sectors

Economic Contribution	Secondary Sectors			
	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Census Division				
Dufferin	158.6	75.7	40.8	700
Durham	373.3	168.8	104.9	1,847
Halton	1,177.8	573.7	305.0	4,967
Hamilton	2,500.8	1,117.1	584.8	9,849
Niagara	407.4	205.4	105.1	1,810
Northumberland	53.3	23.1	12.4	234
Peel	316.7	131.3	79.4	1,279
York	894.6	397.0	236.3	3,820
Greenbelt Total	5,882.6	2,692.0	1,468.7	24,506

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Possibility grows here.

Appendices

A.1. Census Subdivisions

Table 14. Mapping of Census Subdivisions to Census Divisions

	CD	CSD	Overlap with Greenbelt
1	Bruce	Northern Bruce Peninsula	< 50%
2	Dufferin	Mono	< 50%
3	Dufferin	Mulmur	< 50%
4	Dufferin	Orangeville	> 50%
5	Durham	Brock	> 50%
6	Durham	Uxbridge	> 50%
7	Durham	Scugog	> 50%
8	Durham	Clarington	> 50%
9	Durham	Oshawa	< 50%
10	Durham	Whitby	< 50%
11	Durham	Ajax	< 50%
12	Durham	Pickering	< 50%
13	Grey	Georgian Bluffs	< 50%
14	Grey	The Blue Mountains	< 50%
15	Halton	Halton Hills	> 50%
16	Halton	Milton	> 50%
17	Halton	Burlington	> 50%
18	Hamilton	Hamilton	> 50%
19	Niagara	Lincoln	> 50%
20	Niagara	St. Catharines	< 50%
21	Niagara	Pelham	> 50%
22	Niagara	Niagara-on-the-Lake	> 50%
23	Niagara	Thorold	< 50%
24	Niagara	Grimsby	> 50%
25	Northumberland	Alnwick/Haldimand	< 50%
26	Northumberland	Hamilton	< 50%
27	Peel	Caledon	> 50%
28	Peterborough	Cavan Monaghan	< 50%
29	Simcoe	Clearview	< 50%
30	Wellington	Erin	< 50%
31	Wellington	Puslinch	< 50%
32	York	Richmond Hill	> 50%
33	York	Markham	< 50%
34	York	Vaughan	< 50%
35	York	Georgina	< 50%
36	York	East Gwillimbury	> 50%
37	York	King	> 50%
38	York	Aurora	> 50%
39	York	Whitchurch-Stouffville	> 50%

A.2. Industries

Table 15. Detailed Industries Related to Ontario's Greenbelt

NAICS	Industry Description	Detailed Industries Included
111	Crop production	Oilseed and grain farming; Vegetable and melon farming; Fruit and tree nut farming; Greenhouse, nursery and floriculture production; Other crop farming
112	Animal production and aquaculture	Cattle ranching and farming; Hog and pig farming; Poultry and egg production; Sheep and goat farming; Aquaculture; Other animal production
113	Forestry and logging	Timber tract operations; Forest nurseries and gathering of forest products; Logging
114	Fishing, hunting and trapping	Fishing; Hunting and trapping
115	Support activities for agriculture and forestry	Support activities for crop production; Support activities for animal production; Support activities for forestry
311	Food manufacturing	Animal food manufacturing; Grain and oilseed milling; Sugar and confectionary product manufacturing; Fruit and vegetable preserving and speciality food manufacturing; Dairy product manufacturing; Meat product manufacturing; Seafood product preparation and packaging; Bakeries and tortilla manufacturing; Other food manufacturing
312	Beverage and tobacco product manufacturing	Beverage manufacturing; Tobacco manufacturing
33311	Agricultural implement manufacturing	Agricultural implement manufacturing
411	Farm product merchant wholesalers	Farm product merchant wholesalers
413	Food, beverage and tobacco merchant wholesalers	Food merchant wholesalers; Beverage merchant wholesalers; Cigarette and tobacco product merchant wholesalers
418	Miscellaneous merchant wholesalers	Agricultural supplies merchant wholesalers
444	Building material and garden equipment and supplies dealers	Lawn and garden equipment and supplies stores
5615	Travel arrangement and reservation services	Travel arrangement and reservation services
711	Performing arts, spectator sports and related industries	Performing arts companies; Spectator sports; Promoters (presenters) of performing arts, sports and similar events; Agents and managers for artists, athletes, entertainers and other public figures; Independent artists, writers and performers
712	Heritage institutions	Heritage institutions
713	Amusement, gambling and recreation industries	Golf courses and country clubs; Skiing facilities; Marinas; Fitness and recreational sports centres; Other amusement and recreation industries; Sports clubs, teams and leagues performing before a non-paying audience; Other sport facilities; All other amusement and recreation industries
721	Accommodation services	Traveller accomodation; Recreational vehicle (RV) parks and recreational camps
722	Food services and drinking places	Special food services; Drinking places (alcoholic beverages); Full-service restaurants and limited-service eating places
487	Scenic and sightseeing transportation	Scenic and sightseeing transportation, land; Scenic and sightseeing transportation, water; Scenic and sightseeing transportation, other
445	Food and beverage stores	Specialty food stores
493	Warehousing and storage	Refrigerated warehousing and storage; Farm product warehousing and storage

A.3. The Input-Output Modelling Methodology

To assess the economic contribution from activities supported by the Greenbelt's natural assets, EY performed an ECA using inputs from Statistics Canada, Government of Ontario, and EY's proprietary economic modelling tools, which are founded on the principles of the I-O model.

Direct, Indirect, and Induced Contributions

Economic contributions associated with activities supported by the Greenbelt's natural assets are captured through three distinct channels: direct, indirect, and induced contributions. These contributions individually and collectively represent how these economic activities ripple throughout the regional economy. More specifically, we define each of these contributions as follows:

► **Direct contributions** include the economic contributions supported directly by the capital and operational spending of sectors supported by the Greenbelt. These include, for example, spending on capital equipment or employee wages and benefits;

► **Indirect contributions** include the economic contributions from business activities supporting the operation of direct economic activities. The indirect contributions include, among other things, the contributions from suppliers' spending when purchasing goods and services from other suppliers. This could encompass, for example, the costs of subcontractors hired by food processors in the region on goods and services such as equipment and labour; and

► **Induced contributions** include the economic contributions that occur when benefited employees from the stimulated direct and indirect economic activities associated with sectors in the Greenbelt spend their wages and salaries on consumer goods and services. The induced activities are assumed to be primarily in service or

consumer-related industries, such as retail, transportation, accommodation, food and beverage services, and banking and finance. Consumer spending circulates in the economy and, in turn, results in additional jobs and salaries that are also considered part of the induced contributions. Induced contributions can be estimated based on any number of rounds or iterations of additional income resulting in increased spending, economic activity, and further additional income.

Figure 3. Direct, Indirect and Induced Economic Impacts
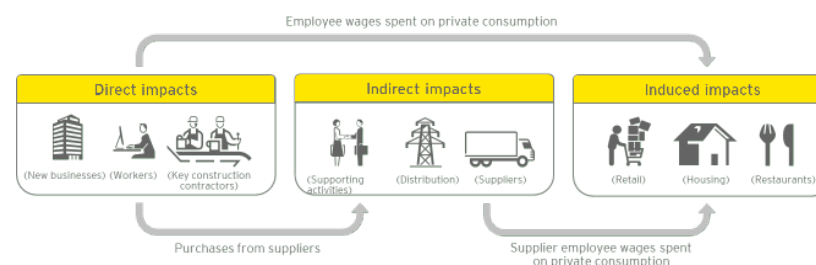
Sources: EY illustration.

The I-O Economic Framework

A static I-O model has been used to assess the economic contribution of Ontario's Greenbelt. The I-O model was selected based on its flexibility in providing a reliable method of assessing regional contributions. Fundamentally, the I-O model translates direct contributions into indirect and induced economic contributions, which collectively define the total economic contributions from economic activity in Greenbelt regions. The contributions are expressed in terms of the following economic indicators:

► **Gross Output:** The total economic value of new goods delivered, and services rendered within a particular area;

► **Gross Domestic Product ("GDP"):** GDP, or local value added, is a measure of the value of all final goods and services produced in a specific region;

► **Wages or labour income:** A component of the local value-added that measures total employee compensation (value of wages and benefits) and proprietor income;

► **Full-time equivalent employment ("Person-Year FTEs"):** This refers to the total number of employee jobs that are converted to full-time equivalence based on the average full-time hours worked; and

► **Government revenue:** This refers to the total revenues collected by various levels of government through taxes imposed on economic activity. These include personal and corporate income taxes, taxes on products, and taxes on production.

Estimation of Regional Economic Contributions

To estimate the total economic contributions of activities supported by the Greenbelt's natural assets, Statistics Canada's most recent economic multipliers from 2015 are used. These multipliers reflect how the interdependency among all industry sectors in the economy is tracked. Specifically, each of these multipliers is a number that describes the size of the total economic contributions for a given level of spending. Statistics Canada's I-O tables are used by both public and private sector organizations and other researcher institutes and is based on a widely accepted methodology for estimating economic contributions.

To develop regional economic multipliers for the CDs in and around Ontario's Greenbelt, data and information on industry concentrations, employment levels, and other microeconomic data is used from each CD that reflect its local economy. The economic multipliers developed using

this methodology provide a more granular representation of how activities associated with the Greenbelt's natural assets contribute to both the Greenbelt region and the province.

The regional contribution model is applied to all CDs in consideration for this analysis, and custom regional multipliers are developed for each CD to accurately estimate the regional contribution of economic activities supported by the Greenbelt's natural assets.

