UPDATED AGRICULTURAL IMPACT ASSESSMENT REPORT FOR THE PROPOSED EVERGREEN COMMUNITY IN THE CITY OF BURLINGTON

Prepared for:
Evergreen Community (Burlington) Ltd.

By:
AgPlan Limited

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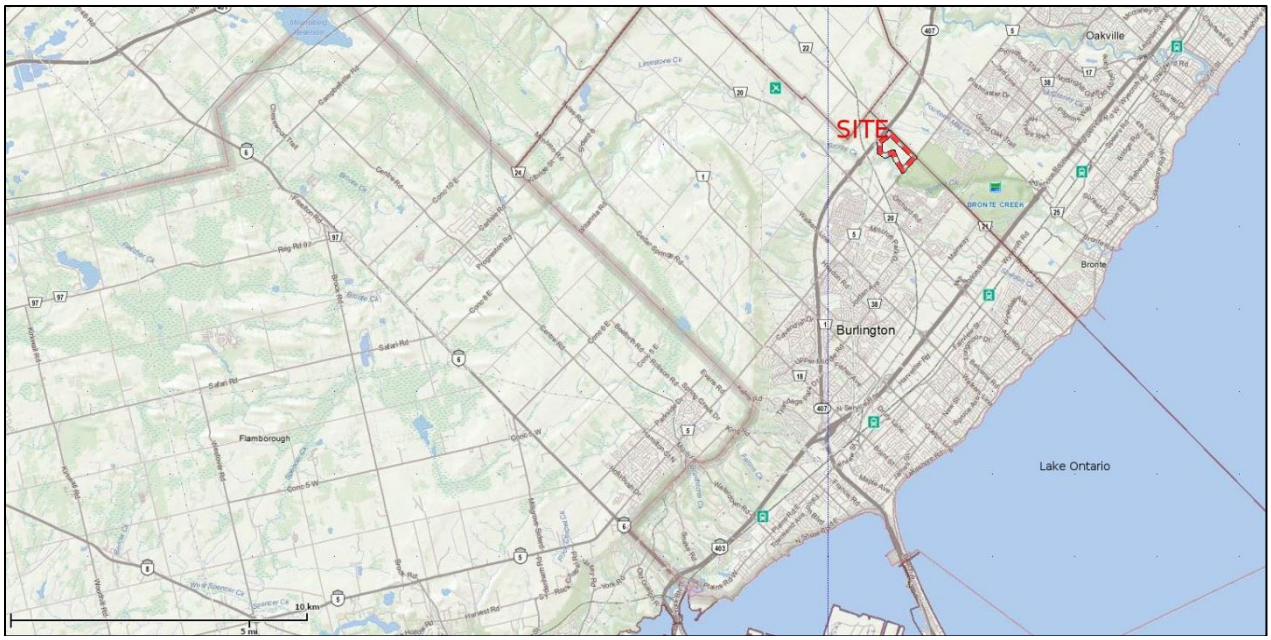
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1.0 INTRODUCTION

The Evergreen Community Site, located in the City of Burlington within the Region of Halton, is bounded by the Bronte Creek Valley to the west, Highway 407 to the north, Tremaine Road in the east and Dundas Street to the south as shown on Map1. AgPlan Limited was originally retained by the Evergreen Community (Burlington) Ltd. in June 2007 to complete an agricultural impact study to:

- Provide context for the state of agriculture in Halton Region and in Burlington.
- Evaluate agricultural impacts due to the development of the Evergreen Community Site and to propose mitigation for any impacts identified.

MAP 1 SITE LOCATION



In February 2008, AgPlan produced a report with the title *Agricultural Impact Assessment Report for the Proposed Evergreen Community in the City of Burlington* (attached to this report as Appendix 2). Conclusions of the 2008 report are that:

- Existing livestock operations are relatively separate from the proposed development area because the proposed Evergreen Community Site is bounded by roads on three sides and the Bronte Creek system to the West.
- The Bronte Creek system already provides a corridor and habitat for wildlife movement which has the potential to be a vector for disease to livestock. Therefore, the presence of storm water management ponds in the proposed development will only marginally increase wildlife populations which may act as a vector for disease.
- The presence of a greater urban population immediately adjacent to the lands to the north of the Evergreen Community Site has the potential to provide a positive impact to agriculture by increasing the customer base for direct farm sales.
- The proposed Evergreen Community Site development meets the requirements of the PPS (2005) in section 2.3.5.2 that *impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands should be mitigated to the extent feasible.*

A revised development concept has been prepared for the Evergreen Community Site as a result of direction provided by the City of Burlington in the fall of 2011 and 2012. To address the

revised concept plan, the updated AgPlan report (2015) has been produced to answer the following question:
Are there changes in the agricultural policy or in the characteristics of the site and the study area that would affect the conclusions reached in the original 2008 agricultural assessment?

