



Evaluating the Economic Benefits of Greenbelt Assets

Econometric Research Limited



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Fourteen in a Series
Friends of the Greenbelt Foundation Occasional Papers
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Friends of the Greenbelt Foundation
661 Yonge St. Suite 500
Toronto, Ontario
M4Y 1Z9
Canada

Tel (416) 960-0001
Fax (416) 960-0030
info@greenbelt.ca
www.greenbelt.ca

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The Friends of the Greenbelt Foundation is committed to promoting awareness and education about Ontario's Greenbelt. To this end we occasionally publish research and general interest papers that explore our three program areas: viable agriculture and viticulture; vibrant rural communities; and, a restored and protected natural environment.

Evaluating the Economic Benefits of Greenbelt Assets
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Executive Summary

The Greenbelt provides Ontario and the Greater Golden Horseshoe region with a vibrant natural resource base serving as a solid anchor for the region's agricultural, tourism and recreation industries. Constituting a significant component of the province's natural capital, the Greenbelt has garnered global recognition for the province.

The analysis of economic impacts presented in this Report demonstrates and quantifies the benefits that businesses directly contingent and dependent on the Greenbelt's natural resource base bring to the Ontario economy and the many communities it straddles. The existence of a healthy Greenbelt in Ontario also generates strong Canada-wide benefits and significant tax revenues for all levels of government. The continued vitality and growth of these businesses is vital to the regional and provincial economies.

The results of this quantification exercise are substantial but not surprising. They include:

- The direct economic impact of Greenbelt associated activities exceed \$3 billion annually province-wide.
- When direct, indirect and induced impacts are combined, the total economic impact rises to over \$9.1 billion annually.
- More than 75,000 Ontarians owe their direct full-time equivalent employment to these Greenbelt-related activities. This volume of employment is larger than that of the entire fish, forestry, mining, quarrying and oil and gas extraction sector in Ontario (42,300), and a multiple of that of the forestry and logging sector in Ontario (14,600). As well, this volume of employment is significantly larger than the utility sector in Ontario (46,300).
- When the volume of employment associated with the Greenbelt activities is compared to other sector employment in the Toronto Economic Region, it is nearly as large as public administration (93,100).
- When total employment impacts (direct, indirect and induced) are taken into account, 161,000 Ontario full-time equivalent jobs are dependent on the Greenbelt.
- All levels of government derive revenues on these impacts exceeding \$2.8 billion. The federal government's share is over \$1.5 billion, the provincial government collected \$1.0 billion, and local governments collectively received \$307million.



There are good reasons why these three selected sectors in the Greenbelt sustain relatively large impacts in the province. First, they are labour intensive. Second, they typically involve large expenditures in sectors that Ontario has comparative advantage in—tourism, recreation, agriculture, and forestry. Third, they represent highly recurrent activities whose impacts are considered to be sustainable and cumulative.

1

Introduction

Our natural environment plays a pivotal role in fostering communities' capabilities for healthy living, wealth generation, employment creation and fiscal stability. Ontario's Greenbelt covers an area of over 1.8 million acres and is designed to safeguard key environmentally sensitive and agriculturally fertile lands from urbanization and sprawl. Recognized worldwide as a leading example of land-use planning, the Greenbelt Plan protects the essential ecosystem services that sustain air and water quality, local food production, biodiversity, and quality of human life for the region.

There is a growing recognition of the pivotal role areas like Ontario's Greenbelt play in providing ecosystem services. For example, the David Suzuki Foundation estimated the Greenbelt's non-market ecosystem services at \$2.6 billion annually. This report looks at a different dimension of the economic contributions of natural capital in the Greenbelt region. It focuses specifically on the major production activities in the Greenbelt that are vertically integrated with the resource base and natural capital of its communities.

This study identifies, quantifies, and showcases the economic contributions of the Greenbelt on the provincial economy and local areas dependent on its resource base. It provides objective, meaningful and sound estimates of the economic contributions of the main economic activities in, or based on, the natural capital base of the Greenbelt. The economically Greenbelt dependent activities taken into account here are restricted to: (i) agriculture, (ii) fishing, trapping, forestry and, (iii) tourism and recreation. The impact results outlined here do not include the economic impacts of all the activities that legitimately could be considered

dependent on the natural resource base of the Greenbelt. For example, there are many food and beverage businesses whose operations depend on their ability to access the natural resources of the Greenbelt region. In this sense, the results are not comprehensive and can be considered conservative.

The analysis specifically estimates the output, employment and taxes paid to all levels of government on the economic impacts of the identified sectors' operations in the Greenbelt region. The large indirect (secondary) and induced (tertiary) impacts define the ripple effects to be expected from any expansion or contraction in the primary sectors' products and services. The major economic impacts will most likely be more pronounced in the agricultural, tourism and recreation sectors, but these can also be easily felt in remotely connected sectors as businesses and workers affected by the expansion and related activities expand their expenditures. The input-output models that Econometric Research Limited (ERL) has developed based on data produced by Statistics Canada are specifically designed to capture, quantify and trace these impacts on income, output, employment by sector (33 sectors) and over 10 different taxes by level of government collecting them. The impact results discussed in this report are the standard outputs of these impact systems.

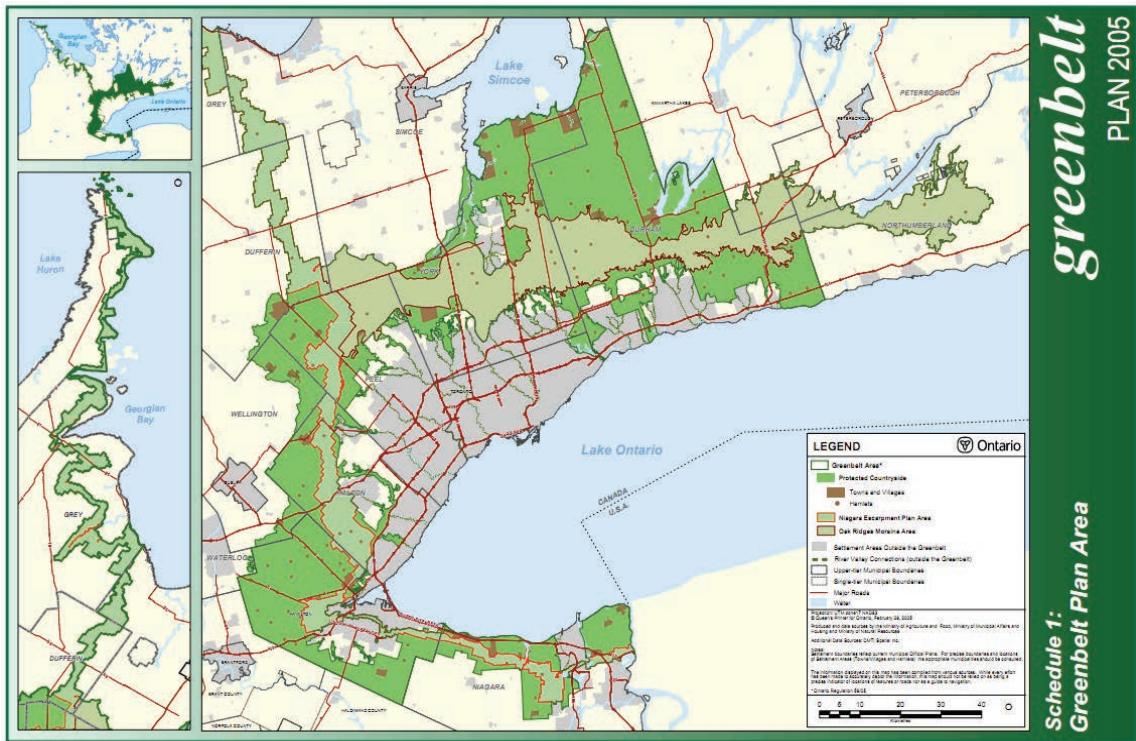
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The Greenbelt Region: Economy and Geography

The Greenbelt permeates and surrounds the Golden Horseshoe. Stretching from Niagara Falls, north to Tobermory and east to Rice Lake, the Greenbelt encompasses wetlands, farmlands, forests, vibrant communities and watersheds. This is the most densely populated area in Canada, and is vital to the quality of life in southern Ontario and the economy of the province at large.

Farmland is the leading land-use classification within the Greenbelt. More than half of the Greenbelt area is used for agriculture with over 7,000 farms. The Greenbelt is an ideal agricultural area for many reasons. It includes high quality soil that few other areas in Ontario can match, a relatively temperate climate, and easy access to fresh water. It is surrounded by an extensive and well developed transportation network, and more than 8 million people live within the Greater Golden Horseshoe alone, constituting a large and diverse market. Major farm products in the Greenbelt include specialty crops (27 per cent), grain and field crops (19 per cent), beef cattle (18.6 per cent) and fruit (13.8 per cent).

The Greenbelt region is also blessed with pristine country side and exceptional rural tourism and recreation opportunities. The Greenbelt Plan recognizes the value of trails that provide residents and visitors with a way to explore and appreciate nature whether on foot, ski or bicycle and provide local businesses with opportunities that may not exist in their absence. These endowments are major assets in the pursuit of developing countryside tourism that attracts local and international tourists and helps to foster economic vitality and dynamism.



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Methodology and Approach

The approach used in this analysis is based on a hybrid integration of: (i) input-output analysis, (ii) location theory and, (iii) relevant segments of typical macroeconomic models. The analysis uses standard economic impact methodology.

A dollar spent on operating a farm in the Greenbelt circulates and re-circulates within the economy, multiplying the effects of the original expenditures on overall economic activity. This process is referred to as the economic multiplier effect. It operates at several levels:

- The initial expenditures in the Greenbelt on wages and materials are generally referred to as the direct costs of operation and their effects are referred to as the initial (direct) effects.

- Subsequent purchases by suppliers of materials and services to sustain the original and derivative expenditures are called the indirect effects.



- The induced effects emerge when workers in the sectors stimulated by initial and indirect expenditures spend their additional income on consumer goods and services.

The impact model used, however, is a special and proprietary application of a unique regional impact model (RIM: Canada) developed by Econometric Research Limited (ERL). It is a unique model in that it captures the economic impact of different activities at the local level, the provincial level and the national level. The local impacts are a special feature of the ERL model that few other systems can duplicate. The model is a specialized application based on a technology that integrates input output analysis and location theory that has been applied to the study of the economic impact of several food processing and agricultural activities in Canada and abroad.¹

The model utilizes a large set of economic and technical databases for local communities, provinces and Canada that are regularly published by Statistics Canada. A short list includes the inter-provincial input-output tables, employment by sector, taxes by type of tax and the level of government collecting it, prices of products, energy used in physical and energy units, and location quotients.

¹ Sample projects where ERL's Economic Impact Analysis Model was employed include: Economic Contribution of the Ontario Farm Sector and Economic Impact of a Reduction in Farm Income prepared for the Ontario Federation of Agriculture; the Economic Impact of Tourism in Ontario and Regions; Economic Impact of the Toronto Convention Centre, Economic Impact of Capital Projects in Ontario.

The expected impacts are estimated in terms of (i) Ontario GDP (value added or income) (ii) total gross output (sales), (iii) wages and salaries, (iv) employment, (v) taxes by level of government and in terms of five major tax categories, and (vi) imports. The output and employment impacts were allocated over the standard 33 sectors of Statistics Canada's Input-Output model for the Ontario economy.

The Greenbelt boundaries do not conform neatly to Statistics Canada Census Subdivisions (CSDs). ERL cooperated with the Centre for Spatial Analysis (CPA) at McMaster University to get a GIS based re-organization of the data to generate a map of economic activities consistent with Greenbelt boundaries.

Several constituent Census Subdivisions (CSDs) pass through the Greenbelt. Not all of the counties, regional municipalities and CSDs where the Greenbelt is a component part are included in the composite region that we defined for our study. Rather we restrict the region to include all of the counties or regional municipalities where the Greenbelt area represents 25 per cent or more of these administrative areas.

The reasoning for using 25 per cent is as follows: we are estimating the impacts of economic activities contingent upon the land base. Where there are agricultural activities taking place in a CSD, most often all of those activities are occurring in the Greenbelt portion of the CSD; for example St. Catharines CSD or Whitby CSD. This would also be the case for tourism and recreation, for example in Halton CSD where the Niagara Escarpment provides much of the basis for those activities as it would in, for example, Northern Bruce Peninsula CSD.

Any area smaller than 25 per cent would not constitute a critical mass of sufficient magnitude to support the economic activities of the selected sectors. On the other hand, it can be argued that 25 per cent is not always large enough to justify the inclusion of all the land based activities as if they were derived or based upon the natural capital of the Greenbelt. Therefore, what is lost by the elimination of areas where the Greenbelt is less than 25 per cent balances any additional contributions that are included by attributing more contributions to the administrative economy than is justified by the 25 per cent of the area.

A Geographic Information System (GIS) was used to overlay the administrative regions of the province (e.g., regional municipalities and counties) over the Greenbelt area. The CSD structure enclosing the Greenbelt was identified and the CSDs that qualified using the 25 per cent rule were segregated as the Greenbelt CSDs. Finally the CSDs enclosing the Greenbelt were mapped into counties and regional municipalities as is displayed in Table 1. This mapping of CSDs onto counties and regional municipalities is dictated by the structure of the impact system whose smallest geographical resolution is the county sectors together. The labour force data of this sector by CSD is the sum of all the separate but hidden sub-sectors. Labour force data was, however, available for accommodation and food (this is the proxy sector for tourism) and also for recreation and culture. This information is displayed in Table 2.

The GIS system also allowed us to capture the Census data on the CSDs labour force by sector (Statistics Canada 2006). We did not have separate data for agriculture, forestry or fishing and trapping. The available data at the CSD level aggregates these three major sectors together. The labour force data of this sector by CSD is the sum of all the separate but hidden sub-sectors. Labour force data was, however, available for accommodation and food (this is the proxy sector



Table 1
CSD to County Mappings
For the Greenbelt Region

CSD	Single/Upper-Tier
Hamilton	Hamilton
St. Catharines	Niagara
Lincoln	Niagara
Niagara-on-the-Lake	Niagara
Clarington	Durham
Caledon	Peel
Halton Hills	Halton
Grimsby	Niagara
Scugog	Durham
Milton	Halton
King	York
Burlington	Halton
Uxbridge	Durham
Brock	Durham
Erin	Wellington
Georgina	York
Pelham	Niagara
Whitby	Durham
Oshawa	Durham
Whitchurch-Stouffville	York
Vaughan	York
Alnwick/Haldimand	Northumberland
Georgian Bluffs	Gray
East Gwillimbury	York
Blue Mountains	Gray
Pickering	Durham
Richmond Hill	York
Ajax	Durham
Mono	Dufferin
Thorold	Niagara
Hamilton	Northumberland
Mulmur	Dufferin
Northern Bruce Peninsula	Bruce County
Aurora	York
Orangeville	Dufferin

Table 2
Labour Force in Selected Sectors
CSD's in the Greenbelt Region

CSD	Agriculture, Forestry & Fishing		Tourism - Accommodation and Food		Total
			Recreation		
Hamilton	3,725		5,135	16,430	25,290
St. Catharines	1,550		2,125	6,640	10,315
Lincoln	1,235		175	585	1,995
Niagara-on-the-Lake	755		435	1,010	2,200
Clarington	725		630	2,300	3,655
Caledon	625		760	1,485	2,870
Halton Hills	595		600	1,410	2,605
Grimsby	590		225	845	1,660
Scugog	575		480	695	1,750
Milton	525		735	1,690	2,950
King	505		360	405	1,270
Burlington	460		1,810	5,850	8,120
Uxbridge	455		430	470	1,355
Brock	365		210	355	930
Erin	355		185	315	855
Georgina	340		440	1,160	1,940
Pelham	340		340	420	1,100
Whitby	295		1,295	3,385	4,975
Oshawa	285		1,245	4,420	5,950
Whitchurch-Stouffville	275		495	630	1,400
Vaughan	265		2,390	5,670	8,325
Alnwick/Haldimand	250		80	230	560
Georgian Bluffs	250		120	295	665
East Gwillimbury	225		345	515	1,085
Blue Mountains	175		150	320	645
Pickering	145		1,035	2,275	3,455
Richmond Hill	145		1,650	4,405	6,200
Ajax	115		750	2,475	3,340
Mono	115		120	305	540
Thorold	110		365	870	1,345
Hamilton	105		105	385	595
Mulmur	100		80	95	275
Northern Bruce Peninsula	90		105	240	435
Aurora	80		980	1,345	2,405
Orangeville	55		270	1,005	1,330
Total	16,800		26,655	70,930	114,385

Source: Statistics Canada and Econometric Research Limited

The GIS system also allowed us to capture the Census data on the CSDs labour force by sector (Statistics Canada 2006). We did not have separate data for agriculture, forestry or fishing and trapping. The available data at the CSD level aggregates these three major sectors together. The labour force data of this sector by CSD is the sum of all the separate but hidden sub-sectors. Labour force data was, however, available for accommodation and food (this is the proxy sector for tourism) and also for recreation and culture. This information is displayed in Table 2.

Translating labour force data by sector into value added (income, GDP) by sector is not an easy task. It would require information on average labour productivity in the sector and area. This information is not available. Instead labour productivity by sector is available at the province-wide level. Using the provincial GDP per worker is the only alternative. This presents a problem as it suggests that Ontario-wide data are relevant for every CSD in Ontario. This is not unreasonable in the case of some sectors such as agriculture given that much of the agricultural activity in the province is in the proximate area of the Greenbelt region. This is not the case when it comes to forestry or tourism. Since this data is only available at this spatial resolution, there were no other workable alternative.

The inputs that we used to estimate the results involved a number of intermediate steps:

- First, we used the average provincial labour productivity (output per worker) in the three sectors as the starting point. This is calculated by dividing GDP (value added) by the total employment (labour force) in the sector.
- Second, the calculated Ontario-wide labour productivity by sector was multiplied by the labour force statistics in the respective CSDs to estimate direct GDP contributions of these three sectors at the CSD level. It would have been better and more accurate to use specific labour productivity in the CSD region as these may be different than the Ontario-wide figures. However, this type of data does not exist at the CSD level.
- Third, the CSD direct GDP by the three sectors was aggregated into their respective county or regional municipality using the mapping in Table 1.
- Fourth, the direct GDP by sector in the county or regional municipality was translated into a final demand equivalent value using input-output ratios of final demand to value added by sector. This step is necessary in order to calibrate the initial expenditures that are needed to estimate the multipliers and the impact results.
- Fifth, these final demands by each sector were used as inputs in the RIM model to calculate the total (direct, indirect and induced) value added, employment and taxes supported by these activities at both the county/regional municipal level and province-wide.

Table 3
GDP in Selected Sectors in
CSD's in the Greenbelt Region

CSD	Agriculture, Forestry & Fishing	Recreation	Tourism - Accommodation and Food	Total
Hamilton	\$ 144,258,075	\$ 77,720,205	\$ 436,932,894	\$ 658,911,173
St. Catharines	\$ 60,026,850	\$ 32,162,694	\$ 176,581,522	\$ 268,771,067
Lincoln	\$ 47,827,845	\$ 2,648,692	\$ 15,557,258	\$ 66,033,795
Niagara-on-the-Lake	\$ 29,238,885	\$ 6,583,893	\$ 26,859,539	\$ 62,682,317
Clarington	\$ 28,077,075	\$ 9,535,293	\$ 61,165,286	\$ 98,777,654
Caledon	\$ 24,204,375	\$ 11,502,893	\$ 39,491,500	\$ 75,198,768
Halton Hills	\$ 23,042,565	\$ 9,081,231	\$ 37,496,980	\$ 69,620,776
Grimsby	\$ 22,848,930	\$ 3,405,462	\$ 22,471,594	\$ 48,725,986
Scugog	\$ 22,268,025	\$ 7,264,985	\$ 18,482,554	\$ 48,015,564
Milton	\$ 20,331,675	\$ 11,124,508	\$ 44,943,189	\$ 76,399,372
King	\$ 19,557,135	\$ 5,448,739	\$ 10,770,409	\$ 35,776,283
Burlington	\$ 17,814,420	\$ 27,395,048	\$ 155,572,576	\$ 200,782,044
Uxbridge	\$ 17,620,785	\$ 6,508,216	\$ 12,498,993	\$ 36,627,994
Brock	\$ 14,135,355	\$ 3,178,431	\$ 9,440,729	\$ 26,754,515
Erin	\$ 13,748,085	\$ 2,800,046	\$ 8,376,985	\$ 24,925,116
Georgina	\$ 13,167,180	\$ 6,659,570	\$ 30,848,579	\$ 50,675,329
Pelham	\$ 13,167,180	\$ 5,146,031	\$ 11,169,313	\$ 29,482,524
Whitby	\$ 11,424,465	\$ 19,600,324	\$ 90,019,345	\$ 121,044,135
Oshawa	\$ 11,037,195	\$ 18,843,555	\$ 117,543,724	\$ 147,424,474
Whitchurch-Stouffville	\$ 10,649,925	\$ 7,492,016	\$ 16,753,970	\$ 34,895,911
Vaughan	\$ 10,262,655	\$ 36,173,571	\$ 150,785,728	\$ 197,221,954
Alnwick/Haldimand	\$ 9,681,750	\$ 1,210,831	\$ 6,116,529	\$ 17,009,109
Georgian Bluffs	\$ 9,681,750	\$ 1,816,246	\$ 7,845,113	\$ 19,343,109
East Gwillimbury	\$ 8,713,575	\$ 5,221,708	\$ 13,695,705	\$ 27,630,988
Blue Mountains	\$ 6,777,225	\$ 2,270,308	\$ 8,509,953	\$ 17,557,486
Pickering	\$ 5,615,415	\$ 15,665,124	\$ 60,500,446	\$ 81,780,985
Richmond Hill	\$ 5,615,415	\$ 24,973,386	\$ 117,144,820	\$ 147,733,621
Ajax	\$ 4,453,605	\$ 11,351,539	\$ 65,819,167	\$ 81,624,311
Mono	\$ 4,453,605	\$ 1,816,246	\$ 8,111,049	\$ 14,380,900
Thorold	\$ 4,259,970	\$ 5,524,416	\$ 23,136,434	\$ 32,920,820
Hamilton	\$ 4,066,335	\$ 1,589,215	\$ 10,238,537	\$ 15,894,088
Mulmur	\$ 3,872,700	\$ 1,210,831	\$ 2,526,392	\$ 7,609,923
Northern Bruce Peninsula	\$ 3,485,430	\$ 1,589,215	\$ 6,382,465	\$ 11,457,110
Aurora	\$ 3,098,160	\$ 14,832,678	\$ 35,768,396	\$ 53,699,234
Orangeville	\$ 2,129,985	\$ 4,086,554	\$ 26,726,571	\$ 32,943,110
Total	\$ 650,613,600	\$ 403,433,701	\$ 1,886,284,245	\$ 2,940,331,546

Source: Statistics Canada and Econometric Research Limited

Some of the key impact indicators generated by these models are defined below to assist the reader in interpreting the results of the economic impact analysis:

Initial Expenditures – This figure indicates the amount of expenditures directly made by a given activity in a given sector. It is these expenditures that typically drive the results.

Value Added (GDP) – This figure represents net output generated by the initial expenditures in the province. It is typically the sum of wages, rent, interest and profits in addition to indirect business taxes and depreciation minus subsidies.

Employment – This refers to the total person years (full-time equivalent jobs) generated by the activity expenditures.

Taxes – Our impact system generates a large number of taxes (income taxes, HST, liquor and tobacco taxes, and others) each of which is linked with the level of government receiving it. For example, the Federal government receives the proceeds from the HST, the Provincial government receives the tobacco and liquor taxes and a portion of the HST, and the local governments receive the property and business tax.