Figure 4. Illustration of Regional Impact
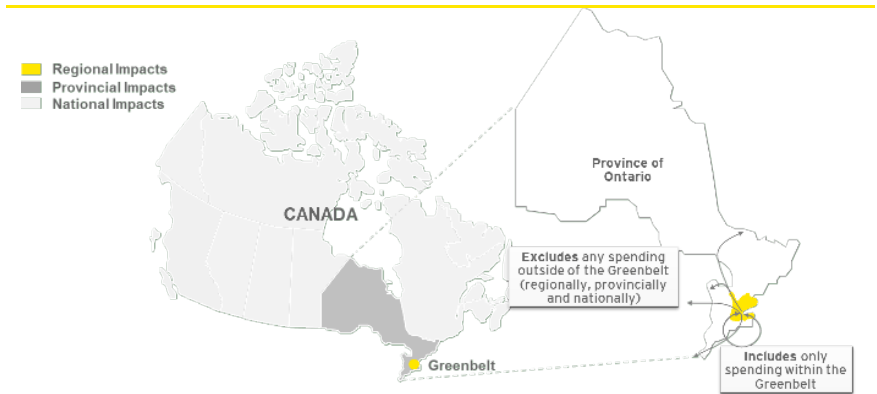
Sources: EY illustration.

The Input-Output Model: Assumptions and Restrictions

The following section outlines the assumptions and restrictions associated with the I-O model used to perform the economic impact analysis in this Report. The I-O model is subject to limitations both in concept and implementation. Like any economic model, the I-O model is conceptually an abstraction that attempts to be complex enough to accurately capture and estimate the most significant impacts to the real-life economy caused by economic activities, yet simple enough to be analytically and intuitively meaningful.

An I-O model reflects the observed interdependency between all sectors of the economy. For Canada, Statistics Canada reports for the 236 industrial sectors in the economy: (1) how each sector relies on the other 235 sectors for inputs to their production; and (2) how each sector supplies its products and services to each of the remaining 235 sectors. While an I-O model provides a consistent and innovative way of measuring the economic effects of an economic activity, one should be aware of the assumptions and limitations imposed on the model's underlying approach. Some of these assumptions include:

► The relationship between industry inputs and outputs is linear and fixed, meaning that a change in demand for the outputs of any industry will result in a proportional change in production;

► The model assumed constant returns to scale, and cannot account for economies/diseconomies of scale or structural changes in production technologies, an assumption that does not necessarily hold in the actual economy;

► Prices are fixed in the model; thus, the model is unable to account for elasticities, or more formally, how one economic variable change in response to another;

► I-O models are static, and therefore do not consider the amount of time required for changes to happen. Changing the timeframe would not affect the magnitude of the estimates;

► There are no capacity constraints, and all industries are operating at full capacity. This implies that an increase in output results in an increase in demand for labour (rather than simply re-deploying existing labour). It also implies that there is no displacement that may occur in existing industries as new projects complete;

► I-O models assume that the technology and resource mix (ratios for inputs and production) is the same for all firms within each industry, i.e., the 236 industry categories reported in Statistics Canada's input-output table. As such, our analysis describes industry average effects;

► The model assumes that the structure of the economy remains unchanged, and any structural changes in the economy since 2015 will therefore lead to changes to the multipliers, which could be implemented once Statistics Canada release updated input-output tables. As such, the further the year of analysis is away from the year of the input-output tables used, the greater the uncertainties;

► The model does not consider the economic impacts or opportunity costs associated with using resources elsewhere. In the case of this analysis for example, funds used to purchase lab equipment may be allocated to other areas. Using these funds for alternative uses would generate their own economic impacts, which could potentially be larger or smaller. However, the model will not be able to capture this difference.

► Results from the I-O model should not be interpreted as causal impacts, that is, one should not take the economic impacts presented in this report at verbatim. We cannot say with certainty that X dollars of capital or operational spending will produce X number of FTEs or have an X amount of impact on GDP; and

► The model does not consider substitutions amongst inputs, and that each industry in the model is regarded as having a single production process.

As per the assumptions above, the structure and limitations of I-O models lend themselves to measuring the impacts of projects that are shorter term in nature; generally, they are used to look at shocks to the economy. For long term analysis, time series and general equilibrium models are more appropriate.

A.4. Detailed Economic Contribution Results

Regional economic contributions are detailed in this section for each CD included in the study and are further broken down for all qualifying CSDs within each CD. *Figure 5* displays counties in the GGH region. CDs or counties in which CSDs included in the analysis are:

► Bruce County
► Dufferin County
► Durham Region
► Grey County
► Halton Region
► Hamilton
► Niagara Region
► Northumberland County
► Peel Region
► Peterborough County
► Simcoe County
► Wellington County
► York Region

Regional results for these counties are summarised below.

Figure 5. Overview of Greenbelt Overlap with Census Divisions
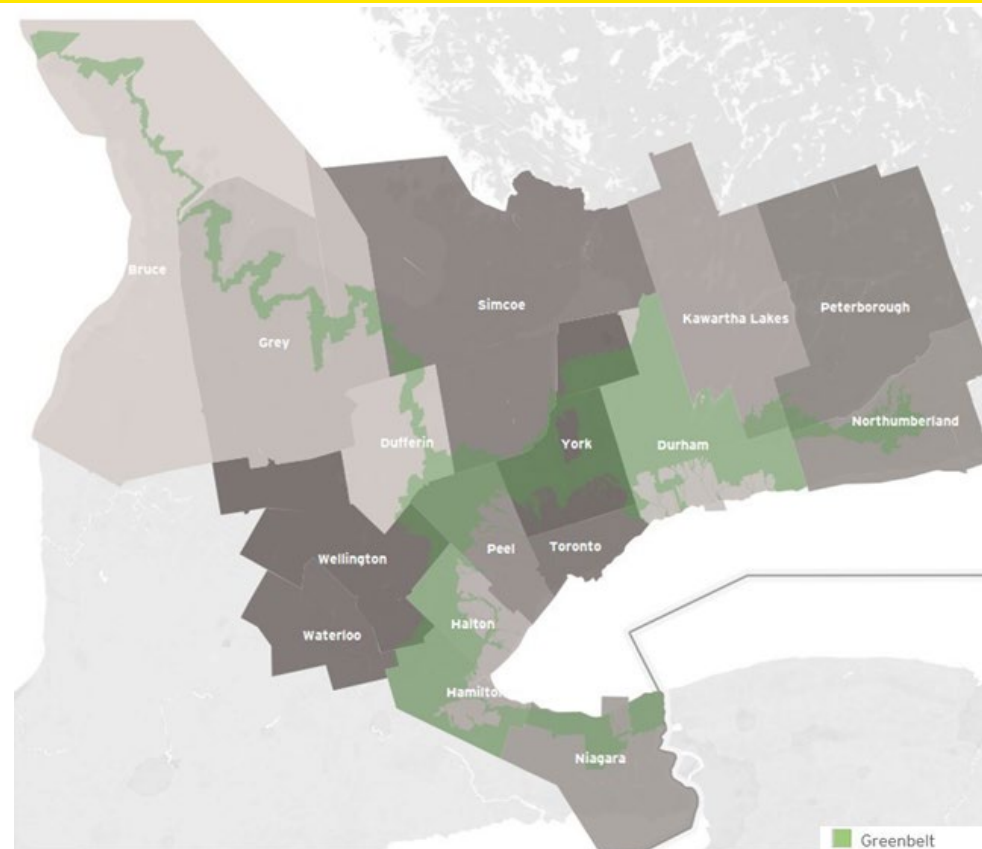
Sources: Ontario GeoHub, Statistics Canda, EY analysis.

Bruce County

Located in Southwestern Ontario, Bruce County forms part of the GGH and overlaps with the Greenbelt. With the analysis restricted to the CSD of Northern Bruce Peninsula in Bruce County, results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 33.1 million** in gross output, CAD **15 million in GDP**, CAD **10.5 million** in labour income, and sustain approximately **330 FTEs** at direct, indirect, and induced levels in the regional economy. Economic contribution results are displayed for all primary sectors in *Table 16* below. Province-wide contributions for all primary sectors are provided in *Table 18*.

Since the Greenbelt has a relatively small degree of overlap with Northern Bruce Peninsula, the analysis is limited to primary sectors, which are more likely to directly benefit from their proximity to the Greenbelt due to supply chain linkages.

Table 16. Regional Contributions from Primary Sectors in Bruce County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	24.0	11.0	8.1	284
Indirect	5.9	3.0	1.9	38
Induced	3.2	1.0	0.6	7
Total	33.1	15.0	10.5	329

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Additionally, tax contributions from primary sector activities in Bruce County are summarised in *Table 17* below. Results suggest that activities in primary Greenbelt sectors in Bruce County contribute **CAD 10 million** in local, provincial, and federal taxes.

Table 17. Tax Contributions in Bruce County

Government Revenue Contributions ($mn)

	Primary Sectors
Federal	
Taxes on Products	0.5
Taxes on Production	0.0
Corporate Income Tax	1.2
Personal Income Tax	4.2
Provincial	
Taxes on Products	0.8
Taxes on Production	0.2
Corporate Income Tax	0.9
Personal Income Tax	1.4
Local	
Taxes on Products	0.0
Taxes on Production	0.8
Total	10.0

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 18. Province-Wide Contributions from Primary Sectors in Bruce County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Grand Total (Northern Bruce Peninsula)				
Direct	24.0	11.0	8.1	284
Indirect	12.6	6.4	3.9	77
Induced	7.9	4.7	2.2	46
Total	44.5	22.0	14.1	406

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Dufferin County

Several CSDs in Dufferin County have significant overlap with the Greenbelt, including Mono, Mulmur, and Orangeville. On an aggregate level, results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 266.3 million** in gross output, **CAD 116.6 million** in GDP, **CAD 80 million** in labour income, and sustain approximately 2,600 **FTEs** at direct, indirect, and induced levels in the regional economy of Dufferin County. Economic contribution results are broken down by direct, indirect and induced contributions for primary sectors in *Table 19*. Further details regarding regional and province-wide contributions by primary sectors in each CSD in Dufferin County are provided in *Table 22* and *Table 23*.