Like the 2008 report, this report is based on AgPlan's review of existing published information (listed in Section 5.0) and unpublished information (Multi-Criteria Analyses) as well as the results of field work. When information provided by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) is mentioned within this report, OMAFRA is cited regardless of whether the information was originally provided by OMAF (Ontario Ministry of Agriculture and Food) or by OMAF MRA (Ontario Ministry of Agriculture and Food, Ministry of Rural Affairs). Methods are described generally as part of the text. In one instance, more specific information on Minimum Distance Separation is outlined in an Appendix. Additionally, AgPlan's report should be read in conjunction with reports prepared by other consultants. Specific reference should be made to the planning analysis completed by Urban Strategies (2015b).

The agricultural analyses discussed in the remainder of this AgPlan report provide information which supports the conclusions reached in the 2008 Agricultural Assessment prepared by AgPlan. The original agricultural assessment (2008) and the current updated assessment contain more agricultural information than would normally be evaluated when the proposed non-agricultural development site is already located within a settlement area boundary. The amount of data analyzed is a reflection of Halton Region's Agricultural Impact Assessment Guidelines (1985, 2014a). Regardless, the following observations concerning the Evergreen Community Site are supported or were supported by observations and data analyses contained within this report as well as in the 2008 AgPlan report:

- The Evergreen Community Site is designated for non-agricultural use and is intended to be used for a non-agricultural use.
- No lands immediately adjacent to the Evergreen Community Site are intended to be used for agriculture.
- The lands designated for agricultural use north of the Evergreen Community Site currently have a restricted and relatively lower potential for specialty crop production.
- No fruits and vegetable farms are located on lands designated for agricultural use and found within 1 kilometre of the proposed Evergreen Community Site development.
- The lands designated for agricultural use north of the Evergreen Community Site are not *specialty crop lands* as defined within the *PPS*.
- The soil capability of the Regional Municipality of Halton is relatively lower when compared to the average capability of agricultural lands in other Counties or Regions in central to southwestern Ontario.
- Active agricultural uses are predominant north and east of the Evergreen Community Site. The active agricultural uses to the east of the Evergreen Community Site will cease to exist as those lands are planned to be used for non-agricultural uses.
- The Evergreen Community Site's location allows for relatively large livestock operations to the North and East without Minimum Distance Separation conflicts.
- Current horse farm operations may experience an increase in business as a result of relatively close urban development.
- Lands to the north of Highway 407 have the soil potential to produce a restricted range of specialty crops that will allow for direct sales to adjacent urban development.
- Other impacts to agriculture are already present, have previously been considered as part of land use planning decisions and/or are mitigated by the separation distance provided by Highway 407.

2.0 POLICIES, GUIDELINES AND THEIR INTERPRETATION

The following is not intended to be a planning analysis. Information on the planning proposal for the Evergreen Community Site and on the relationship of the development proposal to other planning documents is described by Urban Strategies Inc. (2015b). However, some changes in the planning policy environment have occurred since AgPlan's first agricultural assessment report (2008). Four changes are discussed in the following as they relate to agriculture. These changes are:

- the new Provincial Policy Statement (PPS, 2014);
- changes resulting from the Halton Region Official Plan Update (Regional Municipality of Halton, 2014c);
- final copies of Halton Region's Guidelines; specifically, *Agricultural Impact Assessment (AIA) Guidelines* (Regional Municipality of Halton, 2014a, Version 1.0), *Livestock Facility Guidelines* (Regional Municipality of Halton, 2014b, Version 1.0); and,
- *Food and Farming: An Action Plan 2021: Golden Horseshoe Agriculture and Agri-Food Strategy* (Walton et al., 2012).