Imports – These represent the goods and services acquired from outside the province to sustain the activities of the facilities. They essentially represent leakages from the province.

Multipliers – These are summary measures that represent the division of the total impacts (direct, indirect and induced) by the initial expenditures. For example, the income multiplier associated with the total operational expenditures of a farm is calculated by dividing the total income (value added) impact by the initial operating expenditures. The only exception is that of the employment multiplier where total employment is divided by direct employment in order to preserve the common units.

4

Results

The impact results displayed and discussed in this section are the aggregate economic impacts. A three dimensional perspective is adopted where the standard impact measures are presented in terms of direct, indirect and induced measures. The Greenbelt emerges as a major economic area where the land based activities make substantial economic contributions on an annual and sustainable basis. The protection of this key area not only protects environmental amenities and capital, but also protects substantial economic activity that may not exist in its absence.

The direct economic impact of Greenbelt associated activities exceeds annually \$3 billion (value added) province-wide. When direct, indirect and induced impacts are added this total rises to over \$9.1 billion annually.

A total of 161,495 person years (full-time equivalents) of employment are sustained in Ontario by the total of the three sectors' expenditures sustained by the Greenbelt (see Table 4 and Figure 1). This employment is sustained by a high volume of sales that exceeded \$21.4 billion province-wide.

More than 75,000 Ontarians owe their direct full-time equivalent employment to these Greenbelt activities. This volume of employment is larger than that of the entire fish, forestry, mining, quarrying and oil and gas extraction sector in Ontario (42,300), and a multiple of that of the forestry and logging sector in Ontario (14,600). As well, this volume of employment is significantly larger than the utility sector in Ontario (46,300).¹

When the volume of employment associated with the Greenbelt activities is compared to other sector employment in the Toronto Economic Region, it is nearly as large as public administration (93,100).²



¹ The Ontario fish, forestry, mining, quarrying and oil and gas extraction employment is from CANSIM series V2719604. For forestry and logging V2719605, for utilities V2719608.

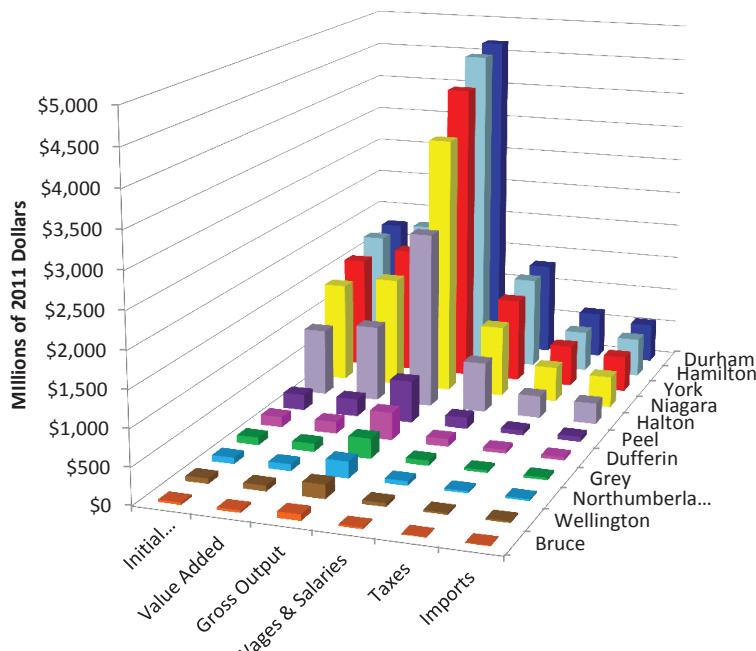
² The employment figures for the Toronto Economic Region by sector are obtained from CANSIM series V2098607 for agriculture, V2098608 for fishing, forestry, mining, quarrying and oil and gas extraction, and V2098609 for utilities and V2098623 for public administration.

Table 4
Province-Wide Economic Impacts of Selected Sectors in the Greenbelt
(Millions of 2011 Dollars)

	Niagara	Durham	York	Wellington	Northumberland	Grey	Dufferin	Bruce	Peel	Halton	Hamilton	Greenbelt
<i>Initial Expenditure</i>	\$1,401	\$1,769	\$1,580	\$75	\$89	\$108	\$147	\$33	\$224	\$936	\$1,751	\$8,113
<i>Value Added</i>												
Direct	\$530	\$661	\$556	\$27	\$34	\$39	\$54	\$11	\$79	\$355	\$679	\$3,025
Indirect & Induced	\$1,021	\$1,345	\$1,237	\$53	\$63	\$78	\$112	\$25	\$168	\$710	\$1,306	\$6,118
Total	\$1,551	\$2,006	\$1,793	\$80	\$97	\$117	\$166	\$36	\$247	\$1,065	\$1,985	\$9,143
Multiplier	1.11	1.13	1.13	1.07	1.09	1.08	1.13	1.09	1.10	1.14	1.13	1.13
<i>Gross Output</i>												
Direct	\$1,330	\$1,722	\$1,552	\$69	\$83	\$101	\$142	\$32	\$224	\$936	\$1,751	\$7,942
Indirect & Induced	\$2,311	\$2,955	\$2,673	\$124	\$147	\$180	\$245	\$55	\$365	\$1,534	\$2,837	\$13,426
Total	\$3,641	\$4,677	\$4,225	\$193	\$230	\$281	\$387	\$87	\$589	\$2,470	\$4,588	\$21,368
Multiplier	2.60	2.64	2.67	2.57	2.58	2.60	2.63	2.64	2.63	2.64	2.62	2.63
<i>Wages & Salaries</i>												
Direct	\$378	\$495	\$423	\$18	\$23	\$26	\$41	\$8	\$42	\$264	\$480	\$2,198
Indirect & Induced	\$626	\$828	\$767	\$33	\$41	\$48	\$69	\$16	\$119	\$439	\$821	\$3,807
Total	\$1,004	\$1,323	\$1,190	\$51	\$64	\$74	\$110	\$24	\$161	\$703	\$1,301	\$6,005
<i>Employment</i>												
Direct	13,241	16,891	14,330	643	852	965	1,431	298	1,485	8,950	16,430	75,516
Indirect & Induced	14,171	18,577	17,056	752	881	1,090	1,526	342	2,822	9,915	18,847	85,979
Total	27,412	35,468	31,386	1,394	1,733	2,055	2,957	640	4,307	18,865	35,277	161,495
Multiplier	2.07	2.10	2.19	2.17	2.03	2.13	2.07	2.15	2.90	2.11	2.15	2.14
<i>Taxes</i>												
Federal	\$258	\$342	\$306	\$14	\$15	\$20	\$27	\$6	\$39	\$169	\$317	\$1,513
Provincial	\$180	\$238	\$212	\$9	\$12	\$13	\$21	\$4	\$25	\$110	\$200	\$1,024
Local	\$55	\$71	\$63	\$3	\$4	\$4	\$7	\$1	\$7	\$33	\$60	\$308
Total	\$493	\$651	\$581	\$26	\$31	\$37	\$55	\$11	\$71	\$312	\$577	\$2,845
<i>Imports</i>												
From Other Provinces	\$280	\$354	\$319	\$16	\$18	\$23	\$30	\$8	\$46	\$189	\$348	\$1,631
From Other Countries	\$159	\$204	\$186	\$8	\$10	\$12	\$16	\$3	\$25	\$107	\$201	\$931
Total	\$439	\$558	\$505	\$24	\$28	\$35	\$46	\$11	\$71	\$296	\$549	\$2,562

Source: Econometric Research Limited

Figure 1 - Province Wide Economic Impacts of Selected Sectors in the Greenbelt



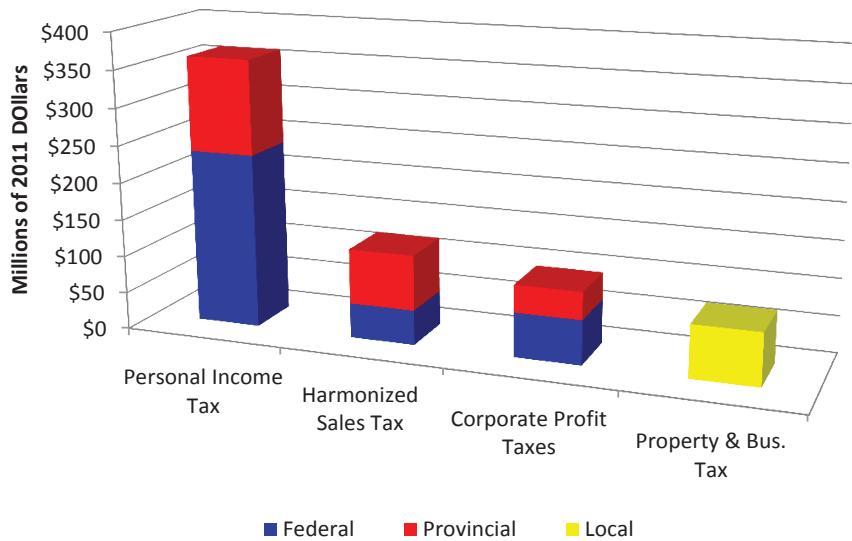
The existence of a healthy Greenbelt in Ontario also generates strong Canada-wide benefits and significant tax revenues for all levels of government, exceeding \$2.8 billion (Table 5 and Figure 2). The federal government's share is over \$1.5 billion, the provincial government collected \$1.0 billion and local governments collectively received \$307 million.

Table 5
Province-Wide Tax Impacts of the Selected Sectors in the Greenbelt
(Millions of 2011 Dollars)

	Niagara	Durham	York	Wellington	Northumberland	Grey	Dufferin	Bruce	Peel	Halton	Hamilton	Greenbelt Total
<i>Federal</i>												
Personal Income Tax	\$178	\$235	\$211	\$9	\$10	\$14	\$19	\$4	\$28	\$124	\$230	\$1,062
Harmonized Sales Tax	\$32	\$47	\$41	\$2	\$2	\$2	\$3	\$1	\$3	\$13	\$24	\$170
Corporate Profit Taxes	\$48	\$60	\$54	\$3	\$3	\$4	\$5	\$1	\$8	\$32	\$61	\$279
Subtotal	\$258	\$342	\$306	\$14	\$15	\$20	\$27	\$6	\$39	\$169	\$317	\$1,513
<i>Provincial</i>												
Personal Income Tax	\$96	\$127	\$113	\$6	\$6	\$7	\$11	\$2	\$16	\$69	\$125	\$578
Harmonized Sales Tax	\$54	\$74	\$68	\$2	\$4	\$4	\$7	\$1	\$5	\$21	\$38	\$278
Corporate Profit Taxes	\$30	\$37	\$31	\$1	\$2	\$2	\$3	\$1	\$4	\$20	\$36	\$167
Subtotal	\$180	\$238	\$212	\$9	\$12	\$13	\$21	\$4	\$25	\$110	\$200	\$1,024
<i>Local</i>												
Property & Bus. Tax	\$55	\$71	\$63	\$3	\$4	\$4	\$7	\$1	\$7	\$33	\$60	\$308
Total	\$493	\$651	\$581	\$26	\$31	\$37	\$55	\$11	\$71	\$312	\$577	\$2,845

Source: Econometric Research Limited

Figure 2 - Province Wide Tax Impacts of Selected Sectors in the Greenbelt



All of the relevant multipliers compare favourably to average economy wide multipliers. The income multipliers of these expenditures are relatively high with an average income multiplier of 1.13, as compared to the average industrial income multiplier of 1.07. The provincial economy, much as the national economy, has become increasingly more open and leakages from provincial and local economies have increased under globalization trends and free trade agreements. This explains why the typical income and employment multipliers have continuously decreased over time so that now even a slightly larger than one multiplier is considered to be relatively high. The employment multiplier is also relatively high. The provincial employment multiplier is 2.14 suggesting that for every direct job generated by tourism expenditures more than 1.14 jobs were generated by the indirect and induced effects.

There are good reasons why these sectors sustain relatively large impacts in the Province. First, these sectors are labour intensive. Second, they typically involve large expenditures in the very sectors that Ontario has comparative advantage in—tourism, recreation, agriculture, and forestry. Third, they represent highly recurrent activities whose impacts are considered to be sustainable and cumulative. These factors in combination explain the reasons why high multipliers were associated with these expenditures in the Province.

Appendix A: Local and Provincial Impacts by CSD

The aggregate economic impacts of the Greenbelt area were presented in the main body of the Report. This Appendix describes the local impacts and their province-wide impacts. Economic impact results here are organized by county or regional municipality; however, within each county or regional municipality the economic impacts by CSDs are also presented.

BRUCE COUNTY

Impacts in Bruce County

The economic impacts of the selected sectors connected to the Greenbelt in Bruce County are naturally smaller than those in the Province and other local economies in the horseshoe area. The regional economy is smaller and less diversified and it is not surprising therefore for these impacts to be limited.

A total of 534 person years (full-time equivalents) of employment are sustained in Bruce County by the total selected sectors' activities anchored on the Greenbelt base in the Region in 2011 (see Table A1 and Figure A1). This employment is sustained by the volume of regional sales that exceeded \$72 million.

This volume of expenditures is credited with supporting a permanent increase in regional income of about \$30 million. This increase in income is split between wages and salaries and other property incomes (Table A1). An increase in wages and salaries of over \$20 million is sustained in Bruce County; representing two thirds of the income increase. The effective wages and salaries sustained by these expenditures in the Region are considered competitive and comparable to tourism wages in other Ontario regions. The direct effective wage was relatively low but over \$28,819, while the total effective wage is higher at \$37,425.

All levels of government derive revenues on these regional impacts exceeding \$9 million (Table A2 and Figure A2). The federal government collected the lion's share with \$5 million, the provincial government collected \$3 million and the local government about \$1 million on these impacts.

The relevant multipliers are understandably considerably lower than the provincial multiplier. Again this is a reflection of the limited economic size of the region and its level of industrial diversification. The average income multipliers of the selected sectors' expenditures are around 0.91.

The employment multiplier associated with these expenditures is relatively high. The average regional employment multiplier associated with the selected sectors' expenditures in the Region is 1.79, suggesting that for every direct job generated by these expenditures another three quarters of a job was generated by the indirect and induced effects.

There are good reasons why the selected sectors sustain relatively large impacts in the Region. First, these sectors are labour intensive. Second, the regional economy is typically rural, agriculturally oriented and attracts large tourism expenditures which explains why the procurement of large proportions of local inputs can sustain related demands. Third, the green activities are highly recurrent activities; they are typically sustainable activities and are expected to grow and prosper with the increased awareness and the pursuit of environmentally sustainable activities. These factors in combination explain the reasons why large impacts were associated with these expenditures in the Region.

Table A1
Local Economic Impacts of Selected Sectors in Bruce County
(Millions of 2011 Dollars)

	Northern Bruce Peninsula
<i>Initial Expenditure</i>	\$33
<i>Value Added</i>	
Direct	\$11
Indirect & Induced	\$19
Total	\$30
Multiplier	0.91
<i>Gross Output</i>	
Direct	\$32
Indirect & Induced	\$40
Total	\$72
Multiplier	2.18
<i>Wages & Salaries</i>	
Direct	\$8
Indirect & Induced	\$12
Total	\$20
<i>Employment</i>	
Direct	298
Indirect & Induced	236
Total	534
Multiplier	1.79
<i>Taxes</i>	
Federal	\$5
Provincial	\$3
Local	\$1
Total	\$9
<i>Imports</i>	
From Other Provinces	\$6
From Other Countries	\$3
Total	\$9

Source: Econometric Research Limited

Figure A1 - Local Economic Impacts of Selected Sectors in Bruce County

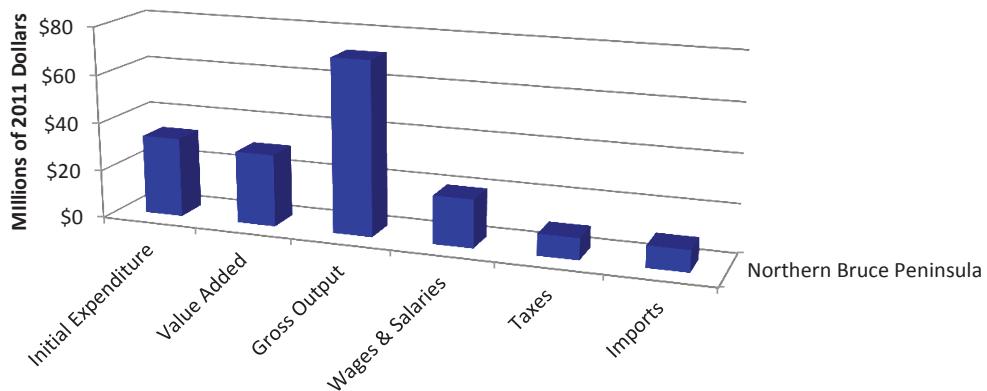
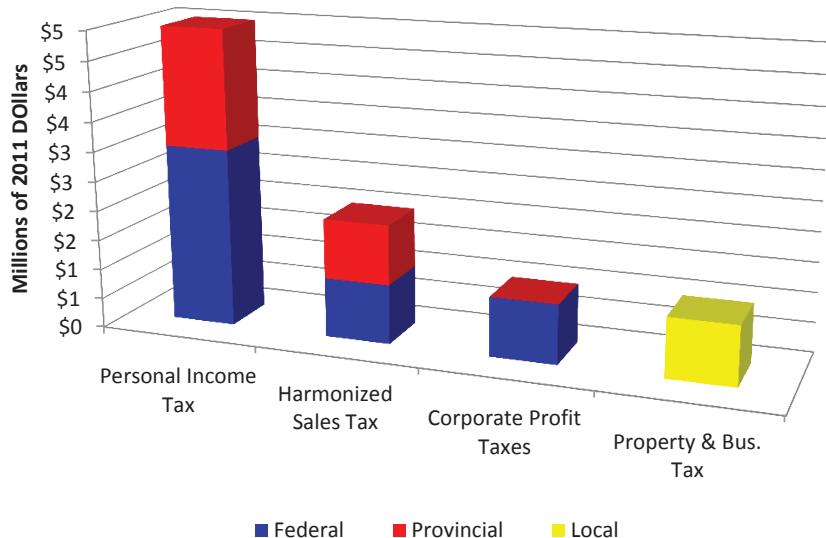


Table A2
Local Tax Impacts of Selected Sectors in Bruce County
(Millions of 2011 Dollars)

	Northern Bruce Peninsula
<i>Federal</i>	
Personal Income Tax	\$3
Harmonized Sales Tax	\$1
Corporate Profit Taxes	\$1
Subtotal	\$5
<i>Provincial</i>	
Personal Income Tax	\$2
Harmonized Sales Tax	\$1
Corporate Profit Taxes	\$0
Subtotal	\$3
<i>Local</i>	
Property & Bus. Tax	\$1
Total	\$9

Source: Econometric Research Limited

Figure A2 - Local Tax Impacts of Selected Sectors in Bruce County



Province-Wide Impacts

A total of 640 person years (full-time equivalents) of employment are sustained in Ontario by the total green industry expenditures in Bruce County (see Table A3 and Figure A3). This employment impact is sustained by a volume of provincial sales that exceeded \$87 million province-wide.

This volume of green industry expenditures is also credited with supporting a permanent increase of Ontario's GDP of about \$36 million, of which wages and salaries accounted for about \$24 million. The effective wages and salaries sustained by these expenditures are reasonable. The direct effective wage is over \$26,817 and the total effective wage is higher at \$37,500. The fact that total effective wages are higher than direct effective wages is indicative of the typical high wages paid in green products related sectors such as business services and manufacturing.

All levels of government derive revenues on these impacts (Table A4 and Figure A4). The total revenues collected are over \$11 million with the federal government's share of \$6 million. The provincial government collected \$4 million and local governments in Ontario collected over \$1 million.

All of the relevant multipliers compare favourably to average economy wide multipliers. The income multiplier of these expenditures is relatively high with an average income multiplier of 1.09. The provincial economy, much as the national economy, has become increasingly more open and leakages from provincial and local economies have increased under globalization trends and free trade agreements. This explains why the typical income and employment multipliers have continuously decreased over time.

so that now even a slightly larger than one multiplier is considered to be relatively high (Table A3). The employment multiplier is also relatively high. The provincial employment multiplier is 2.15 suggesting that for every direct job generated by the selected sectors' expenditures more than 1.15 jobs were generated by the indirect and induced effects.

Table A3
Province-Wide Economic Impacts of Selected Sectors in Bruce County
(Millions of 2011 Dollars)

	Northern Bruce Peninsula
<i>Initial Expenditure</i>	\$33
<i>Value Added</i>	
Direct	\$11
Indirect & Induced	\$25
Total	\$36
Multiplier	1.09
<i>Gross Output</i>	
Direct	\$32
Indirect & Induced	\$55
Total	\$87
Multiplier	2.64
<i>Wages & Salaries</i>	
Direct	\$8
Indirect & Induced	\$16
Total	\$24
<i>Employment</i>	
Direct	298
Indirect & Induced	342
Total	640
Multiplier	2.15
<i>Taxes</i>	
Federal	\$6
Provincial	\$4
Local	\$1
Total	\$11
<i>Imports</i>	
From Other Provinces	\$8
From Other Countries	\$3
Total	\$11

Source: Econometric Research Limited

Figure A3 - Province Wide Economic Impacts of Selected Sectors in Bruce County

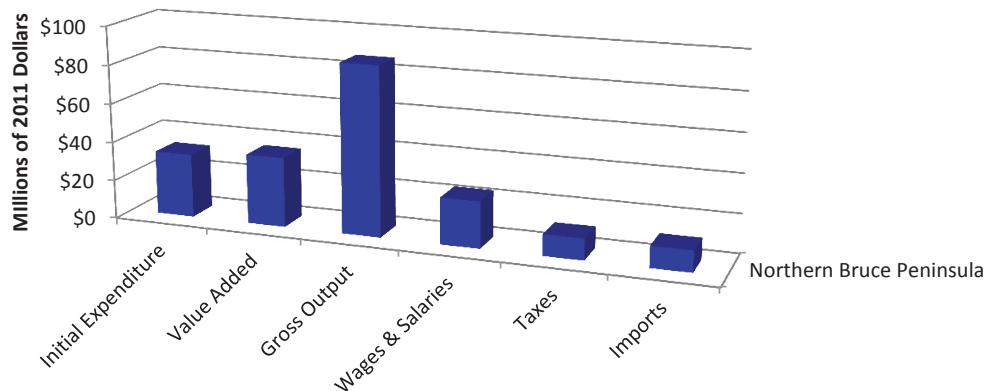
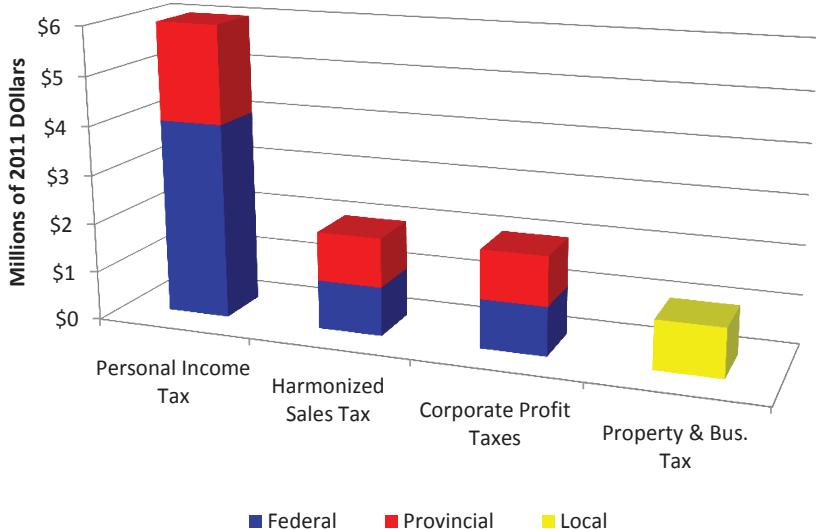


Table A4
Province-Wide Tax Impacts of Selected Sectors in Bruce County
 (Millions of 2011 Dollars)

	Northern Bruce Peninsula
<i>Federal</i>	
Personal Income Tax	\$4
Harmonized Sales Tax	\$1
Corporate Profit Taxes	\$1
Subtotal	\$6
<i>Provincial</i>	
Personal Income Tax	\$2
Harmonized Sales Tax	\$1
Corporate Profit Taxes	\$1
Subtotal	\$4
<i>Local</i>	
Property & Bus. Tax	\$1
Total	\$11

Source: Econometric Research Limited

Figure A4 - Province Wide Tax Impacts of Selected Sectors in Bruce County



DUFFERIN COUNTY

Impacts in Dufferin County

The Greenbelt straddles three municipalities with Dufferin County. The sectors based on the Greenbelt natural capital make impacts in Mono, Mulmur and Orangeville Census Subdivisions within Dufferin County. The economic impacts of the selected sectors connected to the Greenbelt in Dufferin County include the following:

- A total of 2,461 person years (full-time equivalents) of employment are sustained in Dufferin County by the total selected sectors' activities (see Table A5 and Figure A5). This employment impact is split into 667 person years in Mono, 367 person years in Mulmur and 1,427 person years in Orangeville.
- These impacts are driven by a sales volume of \$320 million. This volume of expenditures is credited with supporting a permanent increase in regional income of about \$138 million.
- Wages and salaries are augmented to the tune of \$91 million (Table A5).