Table 19. Regional Contributions from Primary Sectors in Dufferin County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	190.2	86.2	61.9	2,250
Indirect	52.7	23.5	13.8	283
Induced	23.4	6.9	4.3	82
Total	266.3	116.6	80.0	2,614

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

The economic contributions of secondary sector activities in Dufferin County are estimated for Orangeville, as it is the only CSD with greater than 50% area overlap with the Greenbelt. Results for regional economic contributions for secondary sectors supported by the Greenbelt are provided in *Table 20*. Secondary sectors contribute an estimated total of **CAD 158.6 million** in gross output, **CAD 75.7 million** in GDP, **CAD**

40.8 million in labour income, and sustain approximately **700 FTEs** at direct, indirect and induced levels in the regional economy. Results are further broken down by direct, indirect and induced contributions for secondary sectors in *Table 20*. Of the 3 CSDs in Dufferin County that meet the 20% area overlap criteria, only Orangeville has an area overlap greater than 50%. Hence, activity from secondary sectors is only considered for Orangeville, as displayed below. Further, province wide contributions from secondary sectors in Dufferin county are displayed in *Table 24*.

Table 20. Regional Contributions from Secondary Sectors in Dufferin County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Orangeville				
Direct	121.4	51.7	30.0	465
Indirect	27.4	10.2	8.7	164
Induced	9.9	13.7	2.1	71
Total	158.6	75.7	40.8	700
Grand Total (Dufferin)				
Direct	121.4	51.7	30.0	465
Indirect	27.4	10.2	8.7	164
Induced	9.9	13.7	2.1	71
Total	158.6	75.7	40.8	700

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Possibility grows here.

Tax contributions from primary and secondary sector activities in Dufferin County are summarised in *Table 21*. Results suggest that activities in primary Greenbelt sectors in Dufferin County contribute **CAD 47.6 million** in local, provincial, and federal taxes. Additionally, activities from secondary sectors in the region contribute a total of **CAD 26.7 million** in total taxes.

Table 21. Tax Contributions in Dufferin County

Government Revenue Contributions ($mn)

	Primary Sectors	Secondary Sectors
Federal		
Taxes on Products	3.4	1.4
Taxes on Production	0.1	0.0
Corporate Income Tax	4.7	2.8
Personal Income Tax	16.1	10.4
Provincial		
Taxes on Products	6.0	2.5
Taxes on Production	1.9	0.8
Corporate Income Tax	3.6	2.2
Personal Income Tax	5.4	4.0
Local		
Taxes on Products	0.1	0.0
Taxes on Production	6.3	2.5
Total	47.6	26.7

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 22. Regional Contributions from Primary Sectors in Dufferin County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Mono				
Direct	40.8	18.2	12.3	444
Indirect	11.6	5.0	2.9	63
Induced	4.6	1.3	0.8	17
Total	57.0	24.5	16.1	525
Mulmur				
Direct	29.4	13.3	8.5	293
Indirect	8.5	3.7	2.2	50
Induced	3.1	0.8	0.6	12
Total	41.0	17.7	11.3	356
Orangeville				
Direct	120.0	54.7	41.1	1,512
Indirect	32.6	14.8	8.7	169
Induced	15.7	4.9	2.9	53
Total	168.3	74.4	52.6	1,734
Grand Total (Dufferin)				
Direct	190.2	86.2	61.9	2,250
Indirect	52.7	23.5	13.8	283
Induced	23.4	6.9	4.3	82
Total	266.3	116.6	80.0	2,614

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 23. Province-Wide Contributions from Primary Sectors in Dufferin County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Mono				
Direct	40.8	18.2	12.3	444
Indirect	21.6	10.5	6.2	120
Induced	12.3	7.2	3.4	71
Total	74.6	36.0	21.9	636
Mulmur				
Direct	29.4	13.3	8.5	293
Indirect	15.7	7.8	4.7	92
Induced	8.6	5.1	2.4	50
Total	53.7	26.2	15.6	435
Orangeville				
Direct	120.0	54.7	41.1	1,512
Indirect	62.1	30.1	17.9	346
Induced	39.9	23.5	11.1	231
Total	222.0	108.3	70.1	2,088
Grand Total (Dufferin)				
Direct	190.2	86.2	61.9	2,250
Indirect	99.3	48.5	28.8	558
Induced	60.8	35.8	16.9	352
Total	350.3	170.5	107.6	3,159

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 24. Province-Wide Contributions from Secondary Sectors in Dufferin County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Orangeville				
Direct	121.4	51.7	30.0	465
Indirect	56.3	21.9	17.8	303
Induced	29.6	17.5	8.8	189
Total	207.3	91.1	56.7	958
Grand Total (Dufferin)				
Direct	121.4	51.7	30.0	465
Indirect	56.3	21.9	17.8	303
Induced	29.6	17.5	8.8	189
Total	207.3	91.1	56.7	958

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Durham Region

All CSDs in the Durham Region have greater than 20% overlap with the Greenbelt. On an aggregate level, results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 3.2 billion** in gross output, **CAD 1.4 billion** in GDP, **CAD 1 billion** in labour income, and sustain approximately 31,400 **FTEs** at direct, indirect, and induced levels in the regional economy of Dufferin County. Economic contribution results are broken down by direct, indirect and induced contributions for primary sectors in *Table 25*. Further details regarding contributions by each CSD in Dufferin County are provided in *Table 28* and *Table 29.*

Table 25. Regional Contributions from Primary Sectors in Durham Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	2,174.0	996.2	731.2	26,134
Indirect	703.7	361.5	213.1	3,952
Induced	358.1	123.5	75.5	1,310
Total	3,235.9	1,481.1	1,019.9	31,397

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

The regional economic contribution of activities in the identified secondary sectors supported by the Greenbelt are provided in *Table 26*. Secondary sectors contribute an estimated total of **CAD 373.3 million** in gross output, **CAD 168.8 million** in GDP, **CAD 104.9 million** in labour income, and sustain approximately **1,800 FTEs** at direct, indirect and induced levels in the regional economy. Of all CSDs in Durham Region that meet the 20% area overlap criteria, only 4 CSDs have an area

Table 26. Regional Contributions from Secondary Sectors in Durham Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Brock				
Direct	19.4	9.3	5.6	97
Indirect	5.7	2.2	2.0	36
Induced	2.5	1.6	0.6	16
Total	27.6	13.1	8.2	149
Clarington				
Direct	140.5	63.9	38.0	625
Indirect	39.4	14.3	13.9	245
Induced	17.0	11.7	4.1	111
Total	196.9	89.9	56.0	980
Scugog				
Direct	64.4	27.3	16.1	268
Indirect	17.0	5.8	5.9	102
Induced	7.1	5.5	1.7	45
Total	88.6	38.6	23.8	415
Uxbridge				
Direct	43.3	19.2	11.5	199
Indirect	11.9	4.3	4.1	72
Induced	5.1	3.7	1.2	32
Total	60.3	27.2	16.9	303
Grand Total (Durham)				
Direct	267.6	119.7	71.2	1,189
Indirect	74.0	26.6	25.9	454
Induced	31.7	22.5	7.7	204
Total	373.3	168.8	104.9	1,847

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

overlap greater than 50%. Hence, activity from secondary sectors is only considered for Brock, Clarington, Scugog and Uxbridge, as displayed in *Table 26*. Additionally, province-wide impacts from secondary sector activities in the Durham Region are displayed in *Table 30*.

Tax contributions from primary and secondary sector activities in Durham Region are summarised in *Table 27*. Results suggest that activities in primary Greenbelt sectors in Durham Region contribute **CAD 548 million** in local, provincial, and federal taxes. Additionally, activities from secondary sectors in the region contribute a total of **CAD 58.2 million** in total taxes.