The PPS (2014) contains several changes related to agriculture with particular emphasis on the kinds of uses allowed in agricultural areas. The need for compliance with the Minimum Distance Separation (MDS) has been emphasized within the PPS. OMAFRA staff (Personal Communication, 2014) have suggested that any additional reference to MDS within the PPS (2014) has been made for the purpose of providing additional clarity. The baseline requirements related to need, specialty crop areas and soil capability classes 1 through 3 remain as set out in previous versions of the PPS. Regardless, the proposed urban development in the Evergreen Community Site is within an existing urban settlement area boundary on lands intended to be developed for non-agricultural uses. As a result, much of the direction for agriculture provided by the PPS had already been considered in the past when the existing urban area boundary was chosen for Burlington and Oakville. In my opinion, the only matter that needs to be considered is MDS.

The changes in the Halton Region Official Plan Update have not modified the fact that the Evergreen Community Site is within a settlement area and is not designated for agriculture. However, the Halton Region Official Plan has policies that reference the application of Agricultural Impact Assessment Guidelines to non-farm uses adjacent to agricultural operations, and the application of MDS to zoning by-laws (Section 102(2), Regional Municipality of Halton, 2014c).

Halton Region's *Agricultural Impact Assessment (AIA)* (2014a) *Guidelines* have an extensive list of characteristics that need to be considered when changes in land use are made. Given that the Evergreen Community Site is within the settlement area boundary, impacts to agriculture can reasonably be scoped to the evaluation of MDS I. OMAFRA MDS Guidelines state that *MDS I is applied at the time of planning and/or development review for proposed new development …in proximity to existing livestock facilities.* Additionally, Halton's AIA Guidelines (2014a) state that:

> *An AIA should be undertaken where development is proposed and is located in or in close proximity to designations permitting agricultural uses in the Regional Official Plan. As a guide, the use of a 1 kilometre zone of influence is suggested for any analysis.*
>
> *An AIA may be required as part of a secondary plan process that, if approved, would permit development within an Urban Area on lands that abut or are in close proximity to an Agricultural Area. The AIA completed in this context should address mitigation of negative impacts on agricultural operations resulting from the proposed development*.

As a result, the AgPlan (2008) AIA evaluated agriculture beyond the examination of MDS I. The current AIA update examines databases used in the 2008 AIA to consider whether trends in agriculture within Burlington and Halton have changed.

The *Livestock Facility Guidelines* (2014b) are to be applied when there are proposed changes in areas that are designated and zoned where livestock facilities are a permitted use. While existing livestock uses are permitted in the areas slated to be developed for non-agricultural uses and located within the settlement area (as is the case with the Evergreen Community Site and with lands in North Oakville), the intent is that the livestock production agricultural uses will eventually cease to exist. Therefore, MDS I is normally applied to livestock facilities found outside of the settlement area. Regardless, MDS calculations include a barn located within the settlement area of Oakville.

Food and Farming: An Action Plan 2021: Golden Horseshoe Agriculture and Agri-Food Strategy (Walton et al., 2012; endorsed by Halton Regional Council February 29, 2012 and other Councils) is a *plan to make the Golden Horseshoe the leading food and farming cluster in the world* [underlining added]. Unfortunately, while the plan is ambitious, it contains no data to put the *combined activities and outputs of primary production (farmers), food processing, food service providers (including hotels, restaurants, and institutions), food wholesalers/distributors and food retailers/merchandisers and the input suppliers and service providers* extant in the Golden Horseshoe of Ontario in the context of the world. By the use of the word "cluster" the plan to make the Golden horseshoe a worldwide leader is probably based on a measure of economic activity but whether matters of productivity, efficiency, net energy etc. would be part of the plan is not stated. Neither does the Action Plan provide information on what would be required within Burlington and Halton Region in order to implement the Plan. As a result, no reasoned and reasonable analysis of the Action Plan as it relates to the Evergreen Community Site can be completed.

3.0 DISCUSSION OF TRENDS IN AGRICULTURE

A number of analyses have been supplemented with more recent data to examine whether the agricultural trends observed in the AgPlan 2008 report have continued. Figures 1 through 16 summarize the data over a 30 year time frame from 1981 to 2011. Economics information, summarized in Figures 17 to 20, is taken from the OMAFRA website and the time frame varies depending on what is currently available on the website and what has been previously collected by AgPlan. The data analyses indicate the following:

1. Area of census farms in Halton and Burlington is decreasing (Figures 1 and 2). Area of census farms in Halton as a proportion of Ontario's census farm area is decreasing as is the area of census farms in Burlington as a proportion of Halton's farm area (Figures 3 and 4). Therefore, the rate at which the area of census farms is decreasing in Halton is greater than the rate of decrease for the Province of Ontario. As well, the rate of decrease in census farm area in Burlington is greater than the rate of decrease in the Region of Halton.
2. Number of census farms in Halton and Burlington are decreasing (Figures 5 and 6). Number of census farms in Halton as a proportion of Ontario's census farm area is decreasing as is the number of census farms in Burlington as a proportion of Halton's census farm number (Figures 7 and 8). Therefore, the rate at which the number of census farms is decreasing in Halton is greater than the rate of decrease for the Province of Ontario. As well, the rate of decrease in census farm number in Burlington is greater than the rate of decrease in the Region of Halton.
3. Number of livestock commonly produced (cattle, pigs, sheep and lambs, horses and ponies as well as poultry) in Halton Region is decreasing (Figures 9). Number of

livestock commonly produced in Halton as a proportion of Ontario's number of livestock commonly produced is decreasing (Figure 11). Therefore, the rate at which the number of livestock is decreasing in Halton is greater than the rate of decrease for the Province of Ontario.

4. Some data on livestock number is suppressed in Burlington because of the very small number of farms producing that livestock. The statistical information provides background on how many farms are reporting different kinds of livestock but, when the number of farms is relatively small, the actual number of livestock (on the farms reporting) is the information that is not made available. As a result, data on livestock number (as opposed to the number of farms reporting livestock) are only available for cattle from 1981 to 2006 (12 farms in 2011) and horses and ponies from 1981 to 2011 (24 farms in 2011). Data for sheep and lambs, pigs and poultry number are suppressed for reasons of confidentiality. The number of farms reporting livestock is not suppressed and the census farms reporting pigs, sheep and lambs, as well as poultry in Burlington range from 1 to 5 for each livestock category for the census year 2011, for example. The production of cattle in Burlington is increasing based on a linear trendline between the years 1981 in 2011 (Figure 10). A linear trendline for horses and ponies shows a decrease between the years 1981 and 2011 (Figure 10). Number of cattle as well as horses and ponies produced in Burlington as a proportion of Halton's number of cattle as well as horses and ponies is increasing (Figure 12). Therefore, the rate at which the number of livestock is decreasing in Halton does not correlate with the increasing rate of some livestock (cattle, horses and ponies) for Burlington. Caution must be used in interpreting the information available for Burlington given the amount of livestock data suppression. Additionally, the number of livestock in Halton Region and Burlington has diminished to such an extent that the yearly decisions related to livestock production of a few farms can very easily affect the total number of livestock reported.
5. Number of census farms reporting commonly produced livestock in Halton and Burlington are decreasing (Figures 13 and 14). Number of census farms reporting commonly produced livestock in Halton as a proportion of Ontario's census farms area is decreasing (Figure 15). Therefore, the rate at which the number of census farms reporting commonly produced livestock is decreasing in Halton at a greater rate than the rate of decrease for the Province of Ontario. The number of census farms reporting commonly produced livestock in Burlington as a proportion of Halton's census farm number (Figure 16) has fluctuated with an upward trend for the census year 2011. The limitations associated with the use of the Burlington livestock data also applies to the information summarized in Figure 16.
6. In Ontario, most farmers supplement their income from off-farm sources. In the Western Ontario Region, as defined by OMAFRA and within which Halton Region is located, the majority (greater than 80% of farms in the years 2001 -2009 as shown in Figure 17) of farms (farms that are in the gross farm revenue classes of less than $250,000.00 for the year 2001, for example) have off-farm income that exceeds net farm income. Off-farm income is defined by OMAFRA as including *income from wages and salaries, net off-farm self-employment, investments, pensions and other sources.* Irrespective of income class, net farm income is supplemented by off-farm income. Additionally, when the database is not subdivided into income classes, average off-farm income exceeds net farm income.
7. Figure 18 outlines the balance of trade in Canadian dollars calculated as export dollar value minus import dollar value. The Figure shows selected commodity groups as well as the total trade value. Very few commodity groups show a positive balance of trade (where positive balance of trade means that export values exceed import values). Those better but fewer performing commodity groups where exports exceed imports are shown in Figure 18. Fruit and vegetables have a negative balance of trade in Ontario as

summarized in Figure 19. The total value of agricultural imports relative to exports is tending to increase. The balance of trade data indicate that agricultural product buyers including consumers are spending more money on agricultural products from foreign sources.