- The effective wages and salaries sustained by these expenditures include an effective direct wage of \$28,804, while the total effective wage is higher at \$36,975.
- All levels of government derive revenues on these regional impacts exceeding \$45 million (Table A6 and Figure A6). The federal government collected the lion's share with \$22 million, the provincial government collected \$18 million and the local government about \$5 million on these impacts.
- The relevant multipliers are understandably considerably lower than the provincial multiplier. Again this is a reflection of the limited economic size of the region and its level of industrial diversification. The average income multipliers of the selected sectors' expenditures are around 0.94 (0.93 in Mono, 0.88 in Mulmur and 0.96 in Orangeville).
- The employment multiplier associated with these expenditures is relatively high. The average regional employment multiplier associated with the selected sectors' expenditures in the Region is 1.73, suggesting that for every direct job generated by these expenditures another 0.73 of a job was generated by the indirect and induced effects.

Table A5
Local Economic Impacts of Selected Sectors in Dufferin County
(Millions of 2011 Dollars)

	Mono	Mulmur	Orangeville	Dufferin Total
<i>Initial Expenditure</i>	\$41	\$24	\$82	\$147
<i>Value Added</i>				
Direct	\$14	\$7	\$33	\$54
Indirect & Induced	\$24	\$14	\$46	\$84
Total	\$38	\$21	\$79	\$138
Multiplier	0.93	0.88	0.96	0.94
<i>Gross Output</i>				
Direct	\$39	\$22	\$81	\$142
Indirect & Induced	\$50	\$40	\$136	\$226
Total	\$89	\$52	\$179	\$320
Multiplier	2.17	2.17	2.18	2.18
<i>Wages & Salaries</i>				
Direct	\$10	\$5	\$26	\$41
Indirect & Induced	\$14	\$9	\$27	\$50
Total	\$24	\$14	\$53	\$91
<i>Employment</i>				
Direct	376	191	856	1,423
Indirect & Induced	291	176	571	1,038
Total	667	367	1,427	2,461
Multiplier	1.77	1.92	1.67	1.73
<i>Taxes</i>				
Federal	\$6	\$3	\$13	\$22
Provincial	\$5	\$3	\$10	\$18
Local	\$1	\$1	\$3	\$5
Total	\$12	\$7	\$26	\$45
<i>Imports</i>				
From Other Provinces	\$7	\$4	\$13	\$24
From Other Countries	\$4	\$2	\$8	\$14
Total	\$11	\$6	\$21	\$38

Source: Econometric Research Limited

Figure A5 - Local Economic Impacts of Selected Sectors in Dufferin County

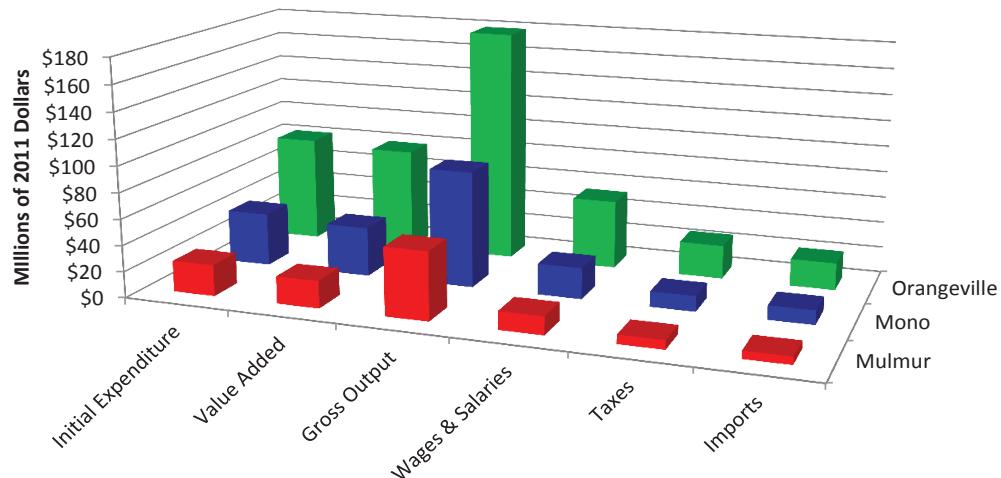
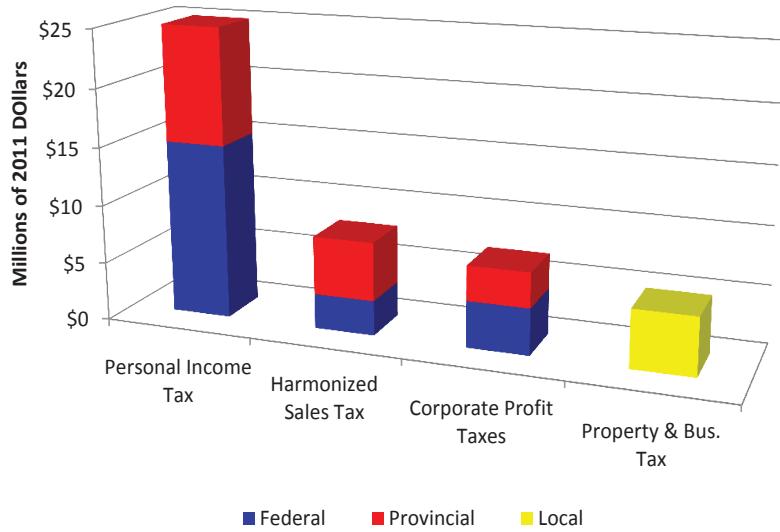


Table A6
Local Tax Impacts of Selected Sectors in Dufferin County
(Millions of 2011 Dollars)

	Mono	Mulmur	Orangeville	Dufferin Total
Federal				
Personal Income Tax	\$4	\$2	\$9	\$15
Harmonized Sales Tax	\$1	\$0	\$2	\$3
Corporate Profit Taxes	\$1	\$1	\$2	\$4
Subtotal	\$6	\$3	\$13	\$22
Provincial				
Personal Income Tax	\$3	\$2	\$5	\$10
Harmonized Sales Tax	\$1	\$1	\$3	\$5
Corporate Profit Taxes	\$1	\$0	\$2	\$3
Subtotal	\$5	\$3	\$10	\$18
Local				
Property & Bus. Tax	\$1	\$1	\$3	\$5
Total	\$12	\$7	\$26	\$45

Source: Econometric Research Limited

Figure A6 - Local Tax Impacts of Selected Sectors in Dufferin County



Province-Wide Impacts

Larger province-wide impacts derive from the selected sectors' activities in Dufferin County. These impacts result from those sectors' activities in Mono, Mulmur and Orangeville. These impacts include:

- A total of 2,957 person years (full-time equivalents) of employment are sustained in Ontario by the total green industry expenditures in Dufferin County (see Table A7 and Figure A7). This employment impact is sustained by a volume of provincial sales that exceeded \$387 million province-wide.
- This volume of green industry expenditures is also credited with supporting a permanent increase of Ontario's GDP of about \$166 million, of which wages and salaries accounted for about \$110 million.
- The effective wages and salaries sustained by these expenditures are reasonable. The direct effective wage is over \$28,645 and the total effective wage is higher at \$37,195.
- All levels of government derive revenues on these impacts (Table A8 and Figure A8). The total revenues collected are over \$55 million with the federal government's share of \$27 million. The provincial government collected \$21 million and local governments in Ontario collected over \$7 million.

- All of the relevant multipliers compare favourably to average economy wide multipliers. The income multiplier of these expenditures is relatively high with an average income multiplier of 1.13 (1.10 in Mono, 1.04 in Mulmur and 1.17 in Orangeville)
- The employment multiplier is also relatively high. The provincial employment multiplier is 2.07 suggesting that for every direct job generated by the selected sectors' expenditures more than 1.07 jobs were generated by the indirect and induced effects.

Table A7
Province-Wide Economic Impacts of Selected Sectors in Dufferin County
(Millions of 2011 Dollars)

	Mono	Mulmur	Orangeville	Dufferin Total
<i>Initial Expenditure</i>	\$41	\$24	\$82	\$147
<i>Value Added</i>				
Direct	\$14	\$7	\$33	\$54
Indirect & Induced	\$31	\$18	\$63	\$112
Total	\$45	\$25	\$96	\$166
Multiplier	1.10	1.04	1.17	1.13
<i>Gross Output</i>				
Direct	\$39	\$22	\$81	\$142
Indirect & Induced	\$69	\$40	\$136	\$245
Total	\$108	\$62	\$217	\$387
Multiplier	2.63	2.58	2.65	2.63
<i>Wages & Salaries</i>				
Direct	\$10	\$5	\$26	\$41
Indirect & Induced	\$19	\$12	\$38	\$69
Total	\$29	\$17	\$64	\$110
<i>Employment</i>				
Direct	376	191	864	1,431
Indirect & Induced	422	248	856	1,526
Total	798	439	1,721	2,957
Multiplier	2.12	2.30	1.99	2.07
<i>Taxes</i>				
Federal	\$7	\$4	\$16	\$27
Provincial	\$6	\$3	\$12	\$21
Local	\$2	\$1	\$4	\$7
Total	\$15	\$8	\$32	\$55
<i>Imports</i>				
From Other Provinces	\$9	\$5	\$16	\$30
From Other Countries	\$5	\$2	\$9	\$16
Total	\$14	\$7	\$25	\$46

Source: Econometric Research Limited

Figure A7 - Province Wide Economic Impacts of Selected Sectors in Dufferin County

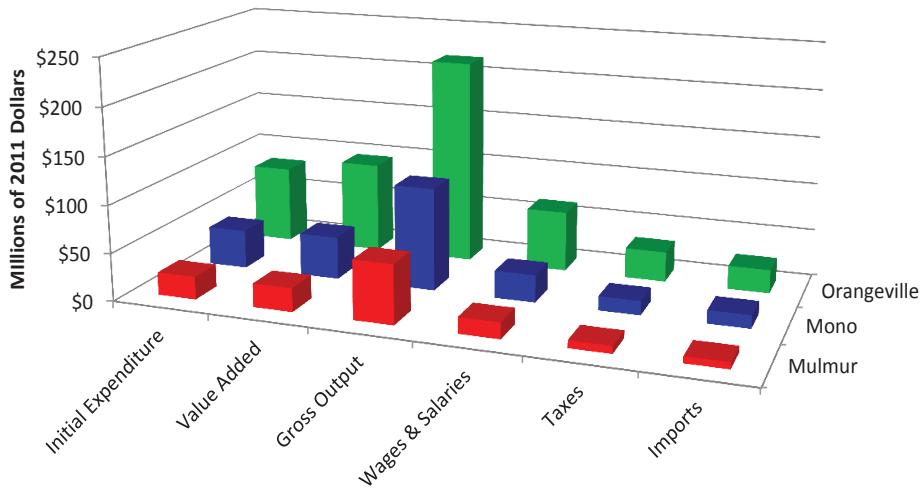
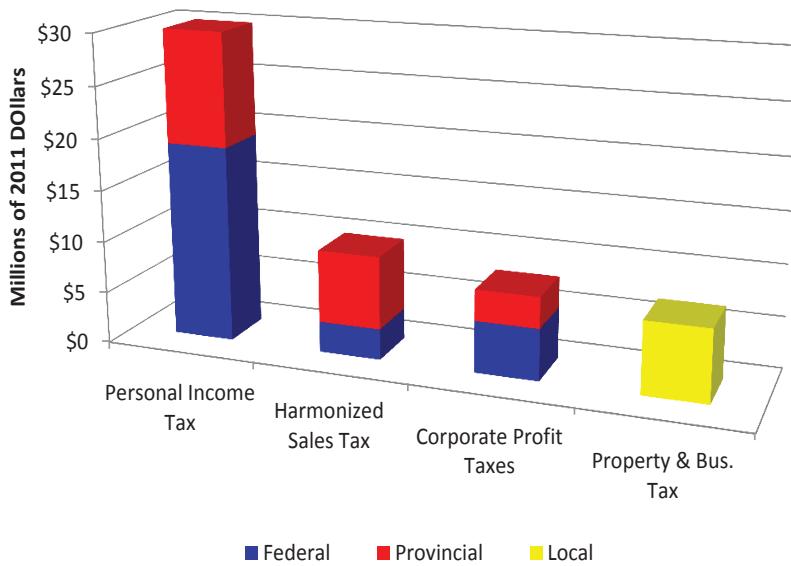


Table A8
Province-Wide Tax Impacts of Selected Sectors in Dufferin County
(Millions of 2011 Dollars)

	Mono	Mulmur	Orangeville	Dufferin Total
<i>Federal</i>				
Personal Income Tax	\$5	\$3	\$11	\$19
Harmonized Sales Tax	\$1	\$0	\$2	\$3
Corporate Profit Taxes	\$1	\$1	\$3	\$5
Subtotal	\$7	\$4	\$16	\$27
<i>Provincial</i>				
Personal Income Tax	\$3	\$2	\$6	\$11
Harmonized Sales Tax	\$2	\$1	\$4	\$7
Corporate Profit Taxes	\$1	\$0	\$2	\$3
Subtotal	\$6	\$3	\$12	\$21
<i>Local</i>				
Property & Bus. Tax	\$2	\$1	\$4	\$7
Total	\$15	\$8	\$32	\$55

Source: Econometric Research Limited

Figure A8 - Province Wide Tax Impacts of Selected Sectors in Dufferin County



DURHAM REGION

Impacts in Durham Region

The Greenbelt represents a significant portion of several Census Subdivisions in Durham Region. The list includes:

Clarington	Scugog
Uxbridge	Brock
Whitby	Oshawa
Pickering	Ajax

The selected sectors anchored on the Greenbelt natural capital base make significant impacts in each and every one of these Census Subdivisions within Durham Region. The economic impacts of the selected sectors connected to the Greenbelt in Durham Region include the following:

- A total of 29,495 person years (full-time equivalents) of employment are sustained in Durham Region by the total selected sectors' activities (see Table A9 and Figure A9). This employment impact is split as follows:

Clarington	4,353	Scugog	2,352
Uxbridge	1,915	Brock	1,278
Whitby	5,566	Oshawa	6,444
Pickering	3,975	Ajax	3,612

- These impacts are driven by a sales volume of \$3.9 billion. This large volume of expenditures is credited with supporting a permanent increase in regional income of about \$1.7 billion.
- Wages and salaries are augmented to the tune of \$1.1 billion (Table A9).
- The effective wages and salaries sustained by these expenditures include an effective direct wage of \$29,306, while the total effective wage is higher at \$37,159. The total effective wage varies by CSD as follows:

Clarington	\$36,297	Scugog	\$36,993
Uxbridge	\$37,072	Brock	\$35,985
Whitby	\$37,550	Oshawa	\$37,089
Pickering	\$37,987	Ajax	\$37,377

- All levels of government derive revenues on these regional impacts exceeding \$539 million (Table A10 and Figure A10). The federal government collected the lion's share with \$238 million, the provincial government collected \$197 million and the local government about \$59 million on these impacts.
- The average income multipliers of the selected sectors' expenditures is around 0.94 and is distributed over the constituent CSD's as follows:

Clarington	0.93	Scugog	0.89
Uxbridge	0.89	Brock	0.89
Whitby	0.95	Oshawa	0.96
Pickering	0.94	Ajax	0.96

- The employment multiplier associated with these expenditures is high. The average regional employment multiplier associated with the selected sectors' expenditures in the Region is 1.75, suggesting that for every direct job generated by these expenditures another three quarters of a job was generated by the indirect and induced effects. The CSD employment multipliers are as follows:

Clarington	1.68	Scugog	1.88
Uxbridge	1.94	Brock	1.82
Whitby	1.75	Oshawa	1.67
Pickering	1.83	Ajax	1.68

Table A9
Local Economic Impacts of Selected Sectors in Durham Region
(Millions of 2011 Dollars)

	Clarington	Scugog	Uxbridge	Brock	Whitby	Oshawa	Pickering	Ajax	Durham Total
Initial Expenditure	\$260	\$151	\$125	\$82	\$330	\$372	\$240	\$209	\$1,769
Value Added									
Direct	\$103	\$51	\$41	\$29	\$123	\$148	\$84	\$82	\$661
Indirect & Induced	\$140	\$84	\$70	\$44	\$190	\$210	\$142	\$119	\$999
Total	\$243	\$135	\$111	\$73	\$313	\$358	\$226	\$201	\$1,660
Multiplier	0.93	0.89	0.89	0.89	0.95	0.96	0.94	0.96	0.94
Gross Output									
Direct	\$249	\$142	\$117	\$76	\$325	\$368	\$238	\$207	\$1,722
Indirect & Induced	\$312	\$187	\$156	\$101	\$402	\$445	\$295	\$251	\$2,149
Total	\$561	\$329	\$273	\$177	\$727	\$813	\$533	\$458	\$3,871
Multiplier	2.16	2.18	2.18	2.16	2.20	2.19	2.22	2.19	2.19
Wages & Salaries									
Direct	\$75	\$36	\$27	\$19	\$95	\$115	\$64	\$64	\$495
Indirect & Induced	\$83	\$51	\$44	\$27	\$114	\$124	\$87	\$71	\$601
Total	\$158	\$87	\$71	\$46	\$209	\$239	\$151	\$135	\$1,096
Employment									
Direct	2,594	1,250	987	701	3,177	3,867	2,167	2,147	16,891
Indirect & Induced	1,759	1,102	928	578	2,389	2,577	1,808	1,464	12,604
Total	4,353	2,352	1,915	1,278	5,566	6,444	3,975	3,612	29,495
Multiplier	1.68	1.88	1.94	1.82	1.75	1.67	1.83	1.68	1.75
Taxes									
Federal	\$41	\$22	\$19	\$12	\$54	\$61	\$39	\$35	\$283
Provincial	\$28	\$16	\$12	\$9	\$38	\$43	\$27	\$24	\$197
Local	\$8	\$5	\$4	\$3	\$11	\$13	\$8	\$7	\$59
Total	\$77	\$43	\$35	\$24	\$103	\$117	\$74	\$66	\$539
Imports									
From Other Provinces	\$42	\$26	\$21	\$14	\$55	\$62	\$41	\$34	\$295
From Other Countries	\$25	\$14	\$12	\$8	\$32	\$35	\$23	\$20	\$169
Total	\$67	\$40	\$33	\$22	\$87	\$97	\$64	\$54	\$464

Source: Econometric Research Limited

Figure A9 - Local Economic Impacts of Selected Sectors in Durham Region

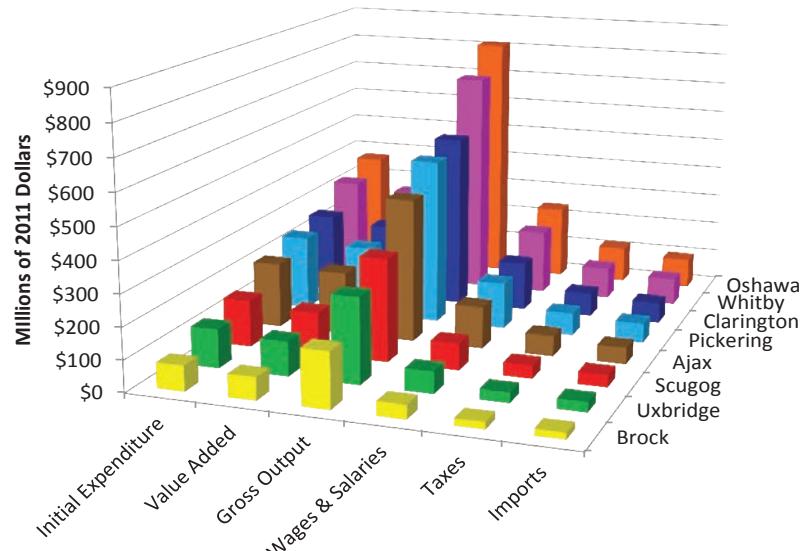
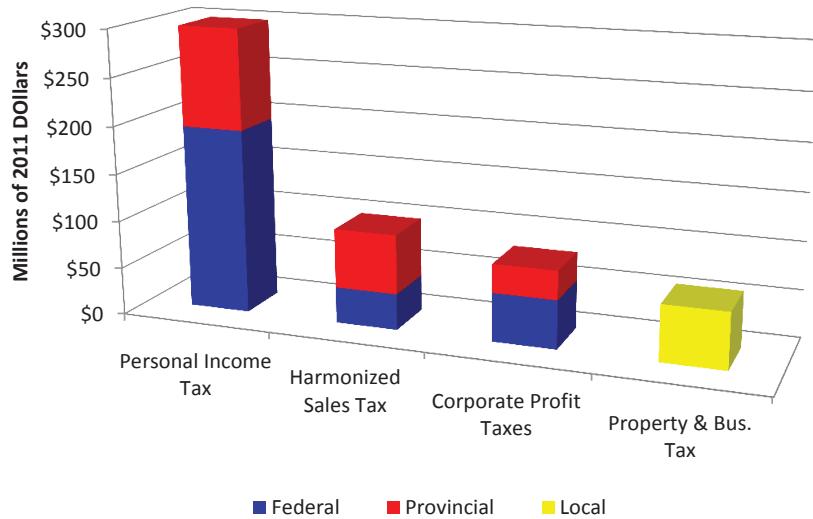


Table A10
Local Tax Impacts of Selected Sectors in Durham Region
(Millions of 2011 Dollars)

	Clarington	Scugog	Uxbridge	Brock	Whitby	Oshawa	Pickering	Ajax	Durham Total
Federal									
Personal Income Tax	\$28	\$15	\$13	\$8	\$37	\$42	\$27	\$24	\$194
Harmonized Sales Tax	\$5	\$3	\$2	\$2	\$8	\$8	\$5	\$5	\$38
Corporate Profit Taxes	\$8	\$4	\$4	\$2	\$9	\$11	\$7	\$6	\$51
Subtotal	\$41	\$22	\$19	\$12	\$54	\$61	\$39	\$35	\$283
Provincial									
Personal Income Tax	\$15	\$9	\$6	\$5	\$20	\$23	\$14	\$13	\$105
Harmonized Sales Tax	\$9	\$4	\$4	\$2	\$12	\$14	\$9	\$8	\$62
Corporate Profit Taxes	\$4	\$3	\$2	\$2	\$6	\$6	\$4	\$3	\$30
Subtotal	\$28	\$16	\$12	\$9	\$38	\$43	\$27	\$24	\$197
Local									
Property & Bus. Tax	\$8	\$5	\$4	\$3	\$11	\$13	\$8	\$7	\$59
Total	\$77	\$43	\$35	\$24	\$103	\$117	\$74	\$66	\$539

Source: Econometric Research Limited

Figure A10 - Local Tax Impacts of Selected Sectors in Durham Region



Province-Wide Impacts

Larger province-wide impacts derive from the selected sectors' activities in Durham Region. These impacts result from those sectors' activities in the eight constituent CSD's. These impacts include:

- A total of 35,468 person years (full-time equivalents) of employment are sustained in Ontario by the total green industry expenditures in Durham Region (see Table A11 and Figure A11). This employment impact is sustained by a volume of provincial sales that exceeded \$4.7 billion province-wide.
- This volume of green industry expenditures is also credited with supporting a permanent increase of Ontario's GDP of about \$2 billion, of which wages and salaries accounted for about \$1.3 billion.
- The effective wages and salaries sustained by these expenditures are reasonable. The direct effective wage is over \$29,306 and the total effective wage is higher at \$37,302.