Table 27. Tax Contributions in Durham Region

Government Revenue Contributions ($mn)

	Primary Sectors	Secondary Sectors
Federal		
Taxes on Products	39.5	3.3
Taxes on Production	1.1	0.1
Corporate Income Tax	51.9	5.9
Personal Income Tax	187.1	22.0
Provincial		
Taxes on Products	69.9	5.9
Taxes on Production	21.7	1.9
Corporate Income Tax	39.8	4.5
Personal Income Tax	63.0	8.4
Local		
Taxes on Products	1.1	0.1
Taxes on Production	73.2	6.2
Total	548.1	58.2

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 28. (1) Regional Contributions from Primary Sectors in Durham Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Ajax				
Direct	380.0	176.9	135.0	4,829
Indirect	121.5	63.0	37.0	679
Induced	66.2	23.5	14.0	241
Total	567.7	263.3	186.0	5,749
Brock				
Direct	53.4	23.5	15.0	521
Indirect	17.8	8.8	5.2	99
Induced	7.4	2.3	1.5	29
Total	78.5	34.6	21.8	649
Clarington				
Direct	346.9	156.4	108.2	3,880
Indirect	112.8	56.6	33.2	622
Induced	53.5	17.6	11.2	197
Total	513.2	230.7	152.7	4,699
Oshawa				
Direct	502.6	228.4	174.2	6,430
Indirect	163.0	83.9	49.2	897
Induced	85.7	30.4	18.1	299
Total	751.3	342.7	241.5	7,626
Pickering				
Direct	268.3	125.5	94.5	3,290
Indirect	86.1	44.9	26.6	493
Induced	46.0	16.1	9.7	172
Total	400.3	186.5	130.7	3,956
Scugog				
Direct	114.4	51.3	32.2	1,117
Indirect	37.5	18.6	11.0	213
Induced	15.8	4.8	3.3	62
Total	167.6	74.6	46.5	1,392

(continued below)

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 28. (2) Regional Contributions from Primary Sectors in Durham Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Uxbridge				
Direct	110.6	50.3	33.7	1,134
Indirect	36.5	18.8	11.2	217
Induced	16.2	5.2	3.4	64
Total	163.3	74.2	48.3	1,414
Whitby				
Direct	397.9	183.9	138.4	4,934
Indirect	128.6	66.9	39.6	734
Induced	67.4	23.7	14.3	245
Total	593.9	274.5	192.3	5,913
Grand Total (Durham)				
Direct	2,174.0	996.2	731.2	26,134
Indirect	703.7	361.5	213.1	3,952
Induced	358.1	123.5	75.5	1,310
Total	3,235.9	1,481.1	1,019.9	31,397

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Possibility grows here.

Table 29. (1) Province-Wide Contributions from Primary Sectors in Durham Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Ajax				
Direct	380.0	176.9	135.0	4,829
Indirect	193.7	94.5	56.4	1,086
Induced	129.8	76.5	36.1	751
Total	703.5	347.9	227.5	6,666
Brock				
Direct	53.4	23.5	15.0	521
Indirect	28.8	14.1	8.3	159
Induced	15.3	9.0	4.3	88
Total	97.5	46.6	27.6	769
Clarington				
Direct	346.9	156.4	108.2	3,880
Indirect	181.8	88.5	52.0	1,005
Induced	107.1	63.1	29.8	620
Total	635.8	308.0	190.0	5,504
Oshawa				
Direct	502.6	228.4	174.2	6,430
Indirect	260.6	126.2	75.1	1,444
Induced	168.9	99.5	46.9	977
Total	932.1	454.1	296.2	8,851
Pickering				
Direct	268.3	125.5	94.5	3,290
Indirect	137.2	67.7	40.6	784
Induced	90.9	53.6	25.3	526
Total	496.4	246.8	160.4	4,601
Scugog				
Direct	114.4	51.3	32.2	1,117
Indirect	60.7	30.0	17.5	343
Induced	32.5	19.2	9.1	189
Total	207.6	100.5	58.8	1,650

(continued below)

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 29. (2) Province-Wide Contributions from Primary Sectors in Durham Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Uxbridge				
Direct	110.6	50.3	33.7	1,134
Indirect	58.8	29.5	17.6	345
Induced	33.6	19.8	9.3	194
Total	203.0	99.6	60.7	1,673
Whitby				
Direct	397.9	183.9	138.4	4,934
Indirect	205.2	100.9	60.5	1,172
Induced	133.9	78.9	37.2	775
Total	737.0	363.7	236.2	6,881
Grand Total (Durham)				
Direct	2,174.0	996.2	731.2	26,134
Indirect	1,126.8	551.4	328.0	6,340
Induced	712.1	419.6	198.0	4,121
Total	4,012.9	1,967.2	1,257.3	36,595

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 30. Province-Wide Contributions from Secondary Sectors in Durham Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Brock				
Direct	19.4	9.3	5.6	97
Indirect	9.2	4.1	3.0	51
Induced	5.5	3.3	1.6	34
Total	34.1	16.6	10.2	182
Clarington				
Direct	140.5	63.9	38.0	625
Indirect	65.8	27.8	21.1	360
Induced	37.5	22.2	11.0	233
Total	243.8	113.9	70.1	1,218
Scugog				
Direct	64.4	27.3	16.1	268
Indirect	29.9	11.6	9.5	161
Induced	15.8	9.3	4.7	101
Total	110.1	48.2	30.3	530
Uxbridge				
Direct	43.3	19.2	11.5	199
Indirect	20.3	8.3	6.4	110
Induced	11.3	6.7	3.3	71
Total	74.9	34.1	21.3	379
Grand Total (Durham)				
Direct	267.6	119.7	71.2	1,189
Indirect	125.2	51.8	39.9	681
Induced	70.2	41.5	20.7	439
Total	462.9	212.9	131.8	2,308

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Grey County

Grey County is located in the GGH region, and is 170 kilometres north of Toronto. The local economy has its strengths in tourism, agriculture, with vast resources and recreational assets in the region, including the Blue Mountain Resort, the Niagara Escarpment and Georgian Bay.[13] Given the relatively small degree of geographic overlap in Grey County, the analysis is restricted to the CSDs of Georgian Bluffs and the Blue Mountains.

On an aggregate level, results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 133.1 million** in gross output, **CAD 59.9 million** in GDP, **CAD 36.6 million** in labour income, and sustain approximately **1,200 FTEs** at direct, indirect, and induced levels in the regional economy of Grey County. Economic contribution results are broken down by direct, indirect and induced contributions for primary sectors in **Table 31**. Further details regarding economic contributions by each CSD in Grey County are provided in **Table 33** and **Table 34**.

Table 31. Regional Contributions from Primary Sectors in Grey County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	106.7	48.3	31.7	1,101
Indirect	18.7	6.7	3.9	99
Induced	7.7	4.9	1.0	23
Total	133.1	59.9	36.6	1,224

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Since the Greenbelt has a relatively small degree of overlap with CSDs in Grey County, the analysis is limited to primary sectors, which are more likely to directly benefit from their proximity to the Greenbelt due to supply chain linkages.

Tax contributions from primary and secondary sector activities in Grey County are summarised in **Table 32** below. Results suggest that activities in primary Greenbelt sectors in Grey County contribute **CAD 26 million** in local, provincial, and federal taxes.

Table 32. Tax Contributions in Grey County

Government Revenue Contributions ($mn)

	Primary Sectors
Federal	
Taxes on Products	1.8
Taxes on Production	0.1
Corporate Income Tax	2.9
Personal Income Tax	8.5
Provincial	
Taxes on Products	3.2
Taxes on Production	1.0
Corporate Income Tax	2.2
Personal Income Tax	2.9
Local	
Taxes on Products	0.1
Taxes on Production	3.5
Total	26.1

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 33. Regional Contributions from Primary Sectors in Grey County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Georgian Bluffs				
Direct	46.0	20.5	12.9	457
Indirect	8.3	2.8	1.6	44
Induced	3.1	2.3	0.4	10
Total	57.4	25.6	15.0	510
The Blue Mountains				
Direct	60.7	27.8	18.8	645
Indirect	10.4	3.9	2.3	56
Induced	4.6	2.6	0.6	13
Total	75.7	34.3	21.6	714
Grand Total (Grey)				
Direct	106.7	48.3	31.7	1,101
Indirect	18.7	6.7	3.9	99
Induced	7.7	4.9	1.0	23
Total	133.1	59.9	36.6	1,224

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 34. Province-Wide Contributions from Primary Sectors in Grey County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Georgian Bluffs				
Direct	46.0	20.5	12.9	457
Indirect	24.5	12.0	7.0	137
Induced	13.1	7.7	3.7	76
Total	83.6	40.2	23.6	669
The Blue Mountains				
Direct	60.7	27.8	18.8	645
Indirect	31.7	15.7	9.3	182
Induced	18.6	11.0	5.2	107
Total	111.0	54.5	33.3	934
Grand Total (Grey)				
Direct	106.7	48.3	31.7	1,101
Indirect	56.2	27.7	16.3	319
Induced	31.7	18.7	8.8	183
Total	194.6	94.7	56.9	1,603

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Halton Region

Located west of Toronto and forming part of the Greater Toronto Hamilton Area ("GTHA"), the Region of Halton has a diversified economy with strengths in sectors such as advanced manufacturing, finance, food and beverage, life sciences, professional services and technology.[14] In the Halton Region, primary and secondary sector contributions are estimated for the CSDs of Burlington, Halton Hills, and Milton.

Results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 1.6 billion** in gross output, **CAD 720.4 million** in GDP, **CAD 502.8 million** in labour income, and sustain approximately **15,800 FTEs** at direct, indirect, and induced levels in the regional economy of Halton. Economic contribution results are broken down by direct, indirect and induced contributions for primary sectors in *Table 35*. Further details regarding economic contributions by each CSD in Halton Region are provided in *Table 38* and *Table 39*.

Table 35. Regional Contributions from Primary Sectors in Halton Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	1,134.4	522.9	387.4	13,805
Indirect	296.0	148.3	86.3	1,529
Induced	153.7	49.2	29.1	455
Total	1,584.1	720.4	502.8	15,789

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

The regional economic contribution of activities in the identified secondary sectors supported by the Greenbelt are provided in **Table 36**. Secondary sectors contribute an estimated total of **CAD 1.2 billion** in gross output, **CAD 573.7 million** in GDP, **CAD 305 million** in labour income, and sustain approximately **5,000 FTEs** at direct, indirect and induced levels in the regional economy. Results are further broken down by direct, indirect and induced contributions for secondary sectors in

Table 36. Regional Contributions from Secondary Sectors in Halton Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Burlington				
Direct	329.2	139.0	80.4	1,241
Indirect	68.0	29.3	23.6	404
Induced	27.4	37.4	6.1	177
Total	424.5	205.7	110.1	1,822
Halton Hills				
Direct	237.0	97.8	56.1	835
Indirect	48.8	20.1	16.6	286
Induced	18.9	26.5	4.2	125
Total	304.7	144.5	76.9	1,246
Milton				
Direct	346.8	150.0	86.0	1,269
Indirect	72.4	32.3	25.4	437
Induced	29.4	41.3	6.6	193
Total	448.5	223.5	118.0	1,900
Grand Total (Halton)				
Direct	913.0	386.8	222.5	3,345
Indirect	189.1	81.7	65.6	1,127
Induced	75.6	105.2	17.0	495
Total	1,177.8	573.7	305	4,967

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 36. Further details regarding province-wide contributions for secondary sectors by each CSD in the Halton Region are provided in *Table 40*.