8. Products for direct human consumption (fruit and vegetables) have higher gross income per unit area as summarized in Figure 20. Marginal returns and net income associated with fruits and vegetables vary with the particular fruit and/or vegetable produced but also tend to be higher per unit area than what would be received for small grains. These higher gross and net returns have not resulted in additional production of fruit and vegetables in Halton Region and Burlington. Over a 30 year time frame from 1981 to 2011, the number of farms reporting fruit and vegetables as well as the area in production for fruit and vegetables in Halton and Burlington has decreased.
9. The relationship amongst gross farm receipts (excluding forest products sold), farm business operating expenses and net on-farm income (total gross farm receipts minus total farm business operating expenses) all calculated on a per farm basis, is limited due to changes in the categories included in farm business operating expenses from census year to census year. However, farm business operating expense categories are the same for 2001, 2006 and 2011 and trends presented graphically are therefore restricted within this report to those census years. These data show Burlington as having relatively high gross farm receipts when compared to the other municipalities within Halton Region (Figure 21). On the other hand, Burlington's net on-farm income ranges from the lowest to the highest as summarized in Figure 22. Note that the dollar values presented in Figures 21 and 22 are not in constant dollars because the information is intended to be used to compare Burlington with Halton's other municipalities within each census year. For the census year 2011, Halton Region's net on-farm income per farm is ranked as the 17th out of 35 Regions/Counties in Southern Ontario (excluding Haliburton and Muskoka), 6th out of 15 Regions/Counties in the Greater Golden Horseshoe and 7th out of 10 Regions/Counties in Western Ontario Region. The data indicate that Halton Region and its constituent municipalities are not outliers with respect to gross farm receipts, total farm business operating expenses and net on-farm income.
10. Overall, the data presented in figures 1 through 22 support the conclusion that agriculture is diminishing within Halton Region and Burlington. As a result, there are fewer farms, farmers and farm land which need to be considered when characterizing the probable impacts of the proposed Evergreen Community Site on agriculture.
11. Minimum Distance Separation (MDS) measurements are a requirement, where farms within designations allowing livestock use, are found in proximity to non-farm development (given the wording of Provincial and Halton Regional planning policy). The MDS calculations made in the 2008 AgPlan report demonstrate that non-agricultural development can occur on the Evergreen Community Site without conflict related to MDS as shown on Map 2. The agricultural lands designated to allow livestock use are labeled as farm building cluster number 2 on Map 2 and are used for horses. The radius of the MDS arc is 500 metres as summarized on the last page of this report (page A2 28). This horse farm (number 2, Map 2), located to the north of the Evergreen Community Site was not a farm tax rated parcel in 2014 (OMAFRA, 2015). Additionally, more separation distance, relative to the south limit of the MDS arc for farm building cluster number 2 and/or to agricultural uses north of the Evergreen Community Site, is available given the location of roads, the LID/SWN/Naturalized Area and the Future 407 Transitway located at the north end of the proposed Evergreen Community Site (Urban Strategies and Gerrard Design Associates, 2015; Urban Strategies, 2015a).

    The farm building cluster located within the Oakville settlement area boundary (number 1, Map 2) is an interim use and normally does not require an MDS I calculation relative

to the proposed Evergreen Community Site. Nevertheless, an MDS I calculation, summarized on page A2 28, results in a radius of 289 metres which allows for Evergreen Community Site development without MDS conflict with the interim livestock use.

4.0 CONCLUSIONS/OPINIONS

In summary, the agricultural data examined as part of this agricultural assessment update and/or in the previous AgPlan report (2008) indicate that:

- Census farm area and census farm number are diminishing within Halton Region and specifically within Burlington.
- In the context of Halton Region, there is less livestock being produced. The number of livestock being produced within Burlington is subject to suppression due to confidentiality because the number of farms producing livestock is relatively low.
- The economic/financial data indicate that Halton Region and its constituent municipalities have an agricultural industry where it is difficult to make money similar to other areas within Southern Ontario.
- The Evergreen Community Site is designated for non-agricultural use and is intended to be used for a non-agricultural use.
- No lands immediately adjacent to the Evergreen Community Site are intended to be used for agriculture.
- The lands designated for agricultural use north of the Evergreen Community Site currently have a restricted and relatively lower potential for specialty crop production.
- No fruits and vegetable farms are located on lands designated for agricultural use and found within 1 kilometre of the proposed Evergreen Community Site development.
- The lands designated for agricultural use north of the Evergreen Community Site are not *specialty crop lands* as defined within the *PPS*.
- The soil capability of the Regional Municipality of Halton is relatively lower when compared to the average capability of agricultural lands in other Counties or Regions in central to southwestern Ontario.
- Active agricultural uses are predominant north and east of the Evergreen Community Site. The active agricultural uses to the east of the Evergreen Community Site will cease to exist as those lands are planned to be used for non-agricultural uses.
- The Evergreen Community Site's location allows for relatively large livestock operations to the North and East without Minimum Distance Separation conflicts.
- Current horse farm operations may experience an increase in business as a result of relatively close urban development.
- Agriculturally designated lands to the north of Highway 407 have the soil potential to produce a restricted range of specialty crops that will allow for direct sales to adjacent urban development.
- Other impacts to agriculture are already present, have previously been considered as part of land use planning decisions and/or are mitigated by the separation distance provided by Highway 407.