- All levels of government derive revenues on these impacts (Table A12 and Figure A12). The total revenues collected are over \$651 million with the federal government's share of \$342 million. The provincial government collected \$238 million and local governments in Ontario collected over \$71 million.
- All of the relevant multipliers compare favourably to average economy wide multipliers. The income multiplier of these expenditures is relatively high with an average income multiplier of 1.13. This is distributed as follows:

Clarington	1.12	Scugog	1.07
Uxbridge	1.06	Brock	1.07
Whitby	1.15	Oshawa	1.17
Pickering	1.14	Ajax	1.17

- The employment multiplier is also relatively high. The provincial employment multiplier is 2.10 suggesting that for every direct job generated by the selected sectors' expenditures more than 1.10 jobs were generated by the indirect and induced effects.



Table A11
Province-Wide Economic Impacts of Selected Sectors in Durham Region
(Millions of 2011 Dollars)

	Clarington	Scugog	Uxbridge	Brock	Whitby	Oshawa	Pickering	Ajax	Durham	Total
Initial Expenditure	\$260	\$151	\$125	\$82	\$330	\$372	\$240	\$209	\$1,769	
Value Added										
Direct	\$103	\$51	\$41	\$29	\$123	\$148	\$84	\$82	\$661	
Indirect & Induced	\$189	\$111	\$92	\$59	\$256	\$286	\$190	\$162	\$1,345	
Total	\$292	\$162	\$133	\$88	\$379	\$434	\$274	\$244	\$2,006	
Multiplier	1.12	1.07	1.06	1.07	1.15	1.17	1.14	1.17	1.13	
Gross Output										
Direct	\$249	\$142	\$117	\$76	\$325	\$368	\$238	\$207	\$1,722	
Indirect & Induced	\$426	\$254	\$211	\$136	\$555	\$617	\$408	\$348	\$2,955	
Total	\$675	\$396	\$328	\$212	\$880	\$985	\$646	\$555	\$4,677	
Multiplier	2.60	2.62	2.62	2.59	2.67	2.65	2.69	2.66	2.64	
Wages & Salaries										
Direct	\$75	\$36	\$27	\$19	\$95	\$115	\$64	\$64	\$495	
Indirect & Induced	\$115	\$68	\$58	\$36	\$158	\$175	\$119	\$99	\$828	
Total	\$190	\$104	\$85	\$55	\$253	\$290	\$183	\$163	\$1,323	
Employment										
Direct	2,594	1,250	987	701	3,177	3,867	2,167	2,147	16,891	
Indirect & Induced	2,619	1,562	1,303	826	3,528	3,899	2,629	2,211	18,577	
Total	5,213	2,812	2,290	1,527	6,705	7,766	4,796	4,358	35,468	
Multiplier	2.01	2.25	2.32	2.18	2.11	2.01	2.21	2.03	2.10	
Taxes										
Federal	\$50	\$26	\$22	\$15	\$65	\$74	\$48	\$42	\$342	
Provincial	\$33	\$19	\$15	\$11	\$46	\$52	\$32	\$30	\$238	
Local	\$10	\$6	\$4	\$3	\$14	\$15	\$10	\$9	\$71	
Total	\$93	\$51	\$41	\$29	\$125	\$141	\$90	\$81	\$651	
Imports										
From Other Provinces	\$50	\$31	\$25	\$17	\$66	\$75	\$49	\$41	\$354	
From Other Countries	\$30	\$17	\$15	\$9	\$39	\$42	\$28	\$24	\$204	
Total	\$80	\$48	\$40	\$26	\$105	\$117	\$77	\$65	\$558	

Figure A11 - Province Wide Economic Impacts of Selected Sectors in Durham Region

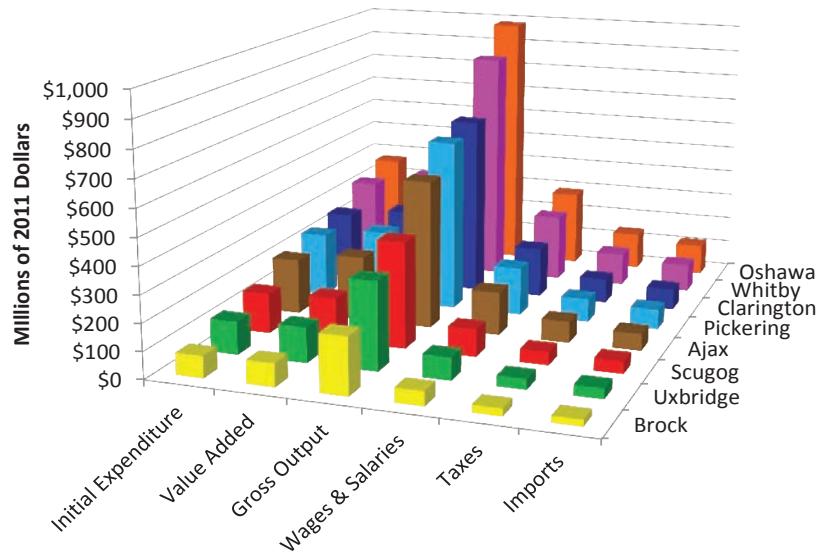
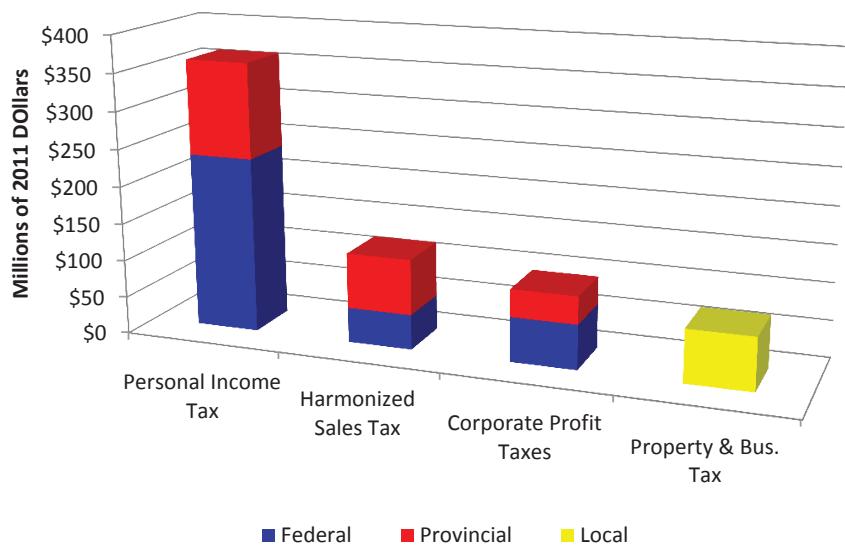


Figure A12 - Province Wide Tax Impacts of Selected Sectors in Durham Region



GREY COUNTY

Impacts in Grey County

The Greenbelt straddles two municipalities with Grey County. The selected sectors based on the Greenbelt natural capital make impacts in Georgian Bluffs and Blue Mountain Census Subdivisions within Grey County. The economic impacts of the selected sectors connected to the Greenbelt in Grey County include the following:

- A total of 1,719 person years (full-time equivalents) of employment are sustained in Grey County by the total selected sectors' activities (see Table A13 and Figure A13). This employment impact is split into 888 person years in Georgian Bluffs and 831 person years in Blue Mountain.
- These impacts are driven by a sales volume of \$233 million. This volume of expenditures is credited with supporting a permanent increase in regional income of about \$97 million.
- Wages and salaries are augmented to the tune of \$62 million (Table A13).
- The effective wages and salaries sustained by these expenditures include an effective direct wage of \$26,937, while the total effective wage is higher at \$36,061.
- All levels of government derive revenues on these regional impacts exceeding \$31 million (Table A14 and Figure A14). The federal government collected the lion's share with \$17 million, the provincial government collected \$11 million and the local government about \$3 million on these impacts.
- The relevant multipliers are understandably considerably lower than the provincial multiplier. Again this is a reflection of the limited economic size of the region and its level of industrial diversification. The average income multipliers of the selected sectors' expenditures are around 0.90 (0.89 in Georgian Bluffs and 0.90 in Blue Mountain).
- The average regional employment multiplier associated with the selected sectors' expenditures in the Region is 1.78, suggesting that for every direct job generated by these expenditures another 0.78 of a job was generated by the indirect and induced effects.

Table A13
Local Economic Impacts of Selected Sectors in Grey County
(Millions of 2011 Dollars)

	Georgian Bluffs	Blue Mountain	Grey Total
<i>Initial Expenditure</i>	\$56	\$52	\$108
<i>Value Added</i>			
Direct	\$20	\$19	\$39
Indirect & Induced	\$30	\$28	\$58
Total	\$50	\$47	\$97
Multiplier	0.89	0.90	0.90
<i>Gross Output</i>			
Direct	\$52	\$49	\$101
Indirect & Induced	\$68	\$87	\$155
Total	\$120	\$113	\$233
Multiplier	2.14	2.17	2.16
<i>Wages & Salaries</i>			
Direct	\$13	\$13	\$26
Indirect & Induced	\$19	\$17	\$36
Total	\$32	\$30	\$62
<i>Employment</i>			
Direct	504	462	965
Indirect & Induced	384	370	754
Total	888	831	1,719
Multiplier	1.76	1.80	1.78
<i>Taxes</i>			
Federal	\$9	\$8	\$17
Provincial	\$6	\$5	\$11
Local	\$2	\$1	\$3
Total	\$17	\$14	\$31
<i>Imports</i>			
From Other Provinces	\$10	\$9	\$19
From Other Countries	\$5	\$5	\$10
Total	\$15	\$14	\$29

Source: Econometric Research Limited

Figure A13 - Local Economic Impacts of Selected Sectors in Grey County

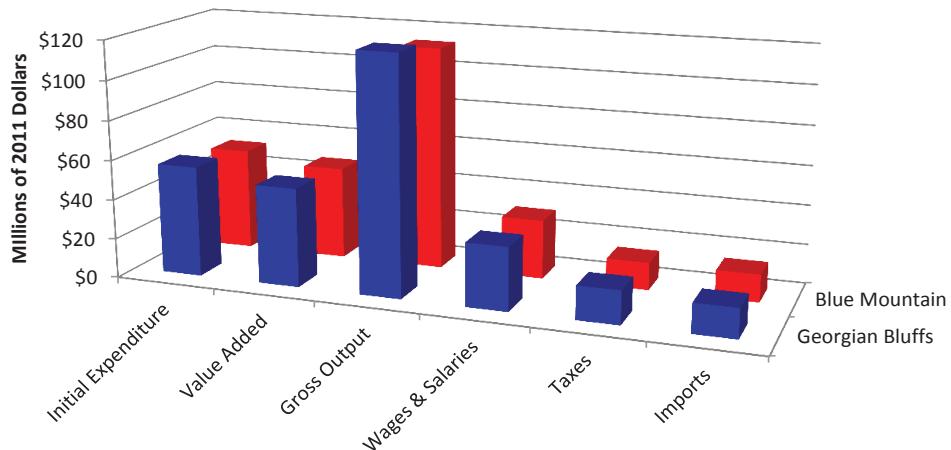
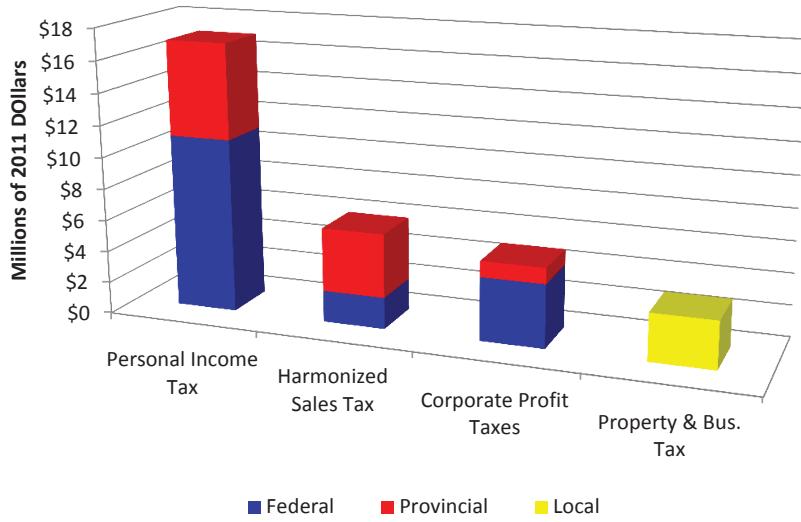


Table A14
Local Tax Impacts of Selected Sectors in Grey County
(Millions of 2011 Dollars)

	Georgian Bluffs	Blue Mountain	Grey Total
Federal			
Personal Income Tax	\$6	\$5	\$11
Harmonized Sales Tax	\$1	\$1	\$2
Corporate Profit Taxes	\$2	\$2	\$4
Subtotal	\$9	\$8	\$17
Provincial			
Personal Income Tax	\$3	\$3	\$6
Harmonized Sales Tax	\$2	\$2	\$4
Corporate Profit Taxes	\$1	\$0	\$1
Subtotal	\$6	\$5	\$11
Local			
Property & Bus. Tax	\$2	\$1	\$3
Total	\$17	\$14	\$31

Source: Econometric Research Limited

Figure A14 - Local Tax Impacts of Selected Sectors in Grey County



Province-Wide Impacts

Larger province-wide impacts derive from the selected sectors' activities in Grey County. These impacts result from those sectors' activities in Georgian Bluffs and Blue Mountain. These impacts include:

- A total of 2,055 person years (full-time equivalents) of employment are sustained in Ontario by the total green industry expenditures in Grey County (see Table A15 and Figure A15). This employment impact is sustained by a volume of provincial sales that exceeded \$281 million province-wide.
- This volume of green industry expenditures is also credited with supporting a permanent increase of Ontario's GDP of about \$117 million, of which wages and salaries accounted for about \$74 million.
- The effective wages and salaries sustained by these expenditures are reasonable. The direct effective wage is over \$26,937 and the total effective wage is higher at \$36,004.

- All levels of government derive revenues on these impacts (Table A16 and Figure A16). The total revenues collected are over \$37 million with the federal government's share of \$20 million. The provincial government collected \$13 million and local governments in Ontario collected over \$4 million.
- All of the relevant multipliers compare favourably to average economy wide multipliers. The income multiplier of these expenditures is relatively high with an average income multiplier of 1.08 (1.07 in Georgian Bluffs and 1.10 in Blue Mountain).
- The employment multiplier is also relatively high. The provincial employment multiplier is 2.13 suggesting that for every direct job generated by the selected sectors' expenditures more than 1.13 jobs were generated by the indirect and induced effects.



Table A15
Province-Wide Economic Impacts of Selected Sectors in Grey County
(Millions of 2011 Dollars)

	Georgian Bluffs	Blue Mountain	Grey Total
<i>Initial Expenditure</i>	\$56	\$52	\$108
<i>Value Added</i>			
Direct	\$20	\$19	\$39
Indirect & Induced	\$40	\$38	\$78
Total	\$60	\$57	\$117
Multiplier	1.07	1.10	1.08
<i>Gross Output</i>			
Direct	\$52	\$49	\$101
Indirect & Induced	\$93	\$87	\$180
Total	\$145	\$136	\$281
Multiplier	2.59	2.62	2.60
<i>Wages & Salaries</i>			
Direct	\$13	\$13	\$26
Indirect & Induced	\$25	\$23	\$48
Total	\$38	\$36	\$74
<i>Employment</i>			
Direct	504	462	965
Indirect & Induced	557	533	1,090
Total	1,061	994	2,055
Multiplier	2.11	2.15	2.13
<i>Taxes</i>			
Federal	\$10	\$10	\$20
Provincial	\$7	\$6	\$13
Local	\$2	\$2	\$4
Total	\$19	\$18	\$37
<i>Imports</i>			
From Other Provinces	\$12	\$11	\$23
From Other Countries	\$6	\$6	\$12
Total	\$18	\$17	\$35

Source: Econometric Research Limited

Figure A15 - Province Wide Economic Impacts of Selected Sectors in Grey County

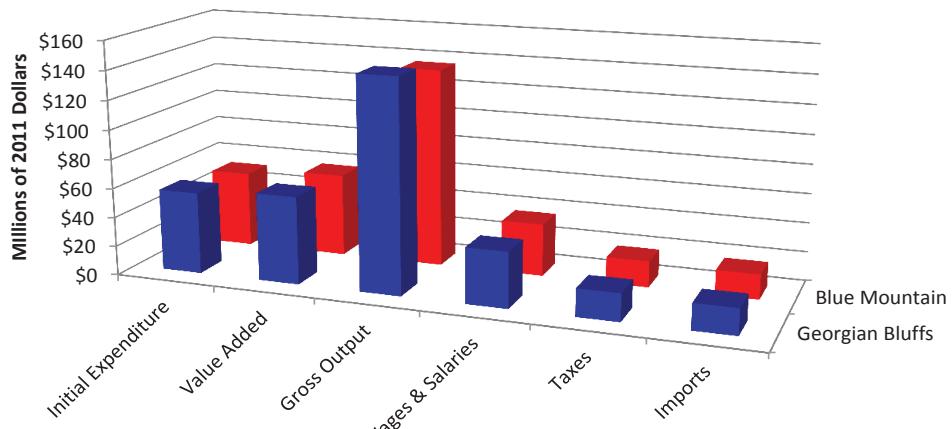
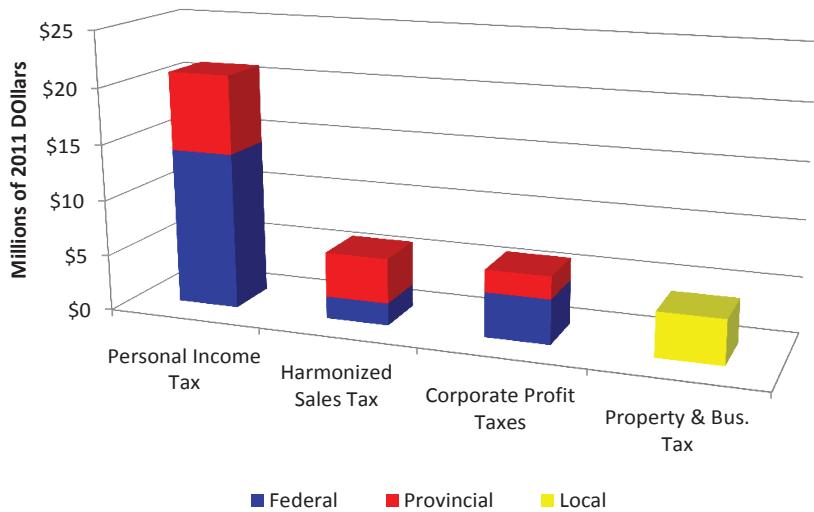


Table A16
Province-Wide Tax Impacts of Selected Sectors in Grey County
 (Millions of 2011 Dollars)

	Georgian Bluffs	Blue Mountain	Grey Total
Federal			
Personal Income Tax	\$7	\$7	\$14
Harmonized Sales Tax	\$1	\$1	\$2
Corporate Profit Taxes	\$2	\$2	\$4
Subtotal	\$10	\$10	\$20
Provincial			
Personal Income Tax	\$4	\$3	\$7
Harmonized Sales Tax	\$2	\$2	\$4
Corporate Profit Taxes	\$1	\$1	\$2
Subtotal	\$7	\$6	\$13
Local			
Property & Bus. Tax	\$2	\$2	\$4
Total	\$19	\$18	\$37

Source: Econometric Research Limited

Figure A16 - Province Wide Tax Impacts of Selected Sectors in Grey County



HALTON REGION

Impacts in the Regional Municipality of Halton

The Greenbelt straddles three municipalities in Halton Region. The selected sectors based on the Greenbelt natural capital make impacts in Halton Hills, Milton and Burlington Census Subdivisions within Halton Region. The economic impacts of those sectors connected to the Greenbelt in Halton Region include the following:

- A total of 11,665 person years (full-time equivalents) of employment are sustained in Halton Region by the total selected sectors' activities (see Table A17 and Figure A17). This employment impact is split into 2,436 person years in Halton Hills, 2,618 in Milton and 6,611 person years in Burlington.
- These impacts are driven by a sales volume of \$1.3 billion. This volume of expenditures is credited with supporting a permanent increase in regional income of about \$589 million.
- Wages and salaries are augmented to the tune of \$389 million (Table A17).

- The effective wages and salaries sustained by these expenditures include an effective direct wage of \$29,497, while the total effective wage is higher at \$33,349.
- All levels of government derive revenues on these regional impacts exceeding \$172 million (Table A18 and Figure A18). The federal government collected the lion's share with \$93 million, the provincial government collected \$61 million and the local government about \$18 million on these impacts.
- The average income multipliers of the selected sectors' expenditures are around 0.63 (0.68 in Halton Hills, 0.66 in Milton and 0.60 in Burlington).
- The average regional employment multiplier associated with the selected sectors' expenditures in the Region is 1.30, suggesting that for every direct job generated by these expenditures another 0.30 of a job was generated by the indirect and induced effects.