Tax contributions from primary and secondary sector activities in Halton Region are summarised in *Table 37* below. Results suggest that activities in primary Greenbelt sectors in Halton Region contribute **CAD 288 million** in local, provincial, and federal taxes. Additionally, activities from secondary sectors in the region contribute a total of **CAD 201.1 million** in total taxes.

Table 37. Tax Contributions in Halton Region

Government Revenue Contributions ($mn)

	Primary Sectors	Secondary Sectors
Federal		
Taxes on Products	20.7	10.5
Taxes on Production	0.6	0.3
Corporate Income Tax	27.0	21.3
Personal Income Tax	98.9	79.5
Provincial		
Taxes on Products	36.7	18.6
Taxes on Production	11.3	5.6
Corporate Income Tax	20.7	16.4
Personal Income Tax	33.3	30.2
Local		
Taxes on Products	0.6	0.3
Taxes on Production	38.5	18.6
Total	288.3	201.1

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 38. Regional Contributions from Primary Sectors in Halton Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Burlington				
Direct	613.5	283.8	214.1	7,656
Indirect	160.7	81.1	47.1	830
Induced	85.2	27.8	16.1	252
Total	859.4	392.7	277.4	8,739
Halton Hills				
Direct	203.9	92.7	66.1	2,340
Indirect	53.3	26.4	15.5	279
Induced	25.9	7.9	4.9	75
Total	283.1	127.1	86.5	2,695
Milton				
Direct	316.9	146.4	107.2	3,809
Indirect	82.0	40.7	23.7	419
Induced	42.7	13.5	8.1	127
Total	441.6	200.6	138.9	4,355
Grand Total (Halton)				
Direct	1,134.4	522.9	387.4	13,805
Indirect	296.0	148.3	86.3	1,529
Induced	153.7	49.2	29.1	455
Total	1,584.1	720.4	502.8	15,789

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 39. Province-Wide Contributions from Primary Sectors in Halton Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Burlington				
Direct	613.5	283.8	214.1	7,656
Indirect	315.1	154.2	92.1	1,777
Induced	206.8	121.9	57.5	1,197
Total	1135.4	559.9	363.7	10,630
Halton Hills				
Direct	203.9	92.7	66.1	2,340
Indirect	107.0	52.7	31.4	610
Induced	65.0	38.3	18.1	376
Total	375.9	183.7	115.5	3,326
Milton				
Direct	316.9	146.4	107.2	3,809
Indirect	162.9	79.6	47.2	912
Induced	104.1	61.4	29.0	602
Total	583.9	287.3	183.4	5,323
Grand Total (Halton)				
Direct	1,134.4	522.9	387.4	13,805
Indirect	584.9	286.5	170.7	3,299
Induced	375.9	221.5	104.5	2,175
Total	2,095.2	1,030.9	662.6	19,279

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 40. Province-Wide Contributions from Secondary Sectors in Halton Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Burlington				
Direct	329.2	139.0	80.4	1,241
Indirect	152.3	58.7	48.3	820
Induced	79.3	46.9	23.7	508
Total	560.8	244.5	152.4	2,569
Halton Hills				
Direct	237.0	97.8	56.1	835
Indirect	109.8	41.1	34.5	586
Induced	55.3	32.7	16.6	357
Total	402.1	171.6	107.2	1,778
Milton				
Direct	346.8	150.0	86.0	1,269
Indirect	160.9	63.8	51.2	872
Induced	85.4	50.4	25.4	541
Total	593.1	264.2	162.7	2,683
Grand Total (Halton)				
Direct	913.0	386.8	222.5	3,345
Indirect	423.0	163.5	134.1	2,279
Induced	220.0	130.0	65.7	1,406
Total	1,556.0	680.3	422.3	7,030

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Hamilton

The City of Hamilton is located in the southwestern region of the GGH, and has a diverse regional economy. Hamilton has a significant overlap with the Greenbelt, and primary and secondary Greenbelt sector make up a large contribution to the regional economy.

As displayed in *Table 41*, results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 2.6 billion** in gross output, **CAD 1.1 billion** in GDP, **CAD 795.2 million** in labour income, and sustain approximately **25,700 FTEs** at direct, indirect, and induced levels in the regional economy of Hamilton. Further details regarding province-wide contributions by primary sectors in Hamilton are provided in *Table 44*.

Table 41. Regional Contributions from Primary Sectors in Hamilton

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	1,907.1	869.6	628.9	22,635
Indirect	472.6	215.2	126.0	2,405
Induced	226.8	66.6	40.3	703
Total	2,606.6	1,151.5	795.2	25,744

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Further, the regional economic contribution of activities in the identified secondary sectors supported by the Greenbelt are provided in *Table 42*. Secondary sectors contribute an estimated total of **CAD 2.5 billion** in gross output, **CAD 1.1 billion** in GDP, **CAD 584.8 million** in labour income, and sustain approximately **10,000 FTEs** at direct, indirect and induced levels in the regional economy. Further details

regarding secondary sector contributions at the provincial level are provided in *Table 45*.

Table 42. Regional Contributions from Secondary Sectors in Hamilton

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Grand Total (Hamilton)				
Direct	1,979.3	769.0	435.7	6,503
Indirect	395.1	145.0	121.7	2,311
Induced	126.4	203.1	27.5	1,035
Total	2,500.8	1,117.1	584.8	9,849

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Tax contributions from primary and secondary sector activities in Hamilton are summarised in *Table 43* below. Results suggest that activities in primary Greenbelt sectors in Hamilton contribute **CAD 776 million** in local, provincial, and federal taxes. Additionally, activities from secondary sectors in the region contribute a total of **CAD 751.3 million** in total taxes.

Table 43. Tax Contributions in Hamilton

Government Revenue Contributions ($mn)

	Primary Sectors	Secondary Sectors
Federal		
Taxes on Products	34.0	20.4
Taxes on Production	0.9	0.5
Corporate Income Tax	92.9	93.7
Personal Income Tax	324.1	349.0
Provincial		
Taxes on Products	60.2	36.1
Taxes on Production	18.9	10.8
Corporate Income Tax	71.2	71.8
Personal Income Tax	109.1	132.4
Local		
Taxes on Products	1.0	0.6
Taxes on Production	64.1	35.8
Total	776.4	751.3

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 44. Province-Wide Contributions from Primary Sectors in Hamilton

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Grand Total (Hamilton)				
Direct	1907.1	869.6	628.9	22,635
Indirect	989.1	481.7	284.8	5,498
Induced	614.9	362.3	171.0	3,557
Total	3,511.0	1,713.6	1,084.7	31,689

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 45. Province-Wide Contributions from Secondary Sectors in Hamilton

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Grand Total (Hamilton)				
Direct	1,979.3	769.0	435.7	6,503
Indirect	905.0	313.5	283.1	4,784
Induced	427.6	252.6	131.1	2,838
Total	3,311.9	1,335.0	849.8	14,126

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Niagara Region

Several CSDs in the Niagara region overlap with the Greenbelt. Primary sector contributions are estimated for the CSDs of Grimsby, Lincoln, Niagara-on-the-Lake, Pelham, St. Catharines, and Thorold.

As displayed in *Table 46*, results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 1.9 billion** in gross output, **CAD 888.9 million** in GDP, **CAD 562.1 million** in labour income, and sustain approximately **18,800 FTEs** at direct, indirect, and induced levels in the Niagara Region. These results are displayed by CSD in *Table 49* and *Table 50*.

Table 46. Regional Contributions from Primary Sectors in Niagara Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	1,517.2	680.3	462.9	16,831
Indirect	316.3	130.0	75.4	1,597
Induced	146.2	78.7	23.9	335
Total	1,979.7	888.9	562.1	18,763

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Further, the regional economic contribution of activities secondary sectors are provided for a subset of CSDs in *Table 47* (including Grimsby, Lincoln, Niagara-on-the-Lake, and Pelham). Secondary sectors contribute an estimated total of **CAD 407 million** in gross output, **CAD 205.4 million** in GDP, **CAD 105 million** in labour income, and sustain approximately **1,800 FTEs** at direct, indirect and induced levels in the regional economy. Further details regarding contributions by CSD at the provincial level are provided in *Table 51*.

Table 47. Regional Contributions from Secondary Sectors in Niagara Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Grimsby				
Direct	94.2	41.3	23.6	343
Indirect	17.3	8.2	6.0	123
Induced	6.3	11.2	1.3	61
Total	117.8	60.7	30.9	527
Lincoln				
Direct	108.2	45.3	25.7	372
Indirect	19.4	8.7	6.5	134
Induced	6.7	12.2	1.4	66
Total	134.3	66.2	33.6	572
Niagara-on-the-Lake				
Direct	92.7	39.9	23.1	358
Indirect	16.7	7.7	5.7	114
Induced	6.1	10.5	1.2	56
Total	115.5	58.1	30.0	528
Pelham				
Direct	31.9	13.9	8.1	122
Indirect	5.8	2.7	2.0	41
Induced	2.1	3.7	0.4	20
Total	39.8	20.4	10.5	182
Grand Total (Niagara)				
Direct	326.9	140.4	80.5	1,195
Indirect	59.3	27.3	20.2	411
Induced	21.2	37.8	4.3	204
Total	407.4	205.4	105.1	1,810

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Tax contributions from primary and secondary sector activities in Niagara are summarised in *Table 48* below. Results suggest that activities in primary Greenbelt sectors in Niagara region contribute **CAD 369 million** in local, provincial, and federal taxes. Additionally, activities from secondary sectors in the region contribute a total of **CAD 73.3 million** in total taxes.

Table 48. Tax Contributions in Niagara Region

Government Revenue Contributions ($mn)

	Primary Sectors	Secondary Sectors
Federal		
Taxes on Products	25.6	3.8
Taxes on Production	0.7	0.1
Corporate Income Tax	39.3	7.8
Personal Income Tax	122.1	29.0
Provincial		
Taxes on Products	45.3	6.7
Taxes on Production	14.7	2.0
Corporate Income Tax	30.1	6.0
Personal Income Tax	41.1	11.0
Local		
Taxes on Products	0.7	0.1
Taxes on Production	49.7	6.8
Total	369.4	73.3

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 49. Regional Contributions from Primary Sectors in Niagara Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Grimsby				
Direct	108.3	48.2	31.8	1,160
Indirect	22.9	9.1	5.2	115
Induced	10.0	6.0	1.6	24
Total	141.2	63.3	38.7	1,299
Lincoln				
Direct	171.4	76.3	45.2	1,555
Indirect	38.1	13.9	8.0	207
Induced	13.6	11.3	2.2	47
Total	223.1	101.5	55.4	1,809
Niagara-on-the-Lake				
Direct	166.7	74.9	49.7	1,765
Indirect	35.3	14.5	8.5	190
Induced	15.3	8.9	2.5	40
Total	217.3	98.3	60.6	1,995
Pelham				
Direct	99.6	44.3	27.0	940
Indirect	22.0	8.4	4.9	122
Induced	8.1	6.2	1.3	25
Total	129.8	58.9	33.2	1,087
St. Catharines				
Direct	845.4	380.1	267.7	9,844
Indirect	172.9	73.3	42.5	849
Induced	85.5	40.7	14.0	177
Total	1103.8	494.1	324.2	10,870
Thorold				
Direct	125.8	56.5	41.5	1,567
Indirect	25.1	10.9	6.3	114
Induced	13.6	5.6	2.3	23
Total	164.5	73.0	50.1	1,704
Grand Total (Niagara)				
Direct	1,517.2	680.3	462.9	16,831
Indirect	316.3	130.0	75.4	1,597
Induced	146.2	78.7	23.9	335
Total	1,979.7	888.9	562.1	18,763

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 50. Province-Wide Contributions from Primary Sectors in Niagara Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Grimsby				
Direct	108.3	48.2	31.8	1,160
Indirect	56.9	27.4	15.8	304
Induced	31.9	18.8	8.9	184
Total	197.1	94.3	56.5	1,648
Lincoln				
Direct	171.4	76.3	45.2	1,555
Indirect	90.8	44.1	25.3	491
Induced	46.4	27.3	12.9	268
Total	308.6	147.7	83.4	2,314
Niagara-on-the-Lake				
Direct	166.7	74.9	49.7	1,765
Indirect	87.7	42.8	25.1	487
Induced	49.6	29.2	13.8	287
Total	304.0	147.0	88.5	2,539
Pelham				
Direct	99.6	44.3	27.0	940
Indirect	53.0	25.9	15.0	292
Induced	27.6	16.3	7.7	160
Total	180.2	86.5	49.7	1,391
St. Catharines				
Direct	845.4	380.1	267.7	9,844
Indirect	440.5	212.1	123.9	2,384
Induced	264.0	155.5	73.4	1,527
Total	1549.8	747.6	465.0	13,755
Thorold				
Direct	125.8	56.5	41.5	1,567
Indirect	65.1	31.0	18.1	345
Induced	40.6	23.9	11.3	235
Total	231.5	111.4	70.9	2,147
Grand Total (Niagara)				
Direct	1,517.2	680.3	462.9	16,831
Indirect	793.9	383.3	223.3	4,303
Induced	460.0	271.0	127.9	2,660
Total	2,771.1	1,334.6	814.0	23,794

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 51. Province-Wide Contributions from Secondary Sectors in Niagara Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Grimsby				
Direct	94.2	41.3	23.6	343
Indirect	43.7	17.6	14.0	238
Induced	23.5	13.9	7.0	148
Total	161.4	72.7	44.5	729
Lincoln				
Direct	108.2	45.3	25.7	372
Indirect	49.9	19.0	15.8	269
Induced	25.5	15.1	7.7	164
Total	183.6	79.4	49.2	805
Niagara-on-the-Lake				
Direct	92.7	39.9	23.1	358
Indirect	43.1	17.0	13.7	233
Induced	22.9	13.5	6.8	145
Total	158.6	70.3	43.6	736
Pelham				
Direct	31.9	13.9	8.1	122
Indirect	14.8	6.0	4.7	81
Induced	8.0	4.7	2.4	50
Total	54.7	24.6	15.2	253
Grand Total (Niagara)				
Direct	326.9	140.4	80.5	1,195
Indirect	151.6	59.5	48.2	820
Induced	79.8	47.2	23.8	508
Total	558.4	247.1	152.5	2,523

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Northumberland County

Located east of Toronto, Northumberland County comprises several CSDs that overlap with the Greenbelt. The regional economy has strengths in advanced manufacturing, agriculture and food processing, and tourism, among others.[15]

Primary sector contributions for Northumberland County are estimated for the Alnwick/Haldimand and Hamilton CSDs. As displayed in *Table 52*, results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 103.8 million** in gross output, **CAD 46.3 million** in GDP, **CAD 28.9 million** in labour income, and sustain approximately **960 FTEs** at direct, indirect, and induced levels in Northumberland County. Further details regarding the regional and provincial economic contribution of primary sectors in each CSD in Northumberland are provided in *Table 55* and *Table 56.*

Table 52. Regional Contributions from Primary Sectors in Northumberland County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	75.9	34.2	23.0	824
Indirect	20.0	7.8	4.5	101
Induced	7.9	4.3	1.4	31
Total	103.8	46.3	28.9	956

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Further, the regional economic contribution of activities in the identified secondary sectors supported by the Greenbelt are provided in *Table 53*. Secondary sector contributions have been estimated for the Hamilton CSD. Secondary sectors contribute an estimated total of **CAD 53.3 million** in gross output, **CAD 23.1 million** in GDP, **CAD 12.4 million** in labour income, and sustain approximately **234 FTEs** at direct, indirect and induced levels in the regional economy. Further details regarding contributions by CSD at the provincial level are provided in *Table 57.*

Table 53. Regional Contributions from Secondary Sectors in Northumberland County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Hamilton (Grand Total Northumberland)				
Direct	41.2	16.0	9.2	148
Indirect	9.5	3.0	2.7	54
Induced	2.7	4.1	0.6	33
Total	53.3	23.1	12.4	234

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Tax contributions from primary and secondary sector activities in Northumberland County are summarised in *Table 54* below. Results suggest that activities in primary Greenbelt sectors in Northumberland contribute **CAD 11.6 million** in local, provincial, and federal taxes. Additionally, activities from secondary sectors in the region contribute a total of **CAD 2.2 million** in total taxes.

Table 54. Tax Contributions in Northumberland County

Government Revenue Contributions ($mn)

	Primary Sectors	Secondary Sectors
Federal		
Taxes on Products	1.3	0.4
Taxes on Production	0.0	0.0
Corporate Income Tax	0.9	0.0
Personal Income Tax	2.4	0.0
Provincial		
Taxes on Products	2.3	0.8
Taxes on Production	0.8	0.2
Corporate Income Tax	0.7	0.0
Personal Income Tax	0.8	0.0
Local		
Taxes on Products	0.0	0.0
Taxes on Production	2.5	0.8
Total	11.6	2.2

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 55. Regional Contributions from Primary Sectors in Northumberland County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Alnwick/Haldimand				
Direct	31.6	13.9	9.0	329
Indirect	8.6	3.2	1.9	42
Induced	3.1	2.0	0.5	12
Total	43.3	19.1	11.3	384
Hamilton				
Direct	44.3	20.3	14.0	495
Indirect	11.4	4.6	2.7	58
Induced	4.8	2.4	0.8	19
Total	60.5	27.2	17.5	572
Grand Total (Northumberland)				
Direct	75.9	34.2	23.0	824
Indirect	20.0	7.8	4.5	101
Induced	7.9	4.3	1.4	31
Total	103.8	46.3	28.9	956

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 56. Province-Wide Contributions from Primary Sectors in Northumberland County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Alnwick/Haldimand				
Direct	31.6	13.9	9.0	329
Indirect	16.7	8.0	4.6	89
Induced	9.1	5.3	2.5	52
Total	57.3	27.3	16.1	471
Hamilton				
Direct	44.3	20.3	14.0	495
Indirect	22.9	11.2	6.6	126
Induced	13.8	8.1	3.8	80
Total	81.0	39.6	24.4	701
Grand Total (Northumberland)				
Direct	75.9	34.2	23.0	824
Indirect	39.6	19.2	11.2	216
Induced	22.8	13.5	6.3	132
Total	138.3	66.8	40.5	1,172

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 57. Province-Wide Contributions from Secondary Sectors in Northumberland County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Hamilton (Grand Total Northumberland)				
Direct	41.2	16.0	9.2	148
Indirect	18.8	6.5	5.9	99
Induced	9.0	5.3	2.8	60
Total	69.0	27.9	17.9	307

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Peel Region

Making part of the Greater Toronto Area, the Peel region economy is diverse and made up of 3 lower tier municipalities. As seen in the geospatial analysis, of all CSDs in the Region of Peel, Caledon has a high degree of overlap with the Greenbelt, thus the analysis is restricted to this CSD.