Figure A17 - Local Economic Impacts of Selected Sectors in Halton Region

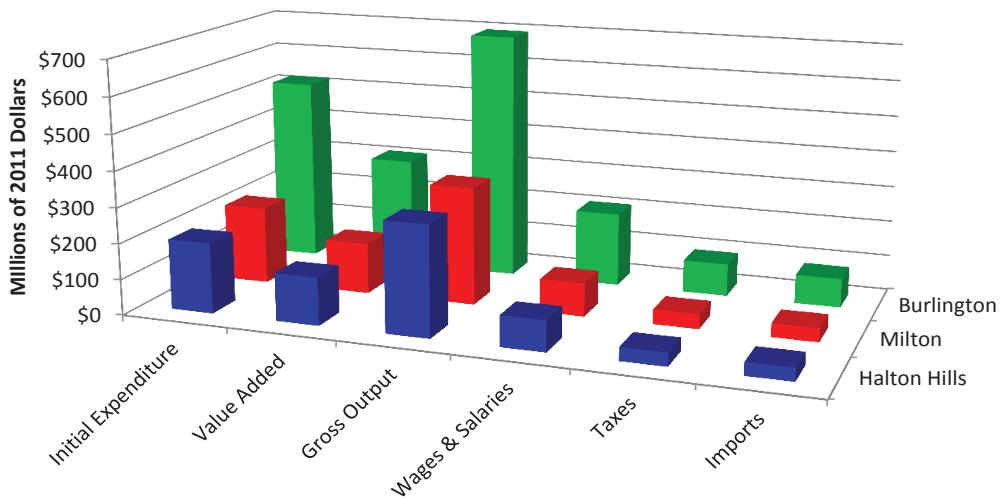


Table A17
Local Economic Impacts of Selected Sectors in Halton Region
(Millions of 2011 Dollars)

	Halton Hills	Milton	Burlington	Halton Total
<i>Initial Expenditure</i>	\$198	\$218	\$520	\$936
<i>Value Added</i>				
Direct	\$72	\$80	\$203	\$355
Indirect & Induced	\$62	\$64	\$108	\$234
Total	\$134	\$144	\$311	\$589
Multiplier	0.68	0.66	0.60	0.63
<i>Gross Output</i>				
Direct	\$198	\$218	\$520	\$936
Indirect & Induced	\$111	\$113	\$175	\$399
Total	\$309	\$331	\$695	\$1,335
Multiplier	1.56	1.52	1.34	1.43
<i>Wages & Salaries</i>				
Direct	\$41	\$49	\$174	\$264
Indirect & Induced	\$46	\$45	\$34	\$125
Total	\$87	\$94	\$208	\$389
<i>Employment</i>				
Direct	1,410	1,690	5,850	8,950
Indirect & Induced	1,026	928	761	2,715
Total	2,436	2,618	6,611	11,665
Multiplier	1.73	1.55	1.13	1.30
<i>Taxes</i>				
Federal	\$20	\$23	\$50	\$93
Provincial	\$14	\$15	\$32	\$61
Local	\$4	\$4	\$10	\$18
Total	\$38	\$42	\$92	\$172
<i>Imports</i>				
From Other Provinces	\$24	\$25	\$52	\$101
From Other Countries	\$13	\$14	\$30	\$57
Total	\$37	\$39	\$82	\$158

Source: Econometric Research Limited

Figure A18 - Local Tax Impacts of Selected Sectors in Halton Region

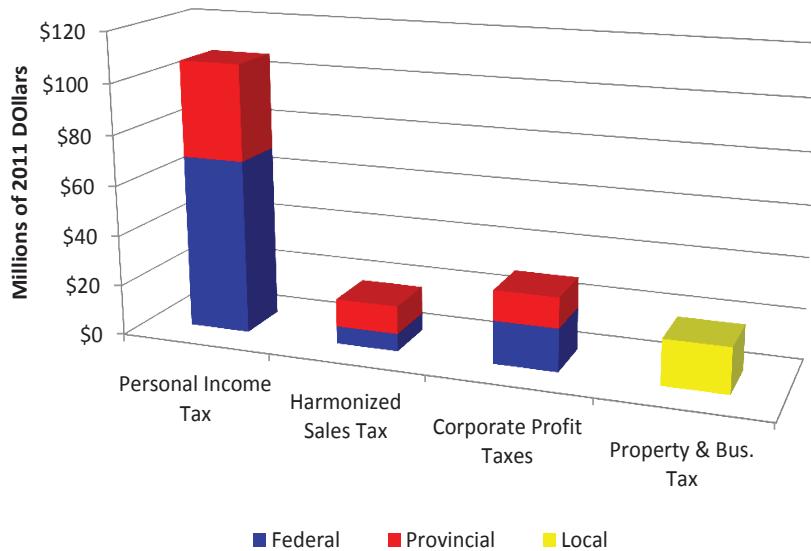


Table A18
Local Tax Impacts of Selected Sectors in Halton Region
(Millions of 2011 Dollars)

	Halton Hills	Milton	Burlington	Halton Total
<i>Federal</i>				
Personal Income Tax	\$15	\$17	\$37	\$69
Harmonized Sales Tax	\$1	\$2	\$4	\$7
Corporate Profit Taxes	\$4	\$4	\$9	\$17
Subtotal	\$20	\$23	\$50	\$93
<i>Provincial</i>				
Personal Income Tax	\$9	\$9	\$20	\$38
Harmonized Sales Tax	\$2	\$3	\$6	\$11
Corporate Profit Taxes	\$3	\$3	\$6	\$12
Subtotal	\$14	\$15	\$32	\$61
<i>Local</i>				
Property & Bus. Tax	\$4	\$4	\$10	\$18
Total	\$38	\$42	\$92	\$172

Source: Econometric Research Limited

Province-Wide Impacts

Larger province-wide impacts derive from the selected sectors' activities in Halton Region. These impacts result from those sectors' activities in Halton Hills, Milton and Burlington. These impacts include:

- A total of 18,865 person years (full-time equivalents) of employment are sustained in Ontario by the total green industry expenditures in Halton Region (see Table A19 and Figure A19). This employment impact is sustained by a volume of provincial sales that exceeded \$2.5 billion province-wide.
- This volume of green industry expenditures is also credited with supporting a permanent increase of Ontario's GDP of about \$1.1 billion, of which wages and salaries accounted for about \$703 million.
- The effective wages and salaries sustained by these expenditures are reasonable. The direct effective wage is over \$29,497 and the total effective wage is higher at \$37,264.
- All levels of government derive revenues on these impacts (Table A20 and Figure A20). The total revenues collected are over \$312 million with the federal government's share of \$169 million. The provincial government collected \$110 million and local governments in Ontario collected over \$33 million.
- All of the relevant multipliers compare favourably to average economy wide multipliers. The income multiplier of these expenditures is relatively high with an average income multiplier of 1.14 (1.11 in Halton Hills, 1.11 in Milton and 1.16 in Burlington).
- The employment multiplier is also relatively high. The provincial employment multiplier is 2.11 suggesting that for every direct job generated by the selected sectors' expenditures more than 1.11 jobs were generated by the indirect and induced effects.

Table A19
Province-Wide Economic Impacts of Selected Sectors in Halton Region
(Millions of 2011 Dollars)

	Halton Hills	Milton	Burlington	Halton Total
<i>Initial Expenditure</i>	\$198	\$218	\$520	\$936
<i>Value Added</i>				
Direct	\$72	\$80	\$203	\$355
Indirect & Induced	\$147	\$163	\$400	\$710
Total	\$219	\$243	\$603	\$1,065
Multiplier	1.11	1.11	1.16	1.14
<i>Gross Output</i>				
Direct	\$198	\$218	\$520	\$936
Indirect & Induced	\$320	\$356	\$858	\$1,534
Total	\$518	\$574	\$1,378	\$2,470
Multiplier	2.62	2.63	2.65	2.64
<i>Wages & Salaries</i>				
Direct	\$41	\$49	\$174	\$264
Indirect & Induced	\$101	\$110	\$228	\$439
Total	\$142	\$159	\$402	\$703
<i>Employment</i>				
Direct	1,410	1,690	5,850	8,950
Indirect & Induced	2,433	2,582	4,900	9,915
Total	3,843	4,272	10,750	18,865
Multiplier	2.73	2.53	1.84	2.11
<i>Taxes</i>				
Federal	\$34	\$38	\$97	\$169
Provincial	\$22	\$26	\$62	\$110
Local	\$7	\$8	\$18	\$33
Total	\$63	\$72	\$177	\$312
<i>Imports</i>				
From Other Provinces	\$41	\$44	\$104	\$189
From Other Countries	\$22	\$25	\$60	\$107
Total	\$63	\$69	\$164	\$296

Source: Econometric Research Limited

Figure A19 - Province Wide Economic Impacts of Selected Sectors in Halton Region

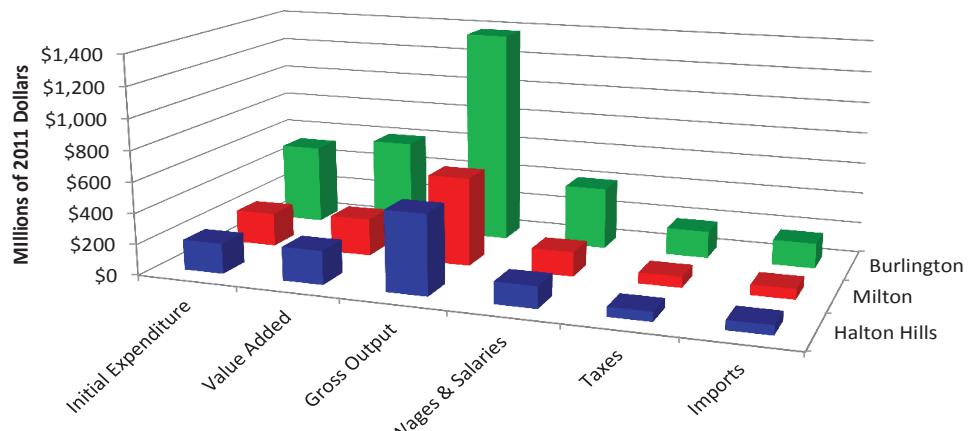
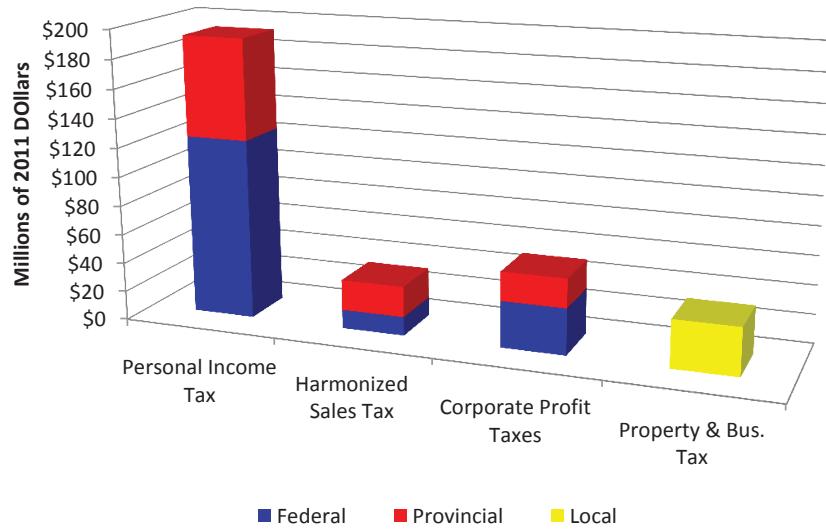


Table A20
Province-Wide Tax Impacts of Selected Sectors in Halton Region
 (Millions of 2011 Dollars)

	Halton Hills	Milton	Burlington	Halton Total
<i>Federal</i>				
Personal Income Tax	\$25	\$28	\$71	\$124
Harmonized Sales Tax	\$2	\$3	\$8	\$13
Corporate Profit Taxes	\$7	\$7	\$18	\$32
Subtotal	\$34	\$38	\$97	\$169
<i>Provincial</i>				
Personal Income Tax	\$14	\$16	\$39	\$69
Harmonized Sales Tax	\$4	\$5	\$12	\$21
Corporate Profit Taxes	\$4	\$5	\$11	\$20
Subtotal	\$22	\$26	\$62	\$110
<i>Local</i>				
Property & Bus. Tax	\$7	\$8	\$18	\$33
Total	\$63	\$72	\$177	\$312

Source: Econometric Research Limited

Figure A20 - Province Wide Tax Impacts of Selected Sectors in Halton Region



CITY OF HAMILTON

Impacts in Hamilton

The economic impacts of the selected sectors connected to the Greenbelt in Hamilton include the following:

- A total of 21,052 person years (full-time equivalents) of employment are sustained in Hamilton by the total selected sectors' activities (see Table A21 and Figure A21).
- These impacts are driven by a sales volume of \$2.6 billion. This volume of expenditures is credited with supporting a permanent increase in regional income of about \$1.2 billion.
- Wages and salaries are augmented to the tune of \$755 million (Table A21).
- The effective wages and salaries sustained by these expenditures include an effective direct wage of \$29,215, while the total effective wage is higher at \$35,864.

- All levels of government derive revenues on these regional impacts exceeding \$331 million (Table A22 and Figure A22). The federal government collected the lion's share with \$182 million, the provincial government collected \$115 million and the local government about \$34 million on these impacts.
- The income multiplier of the selected sectors' expenditures is around 0.66.
- The regional employment multiplier associated with the selected sectors' expenditures in the Region is 1.28, suggesting that for every direct job generated by these expenditures another 0.28 of a job was generated by the indirect and induced effects.

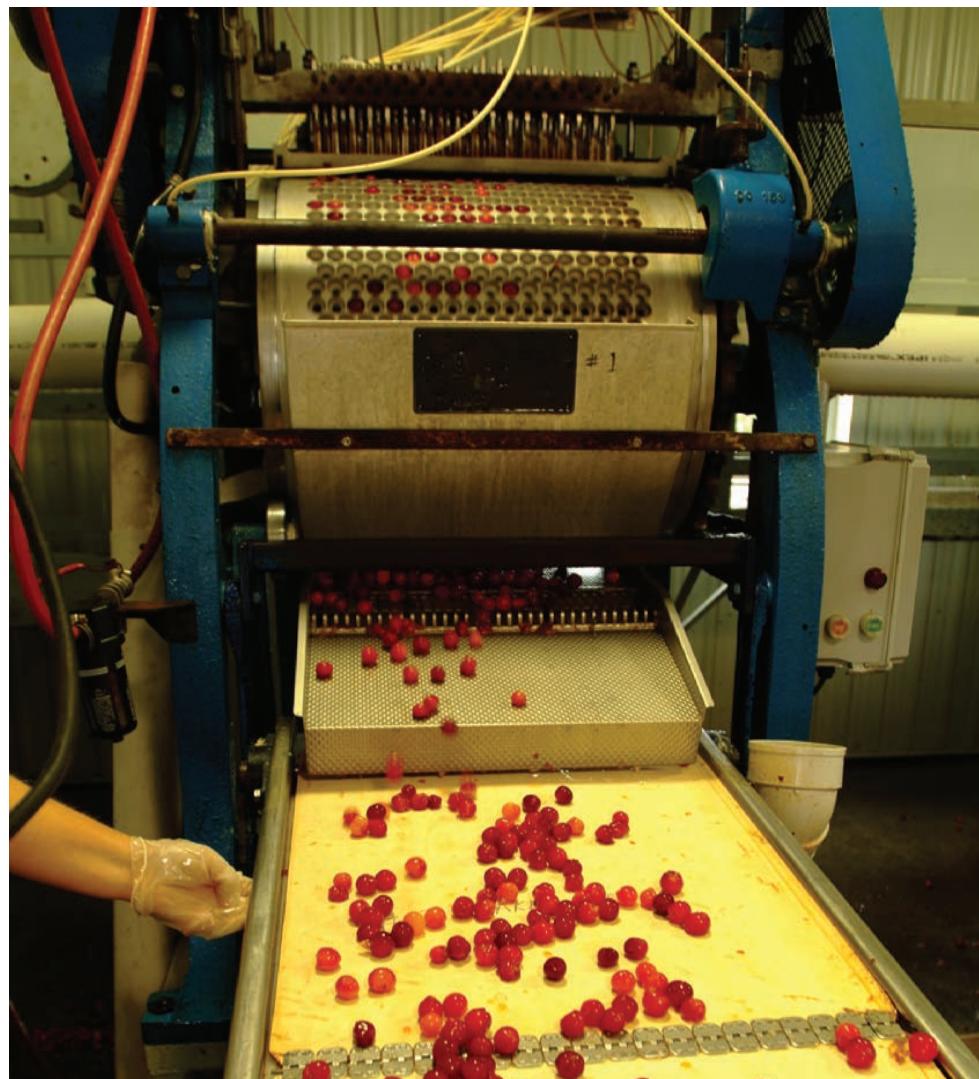


Table A21
Local Economic Impacts of Selected Sectors in Hamilton
(Millions of 2011 Dollars)

	Hamilton
<i>Initial Expenditure</i>	\$1,751
<i>Value Added</i>	
Direct	\$679
Indirect & Induced	\$471
Total	\$1,150
Multiplier	0.66
<i>Gross Output</i>	
Direct	\$1,751
Indirect & Induced	\$832
Total	\$2,583
Multiplier	1.48
<i>Wages & Salaries</i>	
Direct	\$480
Indirect & Induced	\$275
Total	\$755
<i>Employment</i>	
Direct	16,430
Indirect & Induced	4,622
Total	21,052
Multiplier	1.28
<i>Taxes</i>	
Federal	\$182
Provincial	\$115
Local	\$34
Total	\$331
<i>Imports</i>	
From Other Provinces	\$192
From Other Countries	\$112
Total	\$304

Source: Econometric Research Limited

Figure A21 - Local Economic Impacts of Selected Sectors in Hamilton

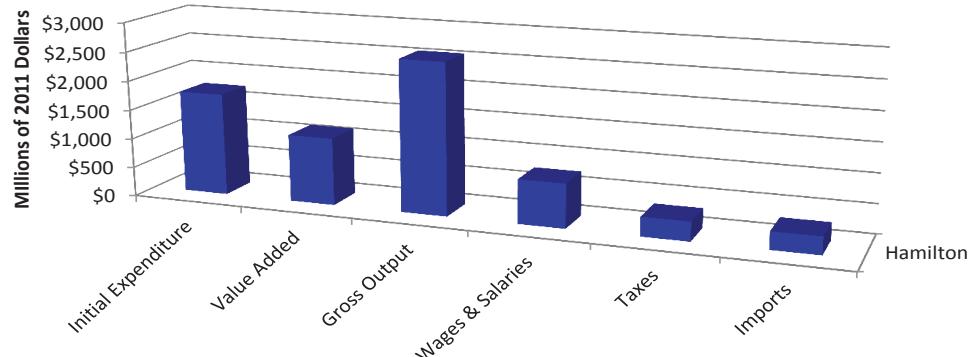
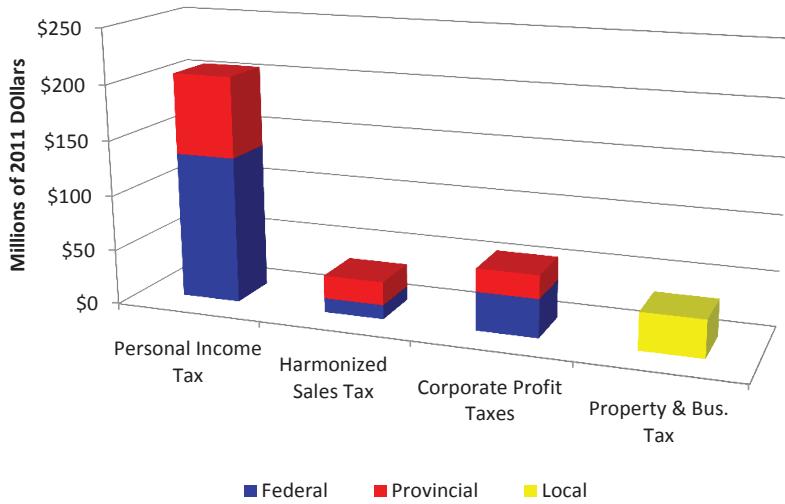


Table A22
Local Tax Impacts of Selected Sectors in Hamilton
 (Millions of 2011 Dollars)

	Hamilton
<i>Federal</i>	
Personal Income Tax	\$133
Harmonized Sales Tax	\$13
Corporate Profit Taxes	\$35
Subtotal	\$182
<i>Provincial</i>	
Personal Income Tax	\$73
Harmonized Sales Tax	\$21
Corporate Profit Taxes	\$21
Subtotal	\$115
<i>Local</i>	
Property & Bus. Tax	\$34
Total	\$331

Source: Econometric Research Limited

Figure A22 - Local Tax Impacts of Selected Sectors in Hamilton



Province-Wide Impacts

Larger province-wide impacts derive from the selected sectors' activities in Hamilton. These impacts include:

- A total of 35,277 person years (full-time equivalents) of employment are sustained in Ontario by the total green industry expenditures in Hamilton (see Table A23 and Figure A23). This employment impact is sustained by a volume of provincial sales that exceeded \$4.6 billion province-wide.
- This volume of green industry expenditures is also credited with supporting a permanent increase of Ontario's GDP of about \$2 billion, of which wages and salaries accounted for about \$1.3 billion.
- The effective wages and salaries sustained by these expenditures are reasonable. The direct effective wage is over \$29,215 and the total effective wage is higher at \$36,879.
- All levels of government derive revenues on these impacts (Table A24 and Figure A24). The total revenue collected is over \$577 million with the federal government's share of \$317 million. The provincial government collected \$200 million and local governments in Ontario collected over \$60 million.

- All of the relevant multipliers compare favourably to average economy wide multipliers. The income multiplier of these expenditures is relatively high with an income multiplier of 1.13.
- The employment multiplier is also relatively high. The provincial employment multiplier is 2.15 suggesting that for every direct job generated by the selected sectors' expenditures more than 1.15 jobs were generated by the indirect and induced effects.