As displayed in *Table 58*, results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 348 million** in gross output, **CAD 157 million** in GDP, **CAD 107 million** in labour income, and sustain approximately **3,200 FTEs** at direct, indirect, and induced levels in the Region of Peel. The provincial economic contributions from primary sectors in the Region of Peel are provided in *Table 61*.

Further, the regional economic contribution of activities in the identified secondary sectors supported by the Greenbelt are provided in *Table 59*. Secondary sectors contribute an estimated total of **CAD 316.7 million** in gross output, **CAD 131.3 million** in GDP, **CAD 79.4 million** in labour income, and sustain approximately **1,300 FTEs** at direct, indirect and induced levels in the regional economy. Further details regarding secondary sector contributions at the provincial level are provided in *Table 62*.

Table 58**. Regional Contributions from Primary Sectors in Peel Region**

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	238.1	109.4	77.6	2,734
Indirect	73.1	36.0	21.4	377
Induced	36.6	12.0	7.5	124
Total	347.9	157.4	106.6	3,235

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 59**. Regional Contributions from Secondary Sectors in Peel Region**

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Caledon (Grand Total Peel)				
Direct	232.7	94.7	53.8	790
Indirect	61.3	21.4	20.1	340
Induced	22.7	15.2	5.4	148
Total	316.7	131.3	79.4	1,279

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Tax contributions from primary and secondary sector activities in the Region of Peel are summarised in *Table 60* below. Results suggest that activities in primary Greenbelt sectors in Peel Region contribute **CAD 59.8 million** in local, provincial, and federal taxes. Additionally, activities from secondary sectors in the region contribute a total of **CAD 50.9 million** in total taxes.

Table 60. Tax Contributions in Peel Region

Government Revenue Contributions ($mn)

	Primary Sectors	Secondary Sectors
Federal		
Taxes on Products	4.2	2.5
Taxes on Production	0.1	0.1
Corporate Income Tax	6.0	5.5
Personal Income Tax	20.2	20.5
Provincial		
Taxes on Products	7.5	4.5
Taxes on Production	2.3	1.3
Corporate Income Tax	4.6	4.2
Personal Income Tax	6.8	7.8
Local		
Taxes on Products	0.1	0.1
Taxes on Production	8.0	4.4
Total	59.8	50.9

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 61. Province-Wide Contributions from Primary Sectors in Peel Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Caledon (Grand Total Peel)				
Direct	238.1	109.4	77.6	2,734
Indirect	123.4	60.6	35.9	697
Induced	76.0	44.8	21.1	440
Total	437.5	214.8	134.7	3,871

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 62. Regional Contributions from Secondary Sectors in Peel Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Caledon (Grand Total Peel)				
Direct	232.7	94.7	53.8	790
Indirect	107.2	39.4	33.8	572
Induced	53.1	31.4	16.1	345
Total	393.0	165.4	103.6	1,708

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Peterborough County

The southwestern end of the Peterborough County overlaps with the Greenbelt, and hence the CSD of Cavan Monaghan is included in this analysis. The regional and provincial contribution analysis is restricted to this CSD, and results are summarised for primary sectors in *Table 63* below.

As displayed in *Table 63*, results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 40.8 million** in gross output, **CAD 18 million** in GDP, **CAD 11.5 million** in labour income, and sustain approximately **365 FTEs** at direct, indirect, and induced levels in Peterborough. Further details regarding primary sector contributions at the provincial level are provided in *Table 65*.

Table 63. Regional Contributions from Primary Sectors in Peterborough

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	29.6	13.5	8.8	308
Indirect	7.7	3.5	2.1	46
Induced	3.5	0.9	0.7	11
Total	40.8	18.0	11.5	365

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Tax contributions from primary sector activities in Peterborough are summarised in *Table 64*. Results suggest that activities in primary Greenbelt sectors in Peterborough contribute **CAD 7.2 million** in local, provincial, and federal taxes.

Table 64. Tax Contributions in Peterborough

Government Revenue Contributions ($mn)

	Primary Sectors
Federal	
Taxes on Products	0.5
Taxes on Production	0.0
Corporate Income Tax	0.8
Personal Income Tax	2.3
Provincial	
Taxes on Products	0.8
Taxes on Production	0.3
Corporate Income Tax	0.6
Personal Income Tax	0.8
Local	
Taxes on Products	0.0
Taxes on Production	1.0
Total	7.2

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 65. Province-Wide Contributions from Primary Sectors in Peterborough

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Grand Total (Peterborough)				
Direct	29.6	13.5	8.8	308
Indirect	15.4	7.5	4.3	84
Induced	8.6	5.1	2.4	51
Total	53.5	26.1	15.5	444

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Simcoe County

Similar to Peterborough County, one CSD in Simcoe County (The CSD of Clearview), overlaps with the Greenbelt. Results for Simcoe county are thus restricted to the regional economy of Clearview.

As displayed in *Table 66*, results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 124.8 million** in gross output, **CAD 56.5 million** in GDP, **CAD 34 million** in labour income, and sustain approximately **1,100 FTEs** at direct, indirect, and induced levels in Simcoe County. Further details regarding primary sector contributions at the provincial level are provided in *Table 68*.

Table 66. Regional Contributions from Primary Sectors in Simcoe County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	92.4	41.7	27.1	954
Indirect	23.2	9.3	5.4	120
Induced	9.2	5.5	1.5	34
Total	124.8	56.5	34.0	1,108

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Tax contributions from primary sector activities in Simcoe County are summarised in *Table 67*. Results suggest that activities in primary Greenbelt sectors in Simcoe County contribute **CAD 22.3 million** in local, provincial, and federal taxes.

Table 67. Tax Contributions in Simcoe County

Government Revenue Contributions ($mn)

	Primary Sectors
Federal	
Taxes on Products	1.5
Taxes on Production	0.0
Corporate Income Tax	2.5
Personal Income Tax	7.2
Provincial	
Taxes on Products	2.7
Taxes on Production	0.9
Corporate Income Tax	1.9
Personal Income Tax	2.4
Local	
Taxes on Products	0.0
Taxes on Production	3.0
Total	22.3

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 68. Province-Wide Contributions from Primary Sectors in Simcoe County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Grand Total (Simcoe)				
Direct	92.4	41.7	27.1	954
Indirect	48.3	23.4	13.6	263
Induced	27.1	16.0	7.5	157
Total	167.8	81.1	48.3	1,374

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Wellington County

The economic contribution analysis for Wellington County is restricted to the CSDs of Erin and Puslinch.

As displayed in *Table 69*, results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 146.8 million** in gross output, **CAD 69.2 million** in GDP, **CAD 39.7 million** in labour income, and sustain approximately **1,300 FTEs** at direct, indirect, and induced levels in Wellington County. Further details regarding primary sector contributions at the regional and provincial level are provided in *Table 71* and *Table 72*.

Table 69. Regional Contributions from Primary Sectors in Wellington County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	98.9	45.2	29.7	988
Indirect	37.1	15.3	9.6	233
Induced	10.8	8.7	0.4	44
Total	146.8	69.2	39.7	1,264

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Tax contributions from primary sector activities in Wellington County are summarised in *Table 70*. Results suggest that activities in primary Greenbelt sectors in Wellington contribute **CAD 24 million** in local, provincial, and federal taxes.

Table 70. Tax Contributions in Wellington County

Government Revenue Contributions ($mn)

	Primary Sectors
Federal	
Taxes on Products	1.7
Taxes on Production	0.0
Corporate Income Tax	2.6
Personal Income Tax	7.8
Provincial	
Taxes on Products	3.0
Taxes on Production	1.0
Corporate Income Tax	2.0
Personal Income Tax	2.6
Local	
Taxes on Products	0.0
Taxes on Production	3.2
Total	23.9

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 71. Regional Contributions from Primary Sectors in Wellington County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Erin				
Direct	64.8	29.2	18.7	615
Indirect	24.8	10.3	6.4	156
Induced	6.9	5.9	0.3	29
Total	96.5	45.4	25.5	801
Puslinch				
Direct	34.1	15.9	11.0	372
Indirect	12.3	5.1	3.2	77
Induced	3.9	2.8	0.1	15
Total	50.3	23.8	14.3	464
Grand Total (Wellington)				
Direct	98.9	45.2	29.7	988
Indirect	37.1	15.3	9.6	233
Induced	10.8	8.7	0.4	44
Total	146.8	69.2	39.7	1,264

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 72. Province-Wide Contributions from Primary Sectors in Wellington County

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Erin				
Direct	64.8	29.2	18.7	615
Indirect	34.6	17.2	10.2	199
Induced	18.9	11.1	5.3	109
Total	118.3	57.6	34.2	923
Puslinch				
Direct	34.1	15.9	11.0	372
Indirect	17.6	8.8	5.2	103
Induced	10.6	6.3	3.0	63
Total	62.4	31.0	19.2	538
Grand Total (Wellington)				
Direct	98.9	45.2	29.7	988
Indirect	52.3	26.0	15.5	301
Induced	29.5	17.4	8.2	172
Total	180.7	88.7	53.4	1,461

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

York Region

Located in the heart of the GGH and in close proximity to the City of Toronto, York region has a diverse economy. All CSDs in the York Region overlap significantly with the Greenbelt, and consolidated results for the regional contributions are displayed in *Table 73* and *Table 74* below.

As displayed in *Table 73*, results suggest that on an annual basis, activities in the primary sectors supported by the Greenbelt contribute an estimated total of **CAD 4.4 billion** in gross output, **CAD 2 billion** in GDP, **CAD 1.4 billion** in labour income, and sustain approximately **44,521 FTEs** at direct, indirect, and induced levels in the York Region. Further details regarding primary sector contributions at the regional and provincial level are provided for each CSD in *Table 76* and *Table 77*.

Table 73. Regional Contributions from Primary Sectors in York Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Primary Sectors				
Direct	3,055.5	1,428.1	1,079.5	38,054
Indirect	874.0	443.6	259.9	4,798
Induced	461.5	155.8	91.8	1,670
Total	4,391.1	2,027.5	1,431.2	44,521

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Additionally, the regional economic contribution of activities in the identified secondary sectors supported by the Greenbelt are provided in *Table 74*. Secondary sectors contribute an estimated total of **CAD 894.6 million** in gross output, **CAD 397 million** in GDP, **CAD 236.3**

Table 74. Regional Contributions from Secondary Sectors in York Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Aurora				
Direct	112.5	47.3	27.2	415
Indirect	24.2	10.4	8.5	141
Induced	10.1	6.7	2.3	61
Total	146.8	64.3	38.1	617
East Gwillimbury				
Direct	53.9	24.8	14.4	215
Indirect	12.2	5.9	4.4	74
Induced	5.4	2.4	1.3	33
Total	71.5	33.1	20.0	322
King				
Direct	101.2	43.4	24.8	361
Indirect	22.0	9.7	7.8	130
Induced	9.2	5.5	2.1	57
Total	132.4	58.5	34.7	547
Richmond Hill				
Direct	290.2	124.0	71.8	1,105
Indirect	62.9	27.6	22.3	370
Induced	26.7	16.8	6.2	160
Total	379.8	168.3	100.2	1,636
Whitchurch-Stouffville				
Direct	125.4	53.7	30.9	468
Indirect	27.2	12.0	9.6	160
Induced	11.5	7.1	2.7	70
Total	164.1	72.7	43.2	698
Grand Total (York)				
Direct	683.3	293.1	169.1	2,564
Indirect	148.4	65.5	52.7	876
Induced	62.8	38.4	14.6	381
Total	894.6	397.0	236.3	3,820

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

million in labour income, and sustain approximately **3,800 FTEs** at direct, indirect and induced levels in the regional economy. Province-wide contributions for secondary sectors in each CSD are provided in **Table 78**.

Tax contributions from primary and secondary sector activities in the York Region are summarised in *Table 75* below. Results suggest that activities in primary Greenbelt sectors in York Region contribute **CAD 785 million** in local, provincial, and federal taxes. Additionally, activities from secondary sectors in the region contribute a total of **CAD 151.3 million** in total taxes.

Table 75. Tax Contributions in York Region

Government Revenue Contributions ($mn)

	Primary Sectors	Secondary Sectors
Federal		
Taxes on Products	56.6	8.0
Taxes on Production	1.5	0.2
Corporate Income Tax	71.5	16.0
Personal Income Tax	273.0	59.5
Provincial		
Taxes on Products	100.2	14.1
Taxes on Production	30.7	4.3
Corporate Income Tax	54.8	12.2
Personal Income Tax	91.9	22.6
Local		
Taxes on Products	1.6	0.2
Taxes on Production	103.6	14.3
Total	785.4	151.3

Notes: Figures for taxes are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 76. (1) Regional Contributions from Primary Sectors in York Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Aurora				
Direct	167.1	77.4	58.3	2,075
Indirect	48.3	24.8	14.6	272
Induced	24.7	8.3	4.9	87
Total	240.1	110.5	77.9	2,434
East Gwillimbury				
Direct	79.4	36.1	25.6	910
Indirect	22.7	11.4	6.8	126
Induced	10.8	3.4	2.1	37
Total	112.8	51.0	34.5	1,073
Georgina				
Direct	161.6	73.2	51.4	1,816
Indirect	45.9	22.7	13.4	248
Induced	21.7	6.8	4.3	76
Total	229.2	102.8	69.1	2,140
King				
Direct	100.3	46.4	31.0	1,036
Indirect	27.5	13.6	8.1	151
Induced	13.0	3.9	2.5	47
Total	140.8	63.9	41.6	1,234
Markham				
Direct	1,087.8	509.6	392.0	13,966
Indirect	311.1	157.2	91.3	1,671
Induced	169.1	58.0	33.7	615
Total	1,568.0	724.8	517.0	16,251
Richmond Hill				
Direct	519.5	245.6	188.0	6,548
Indirect	148.5	76.1	44.6	828
Induced	80.3	27.4	16.0	295
Total	748.3	349.1	248.6	7,671

(continued below)

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 76. (2) Regional Contributions from Primary Sectors in York Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Vaughan				
Direct	778.6	365.1	278.8	9,787
Indirect	223.6	114.3	67.0	1,240
Induced	119.0	40.5	23.7	433
Total	1,121.1	519.9	369.5	11,461
Whitchurch-Stouffville				
Direct	161.4	74.5	54.4	1,917
Indirect	46.3	23.6	14.0	261
Induced	23.0	7.5	4.5	80
Total	230.7	105.5	72.9	2,258
Grand Total (York)				
Direct	3,055.5	1,428.1	1,079.5	38,054
Indirect	874.0	443.6	259.9	4,798
Induced	461.5	155.8	91.8	1,670
Total	4,391.1	2,027.5	1,431.2	44,521

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 77. (1) Province-Wide Contributions from Primary Sectors in York Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Aurora				
Direct	167.1	77.4	58.3	2,075
Indirect	86.2	42.6	25.7	499
Induced	56.4	33.2	15.7	326
Total	309.6	153.3	99.7	2,900
East Gwillimbury				
Direct	79.4	36.1	25.6	910
Indirect	41.7	20.6	12.3	241
Induced	25.2	14.9	7.0	146
Total	146.2	71.6	44.9	1,297
Georgina				
Direct	161.6	73.2	51.4	1,816
Indirect	84.8	41.6	24.6	477
Induced	50.7	29.9	14.1	293
Total	297.0	144.7	90.1	2,586
King				
Direct	100.3	46.4	31.0	1,036
Indirect	52.0	25.9	15.3	299
Induced	30.6	18.1	8.5	177
Total	182.9	90.4	54.8	1,511
Markham				
Direct	1,087.8	509.6	392.0	13,966
Indirect	549.5	267.0	158.9	3,042
Induced	375.4	221.1	104.3	2,171
Total	2,012.6	997.7	655.2	19,179
Richmond Hill				
Direct	519.5	245.6	188.0	6,548
Indirect	262.7	129.5	77.8	1,501
Induced	179.9	106.0	50.0	1,041
Total	962.1	481.1	315.8	9,090

(continued below)

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 77. (2) Province-Wide Contributions from Primary Sectors in York Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Vaughan				
Direct	778.6	365.1	278.8	9,787
Indirect	396.3	194.9	116.9	2,255
Induced	267.6	157.7	74.4	1,548
Total	1,442.5	717.8	470.1	13,591
Whitchurch-Stouffville				
Direct	161.4	74.5	54.4	1,917
Indirect	83.8	41.6	25.0	487
Induced	53.0	31.2	14.7	307
Total	298.3	147.3	94.1	2,711
Grand Total (York)				
Direct	3,055.5	1,428.1	1,079.5	38,054
Indirect	1,557.0	763.7	456.5	8,801
Induced	1,038.8	612.2	288.8	6,009
Total	5,651.3	2,803.9	1,824.8	52,864

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

Table 78. Province-Wide Contributions from Secondary Sectors in York Region

Economic Contribution	Output ($ mn)	GDP ($ mn)	Wages ($ mn)	FTEs (Person-Year)
Aurora				
Direct	112.5	47.3	27.2	415
Indirect	52.0	19.9	16.5	280
Induced	26.9	15.9	8.1	173
Total	191.5	83.1	51.8	867
East Gwillimbury				
Direct	53.9	24.8	14.4	215
Indirect	25.2	10.8	8.1	139
Induced	14.3	8.5	4.2	89
Total	93.5	44.0	26.7	442
King				
Direct	101.2	43.4	24.8	361
Indirect	46.9	18.4	14.9	254
Induced	24.6	14.5	7.3	157
Total	172.7	76.3	47.0	771
Richmond Hill				
Direct	290.2	124.0	71.8	1,105
Indirect	134.6	52.6	42.7	726
Induced	70.9	41.9	21.1	452
Total	495.7	218.4	135.6	2,283
Whitchurch-Stouffville				
Direct	125.4	53.7	30.9	468
Indirect	58.1	22.7	18.5	314
Induced	30.6	18.1	9.1	195
Total	214.1	94.5	58.5	977
Grand Total (York)				
Direct	683.3	293.1	169.1	2,564
Indirect	316.9	124.4	100.7	1,713
Induced	167.3	98.8	49.8	1,064
Total	1,167.5	516.3	319.6	5,341

Notes: Figures for wages, GDP and output are in millions and 2016 CAD.
Sources: Statistics Canada and EY calculations.

A.5. References and Comments

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