Table A23
Province-Wide Economic Impacts of Selected Sectors in Hamilton
(Millions of 2011 Dollars)

	Hamilton
<i>Initial Expenditure</i>	\$1,751
<i>Value Added</i>	
Direct	\$679
Indirect & Induced	\$1,306
Total	\$1,985
Multiplier	1.13
<i>Gross Output</i>	
Direct	\$1,751
Indirect & Induced	\$2,837
Total	\$4,588
Multiplier	2.62
<i>Wages & Salaries</i>	
Direct	\$480
Indirect & Induced	\$821
Total	\$1,301
<i>Employment</i>	
Direct	16,430
Indirect & Induced	18,847
Total	35,277
Multiplier	2.15
<i>Taxes</i>	
Federal	\$317
Provincial	\$200
Local	\$60
Total	\$577
<i>Imports</i>	
From Other Provinces	\$348
From Other Countries	\$201
Total	\$549

Source: Econometric Research Limited

Figure A23 - Province Wide Economic Impacts of Selected Sectors in Hamilton

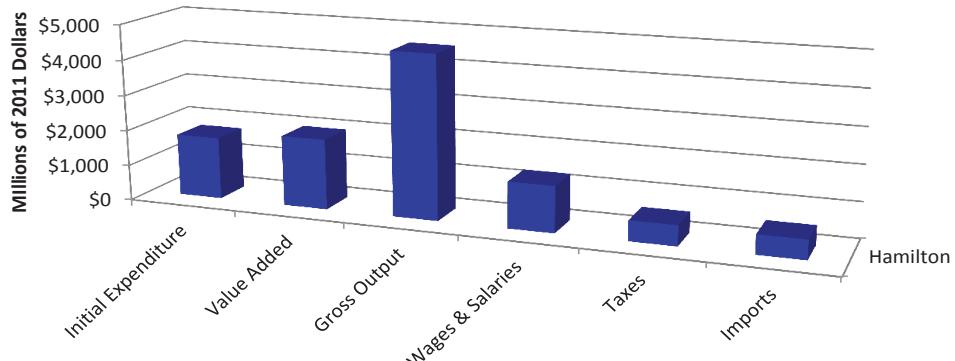
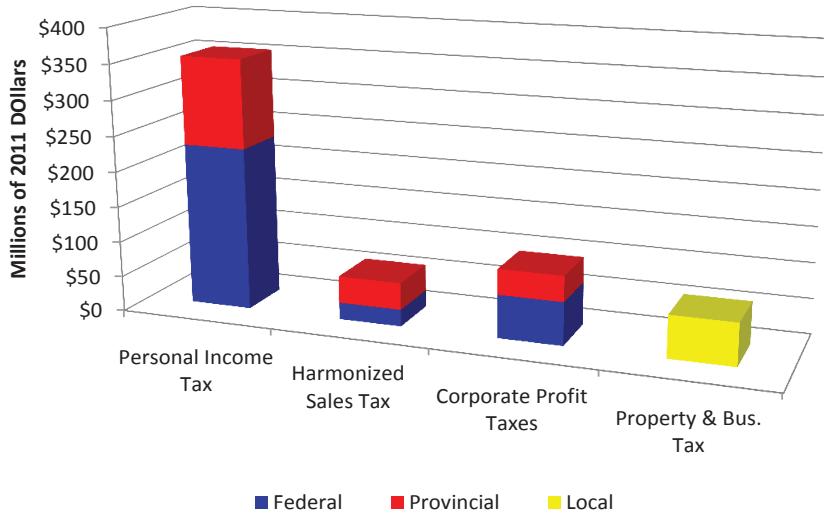


Table A24
Province-Wide Tax Impacts of Selected Sectors in Hamilton
(Millions of 2011 Dollars)

	Hamilton
<i>Federal</i>	
Personal Income Tax	\$230
Harmonized Sales Tax	\$24
Corporate Profit Taxes	\$61
Subtotal	\$317
<i>Provincial</i>	
Personal Income Tax	\$125
Harmonized Sales Tax	\$38
Corporate Profit Taxes	\$36
Subtotal	\$200
<i>Local</i>	
Property & Bus. Tax	\$60
Total	\$577

Source: Econometric Research Limited

Figure A24 - Province Wide Tax Impacts of Selected Sectors in Hamilton



NIAGARA REGION

Impacts in Niagara Region

The Greenbelt represents a significant portion of several regional municipalities (Census Subdivisions) in Niagara Region. The list includes:

St. Catharines	Lincoln
Niagara-on-the-Lake	Thorold
Pelham	Grimsby

The selected sectors anchored on the Greenbelt natural capital base make significant impacts in each and every one of these Census Subdivisions within Niagara Region. The economic impacts of the selected sectors connected to the Greenbelt in Niagara Region include the following:

- A total of 22,893 person years (full-time equivalents) of employment are sustained in Niagara Region by the total selected sectors' activities (see Table A25 and Figure A25). This employment impact is split as follows:

St. Catharines	11,875	Lincoln	2,948
Niagara-on-the-Lake	2,911	Thorold	1,534
Pelham	1,472	Grimsby	2,153

- These impacts are driven by a sales volume of \$3 billion. This large volume of expenditures is credited with supporting a permanent increase in regional income of about \$1.3 billion.
- Wages and salaries are augmented to the tune of \$834 million (Table A25).
- The effective wages and salaries sustained by these expenditures include an effective direct wage of \$28,548, while the total effective wage is higher at \$36,430. The total effective wage varies by CSD as follows:

St. Catharines	\$36,715	Lincoln	\$34,940
Niagara-on-the-Lake	\$36,074	Thorold	\$37,815
Pelham	\$37,357	Grimsby	\$35,759

- All levels of government derive revenues on these regional impacts exceeding \$407 million (Table A26 and Figure A26). The federal government collected the lion's share with \$216 million, the provincial government collected \$147 million and the local government about \$44 million on these impacts.
- The average income multipliers of the selected sectors' expenditures is around 0.92 and is distributed over the constituent CSD's as follows:

St. Catharines	0.94	Lincoln	0.87
Niagara-on-the-Lake	0.90	Thorold	0.95
Pelham	0.89	Grimsby	0.91

- The employment multiplier associated with these expenditures is high. The average regional employment multiplier associated with the selected sectors' expenditures in the Region is 1.73, suggesting that for every direct job generated by these expenditures another three quarters of a job was generated by the indirect and induced effects. The CSD employment multipliers are as follows:

St. Catharines	1.70	Lincoln	1.72
Niagara-on-the-Lake	1.77	Thorold	1.78
Pelham	1.92	Grimsby	1.69

Table A25
Local Economic Impacts of Selected Sectors in Niagara Region
(Millions of 2011 Dollars)

	St. Catharines	Lincoln	Niagara on the Lake	Thorold	Pelham	Grimsby	Niagara Total
<i>Initial Expenditure</i>	\$707	\$191	\$183	\$92	\$95	\$133	\$1,401
<i>Value Added</i>							
Direct	\$274	\$72	\$67	\$33	\$32	\$52	\$530
Indirect & Induced	\$390	\$95	\$98	\$54	\$53	\$69	\$759
Total	\$664	\$167	\$165	\$87	\$85	\$121	\$1,289
Multiplier	0.94	0.87	0.90	0.95	0.89	0.91	0.92
<i>Gross Output</i>							
Direct	\$683	\$172	\$171	\$90	\$90	\$124	\$1,330
Indirect & Induced	\$853	\$229	\$223	\$113	\$118	\$159	\$1,695
Total	\$1,536	\$401	\$394	\$203	\$208	\$283	\$3,025
Multiplier	2.17	2.10	2.15	2.21	2.19	2.13	2.16
<i>Wages & Salaries</i>							
Direct	\$203	\$46	\$46	\$25	\$22	\$36	\$378
Indirect & Induced	\$233	\$57	\$59	\$33	\$33	\$41	\$456
Total	\$436	\$103	\$105	\$58	\$55	\$77	\$834
<i>Employment</i>							
Direct	6,980	1,714	1,643	862	767	1,273	13,241
Indirect & Induced	4,895	1,234	1,267	672	705	880	9,652
Total	11,875	2,948	2,911	1,534	1,472	2,153	22,893
Multiplier	1.70	1.72	1.77	1.78	1.92	1.69	1.73
<i>Taxes</i>							
Federal	\$112	\$27	\$27	\$15	\$15	\$20	\$216
Provincial	\$78	\$17	\$20	\$10	\$9	\$13	\$147
Local	\$23	\$5	\$6	\$3	\$3	\$4	\$44
Total	\$213	\$49	\$53	\$28	\$27	\$37	\$407
<i>Imports</i>							
From Other Provinces	\$117	\$31	\$31	\$15	\$16	\$22	\$232
From Other Countries	\$67	\$18	\$17	\$9	\$9	\$12	\$132
Total	\$184	\$49	\$48	\$24	\$25	\$34	\$364

Source: Econometric Research Limited

Figure A25 - Local Economic Impacts of Selected Sectors in Niagara Region

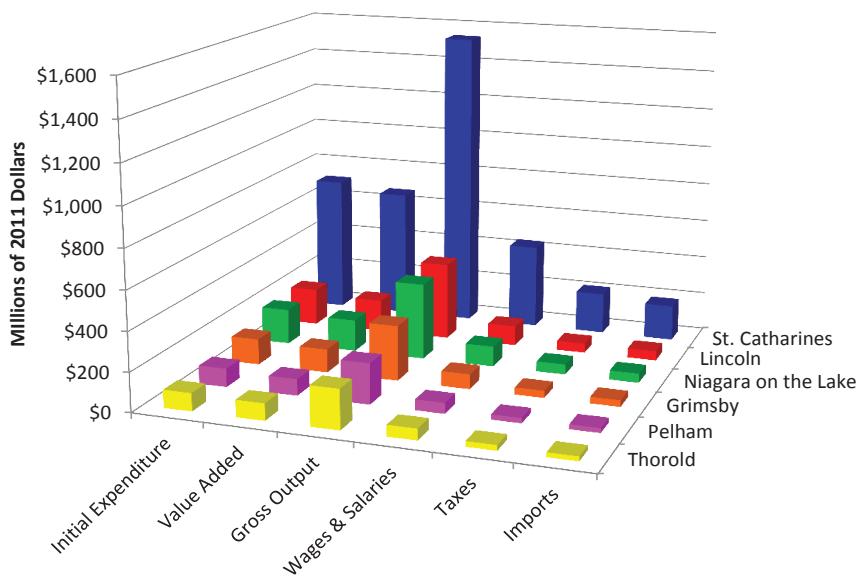
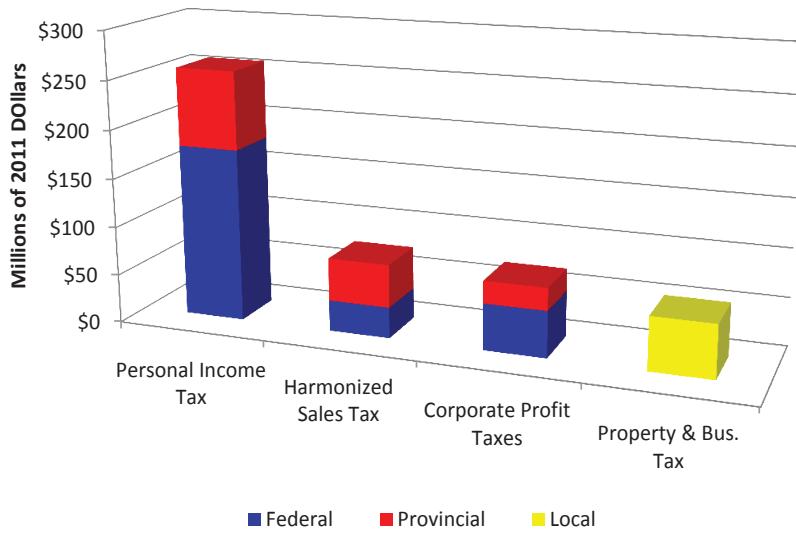


Table A26
Local Tax Impacts of Selected Sectors in Niagara Region
(Millions of 2011 Dollars)

	St. Catharines	Lincoln	Niagara on the Lake	Thorold	Pelham	Grimsby	Niagara Total
Federal							
Personal Income Tax	\$77	\$18	\$19	\$10	\$10	\$14	\$148
Harmonized Sales Tax	\$15	\$3	\$3	\$2	\$2	\$2	\$27
Corporate Profit Taxes	\$20	\$6	\$5	\$3	\$3	\$4	\$41
Subtotal	\$112	\$27	\$27	\$15	\$15	\$20	\$216
Provincial							
Personal Income Tax	\$42	\$10	\$10	\$6	\$5	\$7	\$80
Harmonized Sales Tax	\$24	\$4	\$6	\$3	\$3	\$4	\$44
Corporate Profit Taxes	\$12	\$3	\$4	\$1	\$1	\$2	\$23
Subtotal	\$78	\$17	\$20	\$10	\$9	\$13	\$147
Local							
Property & Bus. Tax	\$23	\$5	\$6	\$3	\$3	\$4	\$44
Total	\$213	\$49	\$53	\$28	\$27	\$37	\$407

Source: Econometric Research Limited

**Figure A26 - Local Tax Impacts of Selected Sectors
in Niagara Region**



Province-Wide Impacts

Larger province-wide impacts derive from the selected sectors' activities in Niagara Region. These impacts result from those sectors' activities in the six constituent CSD's. These impacts include:

- A total of 27,412 person years (full-time equivalents) of employment are sustained in Ontario by the total green industry expenditures in Niagara Region (see Table A27 and Figure A27). This employment impact is sustained by a volume of provincial sales that exceeded \$3.6 billion province-wide.
- This volume of green industry expenditures is also credited with supporting a permanent increase of Ontario's GDP of about \$1.6 billion, of which wages and salaries accounted for about \$1.0 billion.
- The effective wages and salaries sustained by these expenditures are reasonable. The direct effective wage is over \$28,548 and the total effective wage is higher at \$36,627.

- All levels of government derive revenues on these impacts (Table A28 and Figure A28). The total revenue collected is over \$493 million with the federal government's share of \$258 million. The provincial government collected \$180 million and local governments in Ontario collected over \$55 million.
- All of the relevant multipliers compare favourably to average economy wide multipliers. The income multiplier of these expenditures is relatively high with an average income multiplier of 1.11. This is distributed as follows:

St. Catharines	1.13	Lincoln	1.05
Niagara-on-the-Lake	1.08	Thorold	1.14
Pelham	1.07	Grimsby	1.10

- The employment multiplier is also relatively high. The provincial employment multiplier is 2.07 suggesting that for every direct job generated by the selected sectors' expenditures more than 1.07 jobs were generated by the indirect and induced effects.

Table A27
Province-Wide Economic Impacts of Selected Sectors in Niagara Region
(Millions of 2011 Dollars)

	St. Catharines	Lincoln	Niagara on the Lake	Thorold	Pelham	Grimsby	Niagara Total
Initial Expenditure	\$707	\$191	\$183	\$92	\$95	\$133	\$1,401
Value Added							
Direct	\$274	\$72	\$67	\$33	\$32	\$52	\$530
Indirect & Induced	\$526	\$128	\$131	\$72	\$70	\$94	\$1,021
Total	\$800	\$200	\$198	\$105	\$102	\$146	\$1,551
Multiplier	1.13	1.05	1.08	1.14	1.07	1.10	1.11
Gross Output							
Direct	\$683	\$172	\$171	\$90	\$90	\$124	\$1,330
Indirect & Induced	\$1,168	\$308	\$303	\$156	\$160	\$216	\$2,311
Total	\$1,851	\$480	\$474	\$246	\$250	\$340	\$3,641
Multiplier	2.62	2.51	2.59	2.67	2.63	2.56	2.60
Wages & Salaries							
Direct	\$203	\$46	\$46	\$25	\$22	\$36	\$378
Indirect & Induced	\$322	\$77	\$81	\$45	\$44	\$57	\$626
Total	\$525	\$123	\$127	\$70	\$66	\$93	\$1,004
Employment							
Direct	6,980	1,714	1,643	862	767	1,273	13,241
Indirect & Induced	7,261	1,800	1,835	983	994	1,299	14,171
Total	14,241	3,514	3,478	1,845	1,761	2,572	27,412
Multiplier	2.04	2.05	2.12	2.14	2.30	2.02	2.07
Taxes							
Federal	\$135	\$32	\$33	\$17	\$17	\$24	\$258
Provincial	\$94	\$22	\$22	\$13	\$12	\$17	\$180
Local	\$28	\$7	\$7	\$4	\$4	\$5	\$55
Total	\$257	\$61	\$62	\$34	\$33	\$46	\$493
Imports							
From Other Provinces	\$140	\$38	\$38	\$19	\$19	\$26	\$280
From Other Countries	\$81	\$21	\$20	\$11	\$11	\$15	\$159
Total	\$221	\$59	\$58	\$30	\$30	\$41	\$439

Source: Econometric Research Limited

Figure A27 - Province Wide Economic Impacts of Selected Sectors in Niagara Region

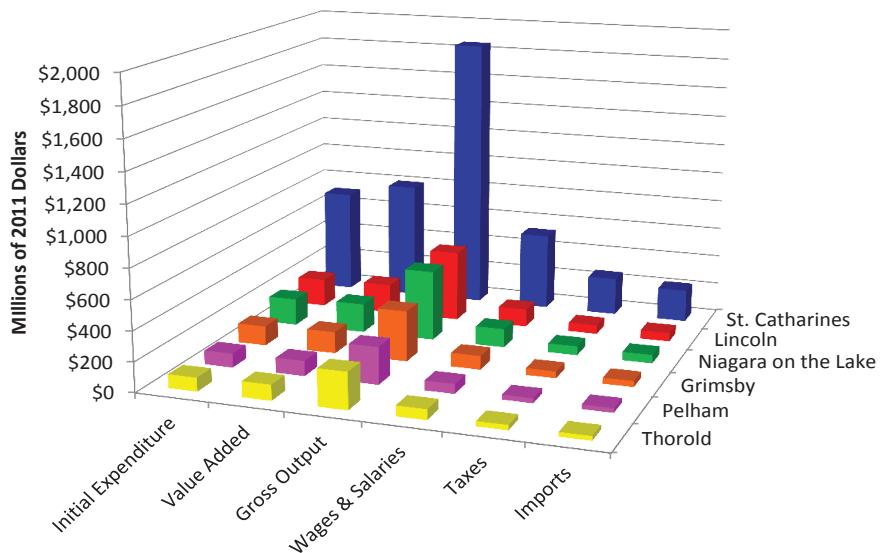
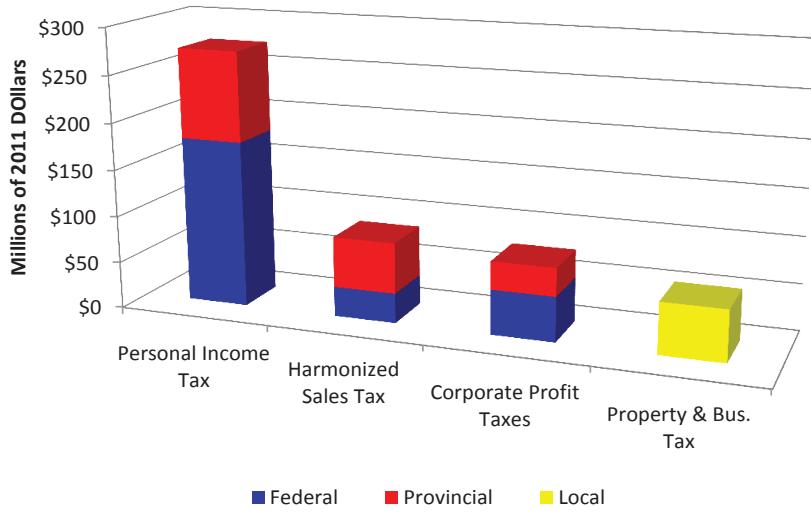


Table A28
Province-Wide Tax Impacts of Selected Sectors in Niagara Region
(Millions of 2011 Dollars)

	St. Catharines	Lincoln	Niagara on the Lake	Thorold	Pelham	Grimsby	Niagara Total
<i>Federal</i>							
Personal Income Tax	\$93	\$22	\$23	\$12	\$12	\$16	\$178
Harmonized Sales Tax	\$18	\$3	\$4	\$2	\$2	\$3	\$32
Corporate Profit Taxes	\$24	\$7	\$6	\$3	\$3	\$5	\$48
Subtotal	\$135	\$32	\$33	\$17	\$17	\$24	\$258
<i>Provincial</i>							
Personal Income Tax	\$50	\$12	\$12	\$7	\$6	\$9	\$96
Harmonized Sales Tax	\$29	\$6	\$6	\$4	\$4	\$5	\$54
Corporate Profit Taxes	\$15	\$4	\$4	\$2	\$2	\$3	\$30
Subtotal	\$94	\$22	\$22	\$13	\$12	\$17	\$180
<i>Local</i>							
Property & Bus. Tax	\$28	\$7	\$7	\$4	\$4	\$5	\$55
Total	\$257	\$61	\$62	\$34	\$33	\$46	\$493

Source: Econometric Research Limited

Figure A28 - Province Wide Tax Impacts of Selected Sectors in Niagara Region



NORTHUMBERLAND COUNTY

Impacts in Northumberland County

The Greenbelt straddles two municipalities with Northumberland County. The selected sectors based on the Greenbelt natural capital make impacts in Alnwick and Hamilton Census Subdivisions within Northumberland County. The economic impacts of the selected sectors connected to the Greenbelt in Northumberland County include the following:

- A total of 1,449 person years (full-time equivalents) of employment are sustained in Northumberland County by the total selected sectors' activities (see Table A29 and Figure A29). This employment impact is split into 759 person years in Alnwick and 690 person years in Hamilton.

- These impacts are driven by a sales volume of \$191 million. This volume of expenditures is credited with supporting a permanent increase in regional income of about \$81 million.
- Wages and salaries are augmented to the tune of \$52 million (Table A29).
- The effective wages and salaries sustained by these expenditures include an effective direct wage of \$26,992, while the total effective wage is higher at \$35,882.
- All levels of government derive revenues on these regional impacts exceeding \$24 million (Table A30 and Figure A30). The federal government collected the lion's share with \$13 million, the provincial government collected \$9 million and the local government about \$2 million on these impacts.
- The average income multipliers of the selected sectors' expenditures are around 0.91 (0.90 in Alnwick and 0.93 in Hamilton).
- The employment multiplier associated with these expenditures is relatively high. The average regional employment multiplier associated with the selected sectors' expenditures in the Region is 1.70, suggesting that for every direct job generated by these expenditures another 0.70 of a job was generated by the indirect and induced effects.

Table A29
Local Economic Impacts of Selected Sectors in Northumberland County
(Millions of 2011 Dollars)

	Alnwick	Hamilton	Northumberland Total
<i>Initial Expenditure</i>	\$48	\$41	\$89
<i>Value Added</i>			
Direct	\$18	\$16	\$34
Indirect & Induced	\$25	\$22	\$47
Total	\$43	\$38	\$81
Multiplier	0.90	0.93	0.91
<i>Gross Output</i>			
Direct	\$44	\$39	\$83
Indirect & Induced	\$58	\$69	\$127
Total	\$102	\$89	\$191
Multiplier	2.13	2.17	2.15
<i>Wages & Salaries</i>			
Direct	\$11	\$12	\$23
Indirect & Induced	\$16	\$13	\$29
Total	\$27	\$25	\$52
<i>Employment</i>			
Direct	441	411	852
Indirect & Induced	319	279	597
Total	759	690	1,449
Multiplier	1.72	1.68	1.70
<i>Taxes</i>			
Federal	\$7	\$6	\$13
Provincial	\$4	\$5	\$9
Local	\$1	\$1	\$2
Total	\$12	\$12	\$24
<i>Imports</i>			
From Other Provinces	\$8	\$7	\$15
From Other Countries	\$4	\$4	\$8
Total	\$12	\$11	\$23

Source: Econometric Research Limited

Figure A29 - Local Economic Impacts of Selected Sectors in Northumberland County

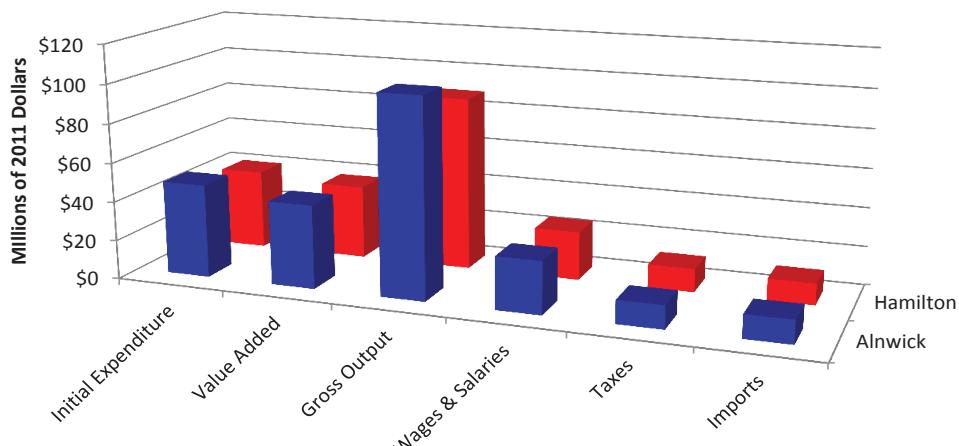
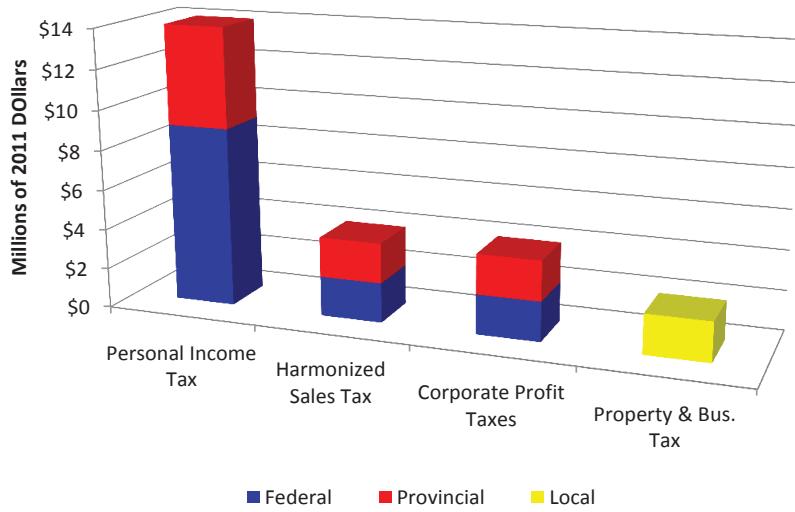


Table A30
Local Tax Impacts of Selected Sectors in Northumberland County
(Millions of 2011 Dollars)

	Alnwick	Hamilton	Northumberland Total
<i>Federal</i>			
Personal Income Tax	\$5	\$4	\$9
Harmonized Sales Tax	\$1	\$1	\$2
Corporate Profit Taxes	\$1	\$1	\$2
Subtotal	\$7	\$6	\$13
<i>Provincial</i>			
Personal Income Tax	\$2	\$3	\$5
Harmonized Sales Tax	\$1	\$1	\$2
Corporate Profit Taxes	\$1	\$1	\$2
Subtotal	\$4	\$5	\$9
<i>Local</i>			
Property & Bus. Tax	\$1	\$1	\$2
Total	\$12	\$12	\$24

Source: Econometric Research Limited

Figure A30 - Local Tax Impacts of Selected Sectors in Northumberland County



Province-Wide Impacts

Larger province-wide impacts derive from the selected sectors' activities in Northumberland County. These impacts result from the selected sectors' activities in Alnwick and Hamilton. These impacts include:

- A total of 1,733 person years (full-time equivalents) of employment are sustained in Ontario by the total green industry expenditures in Northumberland County (see Table A31 and Figure A31). This employment impact is sustained by a volume of provincial sales that exceeded \$230 million province-wide.
- This volume of green industry expenditures is also credited with supporting a permanent increase of Ontario's GDP of about \$97 million, of which wages and salaries accounted for about \$64 million.
- The effective wages and salaries sustained by these expenditures are reasonable. The direct effective wage is over \$26,992 and the total effective wage is higher at \$36,932.
- All levels of government derive revenues on these impacts (Table A32 and Figure A32). The total revenue collected is over \$31 million with the federal government's share of \$15 million. The provincial government collected \$12 million and local governments in Ontario collected over \$4 million.

- All of the relevant multipliers compare favourably to average economy wide multipliers. The income multiplier of these expenditures is relatively high with an average income multiplier of 1.09 (1.08 in Alnwick and 1.10 in Hamilton).
- The employment multiplier is also relatively high. The provincial employment multiplier is 2.03 suggesting that for every direct job generated by the selected sectors' expenditures more than 1.03 jobs were generated by the indirect and induced effects.

Table A31
Province-Wide Economic Impacts of Selected Sectors in Northumberland County
(Millions of 2011 Dollars)

	Alnwick	Hamilton	Northumberland Total
<i>Initial Expenditure</i>	\$48	\$41	\$89
<i>Value Added</i>			
Direct	\$18	\$16	\$34
Indirect & Induced	\$34	\$29	\$63
Total	\$52	\$45	\$97
Multiplier	1.08	1.10	1.09
<i>Gross Output</i>			
Direct	\$44	\$39	\$83
Indirect & Induced	\$78	\$69	\$147
Total	\$122	\$108	\$230
Multiplier	2.54	2.63	2.58
<i>Wages & Salaries</i>			
Direct	\$11	\$12	\$23
Indirect & Induced	\$22	\$19	\$41
Total	\$33	\$31	\$64
<i>Employment</i>			
Direct	441	411	852
Indirect & Induced	465	415	881
Total	906	827	1,733
Multiplier	2.06	2.01	2.03
<i>Taxes</i>			
Federal	\$8	\$7	\$15
Provincial	\$6	\$6	\$12
Local	\$2	\$2	\$4
Total	\$16	\$15	\$31
<i>Imports</i>			
From Other Provinces	\$10	\$8	\$18
From Other Countries	\$5	\$5	\$10
Total	\$15	\$13	\$28

Source: Econometric Research Limited

Figure A31 - Province Wide Economic Impacts of Selected Sectors in Northumberland County

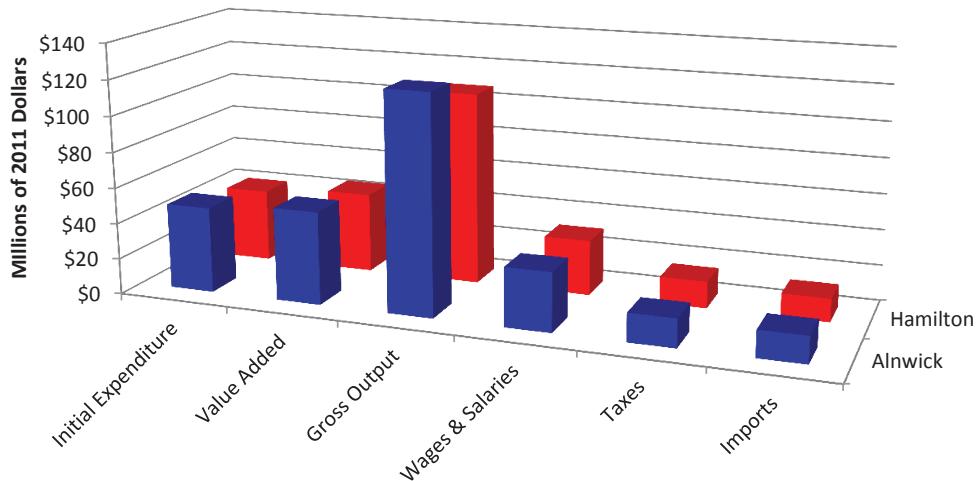
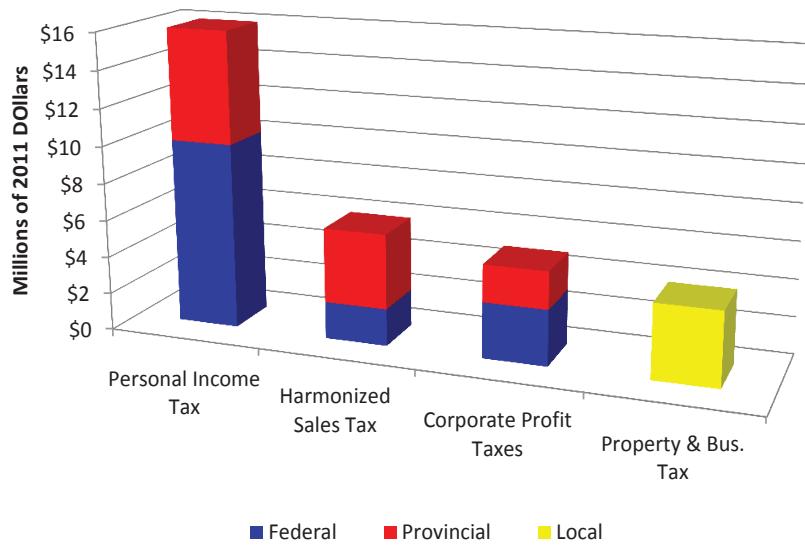


Figure A32 - Province Wide Tax Impacts of Selected Sectors in Northumberland County



PEEL REGION

Impacts in Peel Region

The Greenbelt straddles one municipality in Peel Region. Selected sectors based on the Greenbelt natural capital make impacts in the Caledon Census Subdivision within Peel Region. The economic impacts of the selected sectors connected to the Greenbelt in Peel Region include the following:

- A total of 2,960 person years (full-time equivalents) of employment are sustained in Peel County by the total selected sectors' activities (see Table A33 and Figure A33).
- These impacts are driven by a sales volume of \$380 million. This volume of expenditures is credited with supporting a permanent increase in regional income of about \$164 million.
- Wages and salaries are augmented to the tune of \$107 million (Table A33).
- The effective wages and salaries sustained by these expenditures include an effective direct wage of \$28,283, while the total effective wage is higher at \$36,155.
- All levels of government derive revenues on these regional impacts exceeding \$47 million (Table A34 and Figure A34). The federal government collected the lion's share with \$26 million, the provincial government collected \$16 million and the local government about \$5 million on these impacts.
- The income multipliers of the selected sectors' expenditures are 0.73.
- The average regional employment multiplier associated with selected sectors' expenditures in the Region is 1.99, suggesting that for every direct job generated by these expenditures another 0.99 of a job was generated by the indirect and induced effects.

Table A33
Local Economic Impacts of Selected Sectors in Peel Region
(Millions of 2011 Dollars)

	Caledon
<i>Initial Expenditure</i>	\$224
<i>Value Added</i>	
Direct	\$79
Indirect & Induced	\$85
Total	\$164
Multiplier	0.73
<i>Gross Output</i>	
Direct	\$224
Indirect & Induced	\$156
Total	\$380
Multiplier	1.70
<i>Wages & Salaries</i>	
Direct	\$42
Indirect & Induced	\$65
Total	\$107
<i>Employment</i>	
Direct	1,485
Indirect & Induced	1,475
Total	2,960
Multiplier	1.99
<i>Taxes</i>	
Federal	\$26
Provincial	\$16
Local	\$5
Total	\$47
<i>Imports</i>	
From Other Provinces	\$29
From Other Countries	\$16
Total	\$45

Source: Econometric Research Limited

Figure A33 - Local Economic Impacts of Selected Sectors in Peel Region

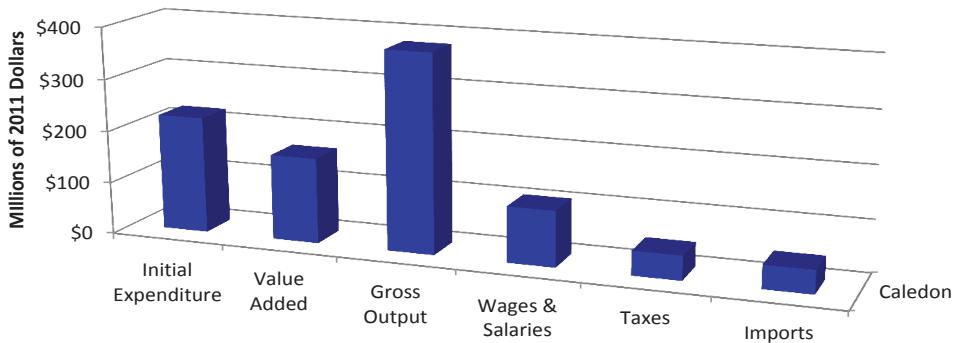
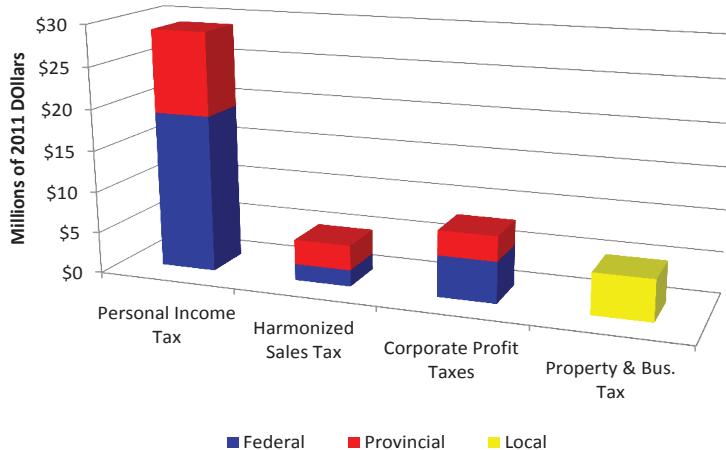


Table A34
Local Tax Impacts of Selected Sectors in Peel Region
(Millions of 2011 Dollars)

	Caledon
<i>Federal</i>	
Personal Income Tax	\$19
Harmonized Sales Tax	\$2
Corporate Profit Taxes	\$5
Subtotal	\$26
<i>Provincial</i>	
Personal Income Tax	\$10
Harmonized Sales Tax	\$3
Corporate Profit Taxes	\$3
Subtotal	\$16
<i>Local</i>	
Property & Bus. Tax	\$5
Total	\$47

Source: Econometric Research Limited

Figure A34 - Local Tax Impacts of Selected Sectors in Peel Region



Province-Wide Impacts

Larger province-wide impacts derive from the selected sectors' activities in Peel Region. These impacts result from those sectors' activities in Caledon. These impacts include:

- A total of 4,307 person years (full-time equivalents) of employment are sustained in Ontario by the total green industry expenditures in Peel Region (see Table A35 and Figure A35). This employment impact is sustained by a volume of provincial sales that exceeded \$589 million province-wide.
- This volume of green industry expenditures is also credited with supporting a permanent increase of Ontario's GDP of about \$247 million, of which wages and salaries accounted for about \$161 million.
- The effective wages and salaries sustained by these expenditures are reasonable. The direct effective wage is over \$28,283 and the total effective wage is higher at \$37,378.
- All levels of government derive revenues on these impacts (Table A36 and Figure A36). The total revenue collected is over \$71 million with the federal government's share of \$39 million. The provincial government collected \$25 million and local governments in Ontario collected over \$7 million.

- All of the relevant multipliers compare favourably to average economy wide multipliers. The income multiplier of these expenditures is relatively high with an average income multiplier of 1.10.
- The employment multiplier is also relatively high. The provincial employment multiplier is 2.90 suggesting that for every direct job generated by the selected sectors' expenditures more than 1.90 jobs were generated by the indirect and induced effects.

Table A35
Province-Wide Economic Impacts of Selected Sectors in Peel Region
(Millions of 2011 Dollars)

	Caledon
Initial Expenditure	\$224
Value Added	
Direct	\$79
Indirect & Induced	\$168
Total	\$247
Multiplier	1.10
Gross Output	
Direct	\$224
Indirect & Induced	\$365
Total	\$589
Multiplier	2.63
Wages & Salaries	
Direct	\$42
Indirect & Induced	\$119
Total	\$161
Employment	
Direct	1,485
Indirect & Induced	2,822
Total	4,307
Multiplier	2.90
Taxes	
Federal	\$39
Provincial	\$25
Local	\$7
Total	\$71
Imports	
From Other Provinces	\$46
From Other Countries	\$25
Total	\$71

Source: Econometric Research Limited

Figure A35 - Province Wide Economic Impacts of Selected Sectors in Peel Region

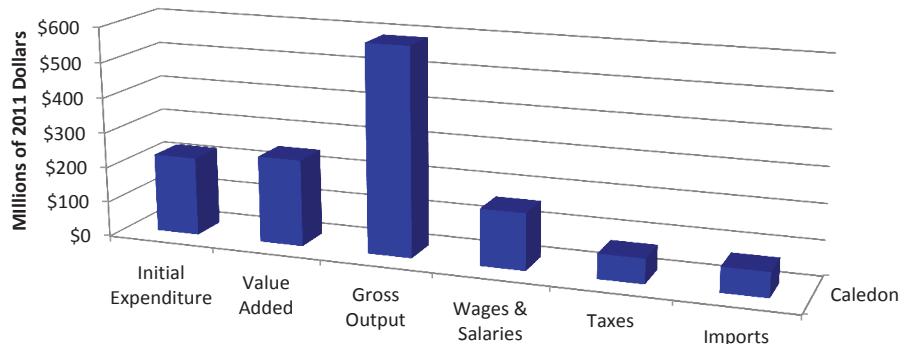
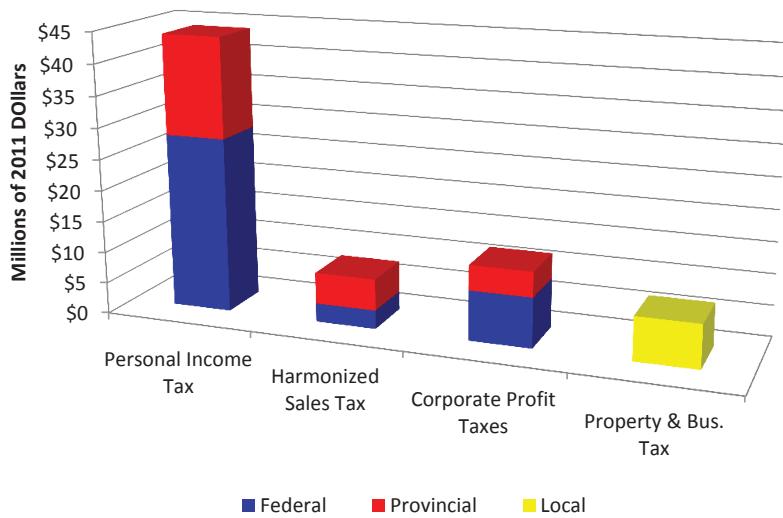


Table A36
Province-Wide Tax Impacts of Selected Sectors in Peel Region
 (Millions of 2011 Dollars)

	Caledon
<i>Federal</i>	
Personal Income Tax	\$28
Harmonized Sales Tax	\$3
Corporate Profit Taxes	\$8
Subtotal	\$39
<i>Provincial</i>	
Personal Income Tax	\$16
Harmonized Sales Tax	\$5
Corporate Profit Taxes	\$4
Subtotal	\$25
<i>Local</i>	
Property & Bus. Tax	\$7
Total	\$71

Source: Econometric Research Limited

Figure A36 - Province Wide Tax Impacts of Selected Sectors in Peel Region



WELLINGTON COUNTY

Impacts in Wellington County

The economic impacts of the selected sectors connected to the Greenbelt in Wellington County (Erin) include the following:

- A total of 1,167 person years (full-time equivalents) of employment are sustained in Wellington County by the total selected sectors' activities (see Table A37 and Figure A37).
- These impacts are driven by a sales volume of \$161 million. This volume of expenditures is credited with supporting a permanent increase in regional income of about \$67 million.
- Wages and salaries are augmented to the tune of \$42 million (Table A37).
- The effective wages and salaries sustained by these expenditures include an effective direct wage of \$28,002, while the total effective wage is higher at \$35,977.

- All levels of government derive revenues on these regional impacts exceeding \$22 million (Table A38 and Figure A38). The federal government collected the lion's share with \$10 million, the provincial government collected \$9 million and the local government about \$3 million on these impacts.
- The income multiplier of the selected sectors' expenditures is around 0.89.
- The regional employment multiplier associated with the selected sectors' expenditures in the Region is 1.82, suggesting that for every direct job generated by these expenditures another 0.82 of a job was generated by the indirect and induced effects.

Table A37
Local Economic Impacts of Selected Sectors in Wellington County
(Millions of 2011 Dollars)

	Erin
<i>Initial Expenditure</i>	\$75
<i>Value Added</i>	
Direct	\$27
Indirect & Induced	\$40
Total	\$67
Multiplier	0.89
<i>Gross Output</i>	
Direct	\$69
Indirect & Induced	\$92
Total	\$161
Multiplier	2.15
<i>Wages & Salaries</i>	
Direct	\$18
Indirect & Induced	\$24
Total	\$42
<i>Employment</i>	
Direct	643
Indirect & Induced	525
Total	1,167
Multiplier	1.82
<i>Taxes</i>	
Federal	\$10
Provincial	\$9
Local	\$3
Total	\$22
<i>Imports</i>	
From Other Provinces	\$13
From Other Countries	\$7
Total	\$20

Source: Econometric Research Limited

Figure A37 - Local Economic Impacts of Selected Sectors in Wellington County

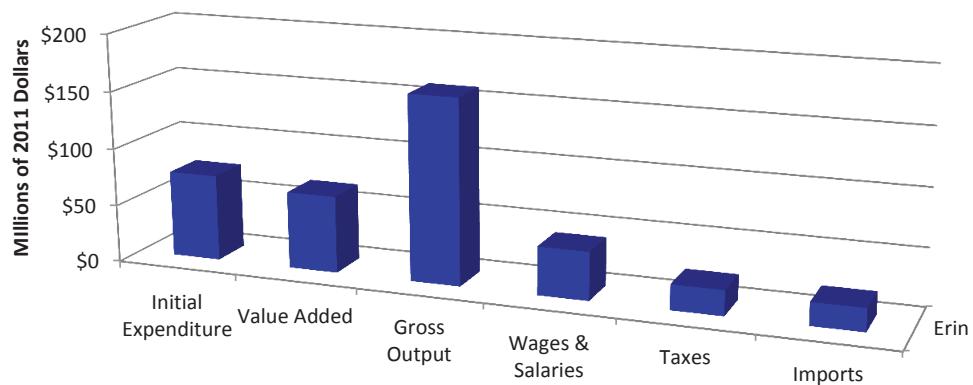
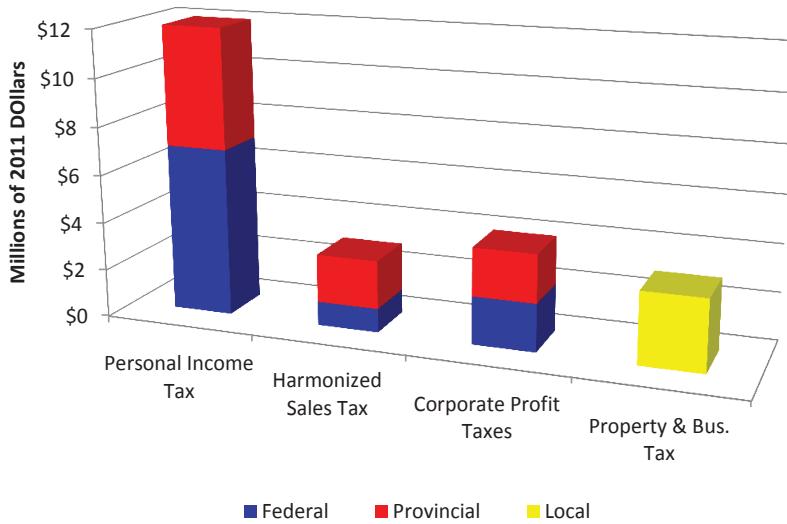


Table A38
Local Tax Impacts of Selected Sectors in Wellington County
(Millions of 2011 Dollars)

	Erin
<i>Federal</i>	
Personal Income Tax	\$7
Harmonized Sales Tax	\$1
Corporate Profit Taxes	\$2
Subtotal	\$10
<i>Provincial</i>	
Personal Income Tax	\$5
Harmonized Sales Tax	\$2
Corporate Profit Taxes	\$2
Subtotal	\$9
<i>Local</i>	
Property & Bus. Tax	\$3
Total	\$22

Source: Econometric Research Limited

Figure A38 - Local Tax Impacts of Selected Sectors in Wellington County



Province-Wide Impacts

Larger province-wide impacts derive from the selected sectors' activities in Wellington County. These impacts include:

- A total of 1,394 person years (full-time equivalents) of employment are sustained in Ontario by the total green industry expenditures in Wellington (see Table A39 and Figure A39). This employment impact is sustained by a volume of provincial sales that exceeded \$193 million province-wide.
- This volume of green industry expenditures is also credited with supporting a permanent increase of Ontario's GDP of about \$80 million, of which wages and salaries accounted for about \$51 million.
- The effective wages and salaries sustained by these expenditures are reasonable. The direct effective wage is over \$28,002 and the total effective wage is higher at \$36,577.

- All levels of government derive revenues on these impacts (Table A40 and Figure A40). The total revenues collected are over \$26 million with the federal government's share of \$14 million. The provincial government collected \$9 million and local governments in Ontario collected over \$3 million.
- All of the relevant multipliers compare favourably to average economy wide multipliers. The income multiplier of these expenditures is relatively high with an income multiplier of 1.07.
- The employment multiplier is also relatively high. The provincial employment multiplier is 2.17 suggesting that for every direct job generated by the selected sectors' expenditures more than 1.17 jobs were generated by the indirect and induced effects.



Table A39
Province-Wide Economic Impacts of Selected Sectors in Wellington County

(Millions of 2011 Dollars)

	Erin
<i>Initial Expenditure</i>	\$75
<i>Value Added</i>	
Direct	\$27
Indirect & Induced	\$53
Total	\$80
Multiplier	1.07
<i>Gross Output</i>	
Direct	\$69
Indirect & Induced	\$124
Total	\$193
Multiplier	2.57
<i>Wages & Salaries</i>	
Direct	\$18
Indirect & Induced	\$33
Total	\$51
<i>Employment</i>	
Direct	643
Indirect & Induced	752
Total	1,394
Multiplier	2.17
<i>Taxes</i>	
Federal	\$14
Provincial	\$9
Local	\$3
Total	\$26
<i>Imports</i>	
From Other Provinces	\$16
From Other Countries	\$8
Total	\$24

Source: Econometric Research Limited

Figure A39 - Province Wide Economic Impacts of Selected Sectors in Wellington County

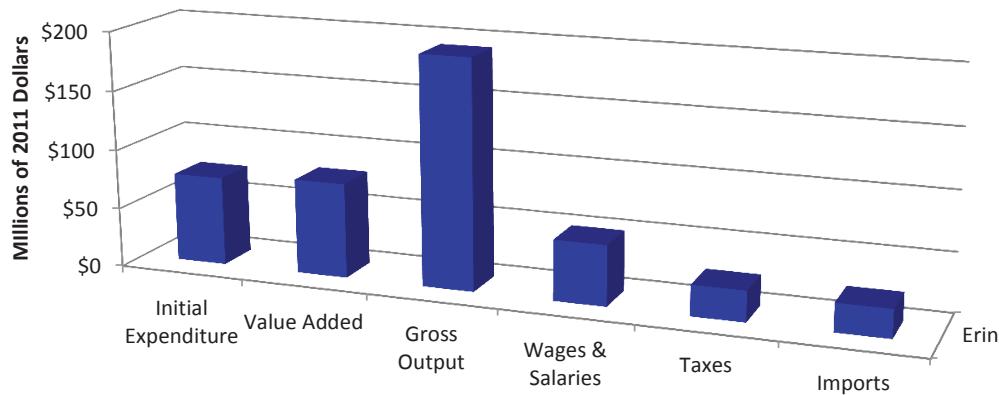
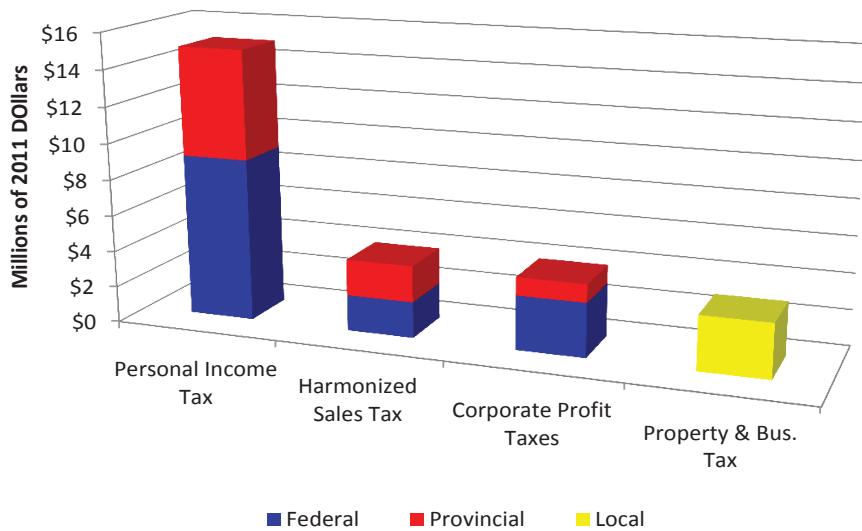


Table A40
Province-Wide Tax Impacts of Selected Sectors in Wellington County
(Millions of 2011 Dollars)

	Erin
<i>Federal</i>	
Personal Income Tax	\$9
Harmonized Sales Tax	\$2
Corporate Profit Taxes	\$3
Subtotal	\$14
<i>Provincial</i>	
Personal Income Tax	\$6
Harmonized Sales Tax	\$2
Corporate Profit Taxes	\$1
Subtotal	\$9
<i>Local</i>	
Property & Bus. Tax	\$3
Total	\$26

Source: Econometric Research Limited

Figure A40 - Province Wide Tax Impacts of Selected Sectors in Wellington County



YORK REGION

Impacts in York Region

The Greenbelt represents a significant portion of several Census Subdivisions in York Region. The list includes:

King	Georgina
Whitchurch-Stouffville	Vaughan
East Gwillimbury	Richmond Hill
Aurora	

The selected sectors anchored on the Greenbelt natural capital base make significant impacts in each and every one of these Census Subdivisions within York Region. The economic impacts of the selected sectors connected to the Greenbelt in York Region include the following:

- A total of 26,047 person years (full-time equivalents) of employment are sustained in York Region by the total selected sectors' activities (see Table A41 and Figure A41). This employment impact is split as follows:

King	1,774	Georgina	2,340
Whitchurch-Stouffville	1,787	Vaughan	9,222
East Gwillimbury	1,359	Richmond Hill	6,769
Aurora	2,796		

- These impacts are driven by a sales volume of \$3.5 billion. This large volume of expenditures is credited with supporting a permanent increase in regional income of about \$1.5 billion.
- Wages and salaries are augmented to the tune of \$983 million (Table A41).
- The effective wages and salaries sustained by these expenditures include an effective direct wage of \$29,518, while the total effective wage is higher at \$37,739. The total effective wage varies by CSD as follows:

King	\$36,647	Georgina	\$36,747
Whitchurch-Stouffville	\$38,048	Vaughan	\$37,844
East Gwillimbury	\$37,519	Richmond Hill	\$37,674
Aurora	\$38,984		

- All levels of government derive revenues on these regional impacts exceeding \$482 million (Table A42 and Figure A42). The federal government collected the lion's share with \$252 million, the provincial government collected \$177 million and the local government about \$53 million on these impacts.
- The average income multipliers of the selected sectors' expenditures is around 0.94 and is distributed over the constituent CSD's as follows:

King	0.89	Georgina	0.93
Whitchurch-Stouffville	0.91	Vaughan	0.95
East Gwillimbury	0.91	Richmond Hill	0.95
Aurora	0.93		

- The employment multiplier associated with these expenditures is high. The average regional employment multiplier associated with the selected sectors' expenditures in the Region is 1.82, suggesting that for every direct job generated by these expenditures another three quarters of a job was generated by the indirect and induced effects. The CSD employment multipliers are as follows:

King	1.92	Georgina	1.75
Whitchurch-Stouffville	1.96	Vaughan	1.78
East Gwillimbury	1.91	Richmond Hill	1.74
Aurora	2.01		

Table A41
Local Economic Impacts of Selected Sectors in York Region
(Millions of 2011 Dollars)

	King	Georgina	Whitchurch-Stouffville	Vaughan	East Gwillimbury	Richmond Hill	Aurora	York Total
Initial Expenditure	\$116	\$142	\$114	\$549	\$86	\$398	\$175	\$1,580
Value Added								
Direct	\$39	\$53	\$36	\$198	\$28	\$149	\$53	\$556
Indirect & Induced	\$64	\$79	\$68	\$323	\$50	\$231	\$110	\$925
Total	\$103	\$132	\$104	\$521	\$78	\$380	\$163	\$1,481
Multiplier	0.89	0.93	0.91	0.95	0.91	0.95	0.93	0.94
Gross Output								
Direct	\$108	\$137	\$110	\$545	\$82	\$396	\$174	\$1,552
Indirect & Induced	\$144	\$172	\$143	\$670	\$108	\$482	\$220	\$1,939
Total	\$252	\$309	\$253	\$1,215	\$190	\$878	\$394	\$3,491
Multiplier	2.17	2.18	2.22	2.21	2.21	2.21	2.25	2.21
Wages & Salaries								
Direct	\$25	\$39	\$26	\$155	\$20	\$116	\$42	\$423
Indirect & Induced	\$40	\$47	\$42	\$194	\$31	\$139	\$67	\$560
Total	\$65	\$86	\$68	\$349	\$51	\$255	\$109	\$983
Employment								
Direct	925	1,334	911	5,170	712	3,884	1,394	4,330
Indirect & Induced	849	1,006	876	4,052	648	2,884	1,402	11,717
Total	1,774	2,340	1,787	9,222	1,359	6,769	2,796	26,047
Multiplier	1.92	1.75	1.96	1.78	1.91	1.74	2.01	1.82
Taxes								
Federal	\$17	\$22	\$17	\$90	\$13	\$65	\$28	\$252
Provincial	\$11	\$17	\$12	\$62	\$9	\$46	\$20	\$177
Local	\$3	\$5	\$4	\$18	\$3	\$14	\$6	\$53
Total	\$31	\$44	\$33	\$170	\$25	\$125	\$54	\$482
Imports								
From Other Provinces	\$20	\$23	\$20	\$92	\$15	\$67	\$30	\$267
From Other Countries	\$11	\$14	\$11	\$53	\$8	\$38	\$17	\$152
Total	\$31	\$37	\$31	\$145	\$23	\$105	\$47	\$419

Source: Econometric Research Limited

Figure A41 - Local Economic Impacts of Selected Sectors in York Region

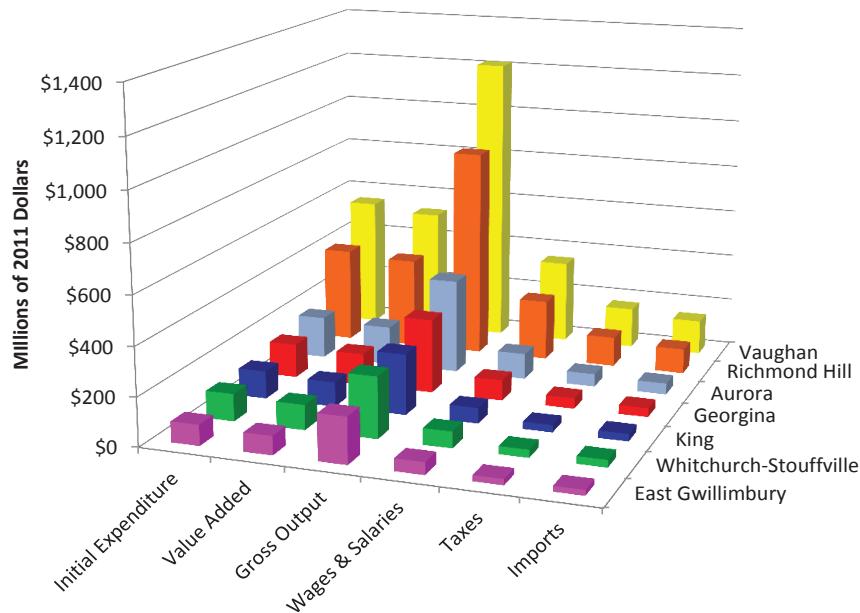


Table A42
Local Tax Impacts of Selected Sectors in York Region
(Millions of 2011 Dollars)

	King	Georgina	Whitchurch-Stouffville	Vaughan	East Gwillimbury	Richmond Hill	Aurora	York Total
Federal								
Personal Income Tax	\$12	\$15	\$12	\$62	\$9	\$45	\$11	\$166
Harmonized Sales Tax	\$2	\$3	\$2	\$13	\$2	\$9	\$6	\$37
Corporate Profit Taxes	\$3	\$4	\$3	\$15	\$2	\$11	\$3	\$41
Subtotal	\$17	\$22	\$17	\$90	\$13	\$65	\$20	\$244
Provincial								
Personal Income Tax	\$6	\$9	\$6	\$33	\$5	\$24	\$0	\$83
Harmonized Sales Tax	\$3	\$5	\$4	\$20	\$2	\$15	\$0	\$49
Corporate Profit Taxes	\$2	\$3	\$2	\$9	\$2	\$7	\$0	\$25
Subtotal	\$11	\$17	\$12	\$62	\$9	\$46	\$6	\$163
Local								
Property & Bus. Tax	\$3	\$5	\$4	\$18	\$3	\$14	\$0	\$47
Total	\$31	\$44	\$33	\$170	\$25	\$125	\$26	\$454

Source: Econometric Research Limited

Province-Wide Impacts

Larger province-wide impacts derive from the selected sectors' activities in York Region. These impacts result from those sectors' activities in the seven constituent CSD's. These impacts include:

- A total of 31,386 person years (full-time equivalents) of employment are sustained in Ontario by the total green industry expenditures in York Region (see Table A44 and Figure A43). This employment impact is sustained by a volume of provincial sales that exceeded \$4.2 billion province-wide.
- This volume of green industry expenditures is also credited with supporting a permanent increase of Ontario's GDP of about \$1.8 billion, of which wages and salaries accounted for about \$1.2 billion.
- The effective wages and salaries sustained by these expenditures are reasonable. The direct effective wage is over \$29,518 and the total effective wage is higher at \$37,915.
- All levels of government derive revenues on these impacts (Table A44 and Figure A44). The total revenues collected are over \$581 million with the federal government's share of \$306 million. The provincial government collected \$212 million and local governments in Ontario collected over \$63 million.
- All of the relevant multipliers compare favourably to average economy wide multipliers. The income multiplier of these expenditures is relatively high with an average income multiplier of 1.13. This is distributed as follows:

King	1.06	Georgina	1.12
Whitchurch-Stouffville	1.10	Vaughan	1.15
East Gwillimbury	1.09	Richmond Hill	1.16
Aurora	1.13		

- The employment multiplier is also relatively high. The provincial employment multiplier is 2.19 suggesting that for every direct job generated by the selected sectors' expenditures more than 1.19 jobs were generated by the indirect and induced effects.

Figure A42 - Local Tax Impacts of Selected Sectors in York Region

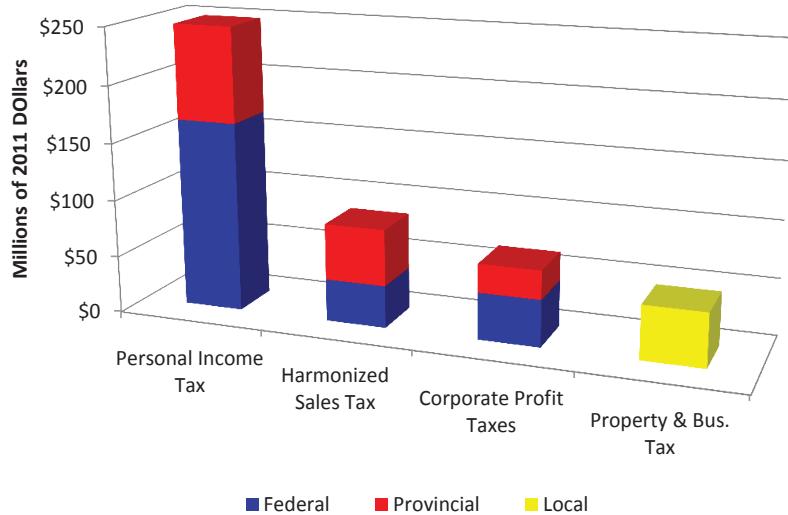


Figure A43 - Province Wide Economic Impacts of Selected Sectors in York Region

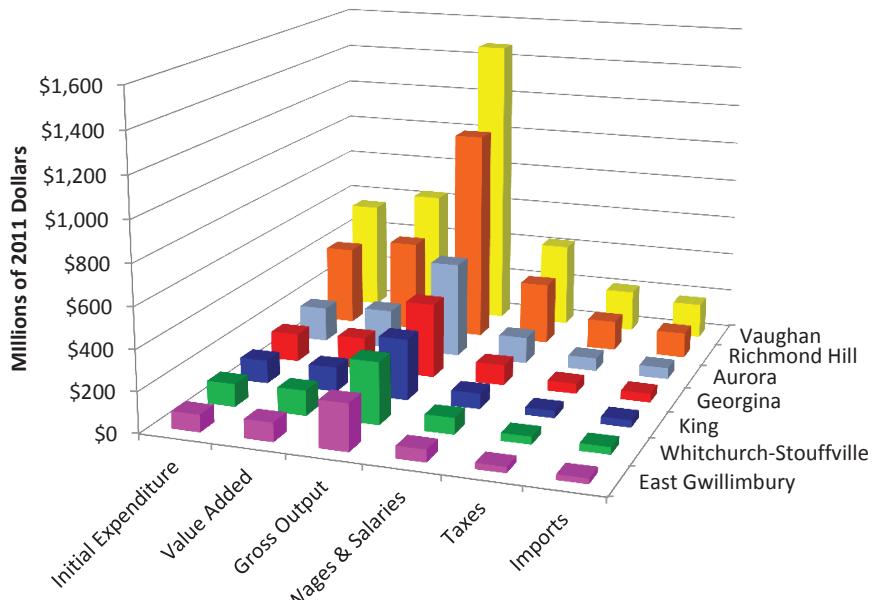


Table A43
Province-Wide Economic Impacts of Selected Sectors in York Region
(Millions of 2011 Dollars)

	King	Georgina	Whitchurch-Stouffville	Vaughan	East Gwillimbury	Richmond Hill	Aurora	York Total
<i>Initial Expenditure</i>	\$116	\$142	\$114	\$549	\$86	\$398	\$175	\$1,580
<i>Value Added</i>								
Direct	\$39	\$53	\$36	\$198	\$28	\$149	\$53	\$556
Indirect & Induced	\$84	\$106	\$89	\$435	\$66	\$312	\$145	\$1,237
Total	\$123	\$159	\$125	\$633	\$94	\$461	\$198	\$1,793
Multiplier	1.06	1.12	1.10	1.15	1.09	1.16	1.13	1.13
<i>Gross Output</i>								
Direct	\$108	\$137	\$110	\$545	\$82	\$396	\$174	\$1,552
Indirect & Induced	\$195	\$235	\$195	\$928	\$147	\$669	\$304	\$2,673
Total	\$303	\$372	\$305	\$1,473	\$229	\$1,065	\$478	\$4,225
Multiplier	2.61	2.62	2.68	2.68	2.66	2.68	2.73	2.67
<i>Wages & Salaries</i>								
Direct	\$25	\$39	\$26	\$155	\$20	\$116	\$42	\$423
Indirect & Induced	\$53	\$64	\$56	\$268	\$41	\$194	\$91	\$767
Total	\$78	\$103	\$82	\$423	\$61	\$310	\$133	\$1,190
<i>Employment</i>								
Direct	925	1,334	911	5,170	712	3,884	1,394	14,330
Indirect & Induced	1,194	1,471	1,232	5,964	918	4,293	1,984	17,056
Total	2,120	2,805	2,143	11,134	1,629	8,177	3,378	31,386
Multiplier	2.29	2.10	2.35	2.15	2.29	2.11	2.42	2.19
<i>Taxes</i>								
Federal	\$19	\$26	\$22	\$109	\$16	\$79	\$35	\$306
Provincial	\$14	\$19	\$13	\$76	\$11	\$55	\$24	\$212
Local	\$4	\$6	\$4	\$23	\$3	\$16	\$7	\$63
Total	\$37	\$51	\$39	\$208	\$30	\$150	\$66	\$581
<i>Imports</i>								
From Other Provinces	\$23	\$27	\$23	\$112	\$17	\$81	\$36	\$319
From Other Countries	\$14	\$17	\$14	\$64	\$10	\$46	\$21	\$186
Total	\$37	\$44	\$37	\$176	\$27	\$127	\$57	\$505

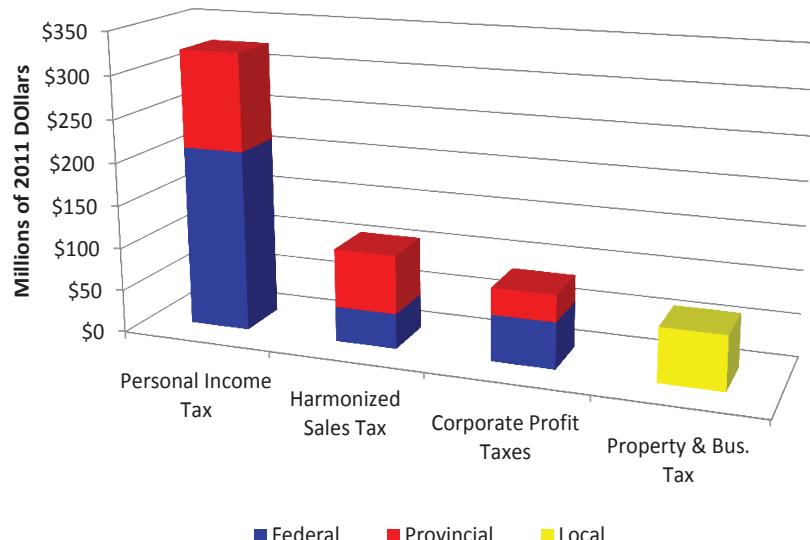
Source: Econometric Research Limited

Table A44
Province Wide Tax Impacts of Selected Sectors in York Region
(Millions of 2011 Dollars)

	King	Georgina	Whitchurch-Stouffville	Vaughan	East Gwillimbury	Richmond Hill	Aurora	York Total
<i>Federal</i>								
Personal Income Tax	\$13	\$18	\$15	\$75	\$11	\$55	\$24	\$211
Harmonized Sales Tax	\$2	\$3	\$3	\$15	\$2	\$11	\$5	\$41
Corporate Profit Taxes	\$4	\$5	\$4	\$19	\$3	\$13	\$6	\$54
Subtotal	\$19	\$26	\$22	\$109	\$16	\$79	\$35	\$306
<i>Provincial</i>								
Personal Income Tax	\$8	\$10	\$7	\$40	\$6	\$29	\$13	\$113
Harmonized Sales Tax	\$4	\$6	\$4	\$25	\$3	\$18	\$8	\$68
Corporate Profit Taxes	\$2	\$3	\$2	\$11	\$2	\$8	\$3	\$31
Subtotal	\$14	\$19	\$13	\$76	\$11	\$55	\$24	\$212
<i>Local</i>								
Property & Bus. Tax	\$4	\$6	\$4	\$23	\$3	\$16	\$7	\$63
Total	\$37	\$51	\$39	\$208	\$30	\$150	\$66	\$581

Source: Econometric Research Limited

Figure A44 - Province Wide Tax Impacts of Selected Sectors in York Region



Appendix B: Limitations

The data used in this report were gathered from Census data and different surveys, primarily produced by Statistics Canada, and they are deemed reliable for the purposes of this study. It should be stressed that the results of an economic impact analysis are estimates based on an accounting framework that represents average parameter values of the underlying behavioural, structural and technical relationships of the Ontario economy at a given year (2006). Thus, in evaluating these estimates, there should be some allowance for a margin of error to the extent that actual observations deviate from actual values.

Some additional limitations include:

- We made a major assumption that if the Greenbelt in a CSD represents 25 per cent or more of that CSD's area, all of the sectors' dependent employment and output for that CSD would be included and attributed to the CSD.
- We limited the sectors to only those in agriculture, forestry, fishing and trapping, recreation and tourism. There are many other sectors that can be considered to be contingent and dependent on the Greenbelt natural resource based that have not been included, such as renewable energy and a few beverage and food industries.
- The impact results were generated using an input-output model that utilizes a number of assumptions relating to the model itself and to the data that makes it operational.
- ERL does not take responsibility for errors or omissions to the input data that could not have been reasonably determined within the scope of the assignment.



Possibility grows here.