The proposed Evergreen Community Site will use lands intended for non-agricultural development. The impacts to lands designated for agricultural use located to the north of the Evergreen Community Site are minimal given the findings related to Minimum Distance Separation. The policy and data reviewed within this AgPlan 2015 report support the conclusions of the AgPlan 2008 Evergreen Community Site agricultural assessment that:

- Existing livestock operations are relatively separate from the proposed development area because the proposed Evergreen Community Site area is bounded by roads on three sides and the Bronte Creek system to the West.

- The Bronte Creek system already provides a corridor and habitat for wildlife movement which has the potential to be a vector for disease to livestock. Therefore, the presence of storm water management ponds in the proposed development will only marginally increase wildlife populations which may act as a vector for disease.
- The presence of a greater urban population immediately adjacent to the lands to the north of the Evergreen Community Site has the potential to provide a positive impact to agriculture by increasing the customer base for direct farm sales.
- The proposed Evergreen Community Site development meets the requirements of the PPS that *impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands are to be mitigated to the extent feasible.*

No mitigation is necessary or recommended because the separation distance between the Evergreen Community Site and the barns on lands designated for agricultural use located north of the Evergreen Community is sufficient.

AgPlan Limited



Michael K. Hoffman
Agricultural Analyst

FIGURE 1 AREA OF CENSUS FARMS IN HALTON REGION 1981 TO 2011

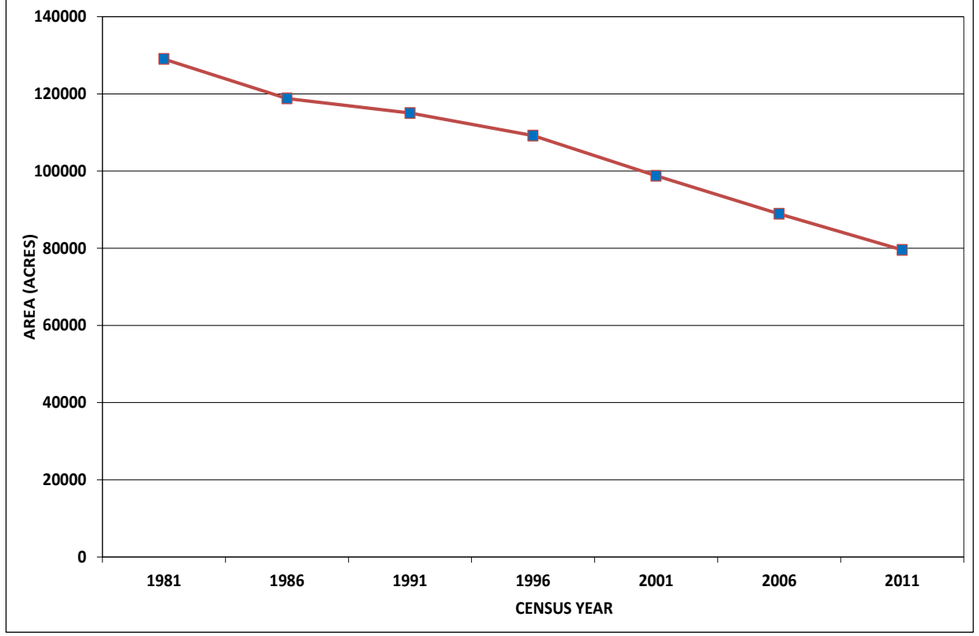


FIGURE 2 AREA OF CENSUS FARMS IN BURLINGTON 1981 TO 2011

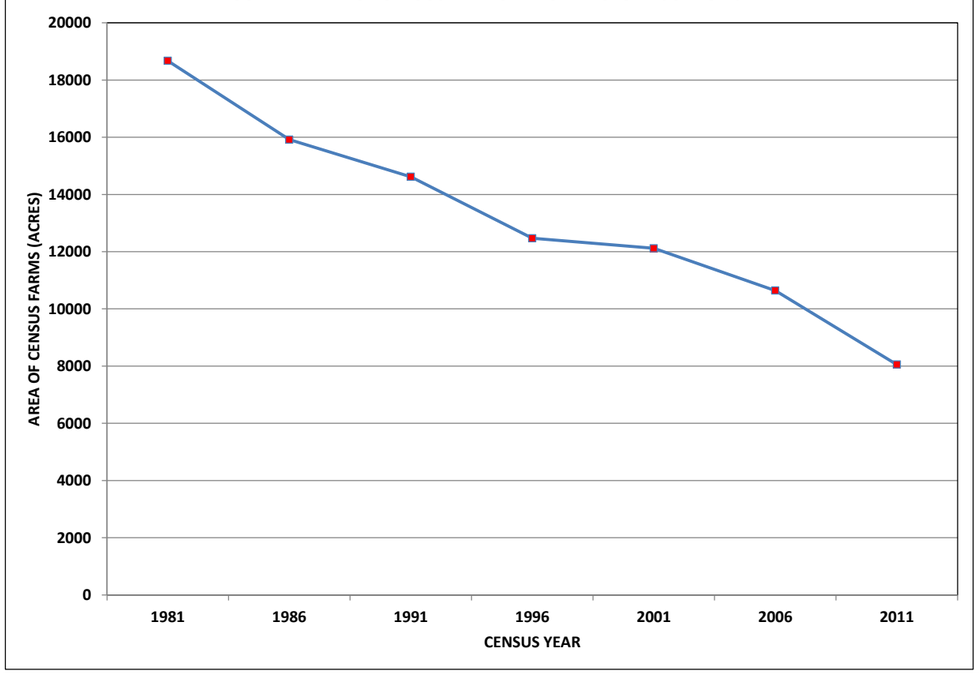


FIGURE 3 HALTON'S CENSUS FARM AREA AS A PROPORTION OF ONTARIO'S CENSUS FARM AREA

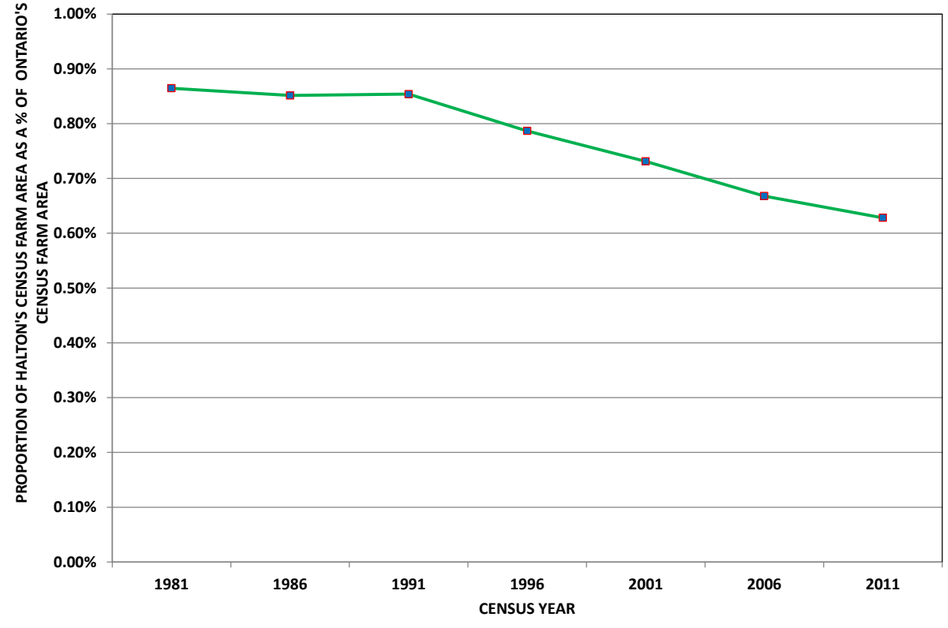


FIGURE 4 BURLINGTON'S CENSUS FARM AREA AS A PROPORTION OF HALTON'S CENSUS FARM AREA

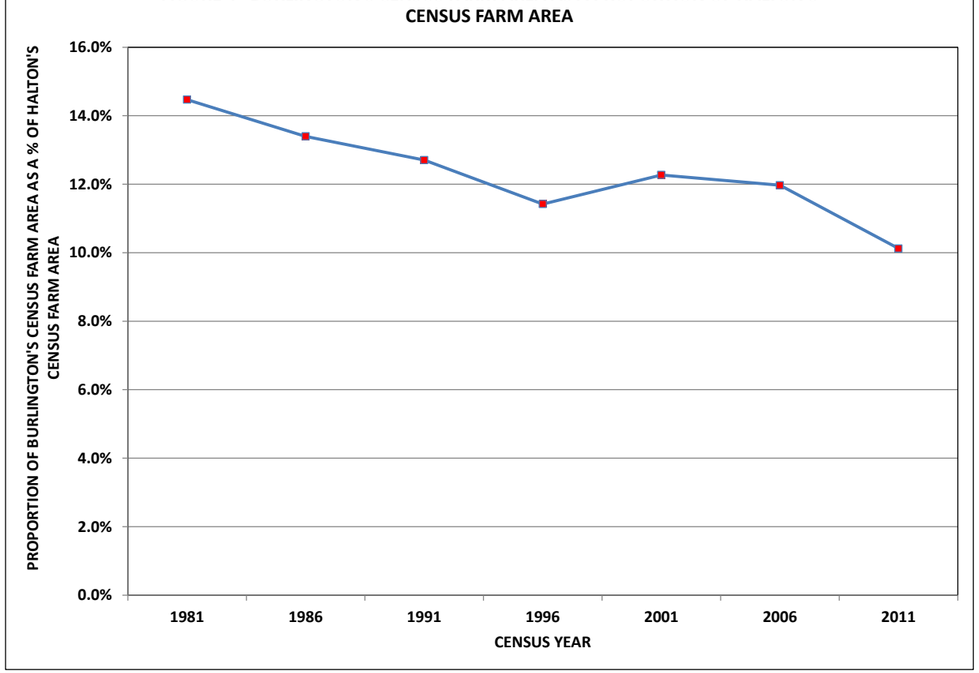


FIGURE 5 NUMBER OF CENSUS FARMS IN HALTON REGION 1981 TO 2011

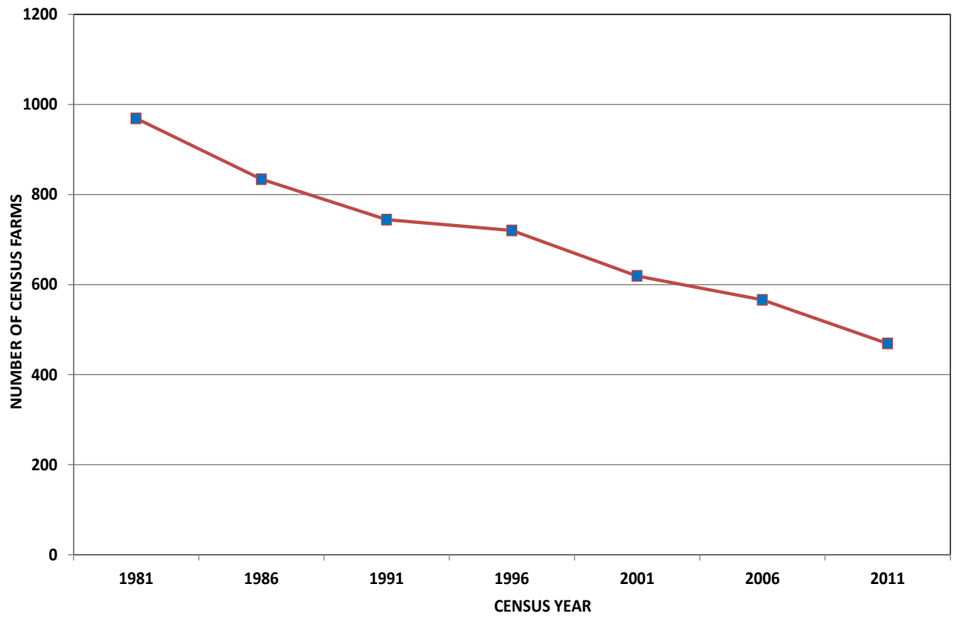


FIGURE 6 NUMBER OF CENSUS FARMS IN BURLINGTON 1981 TO 2011

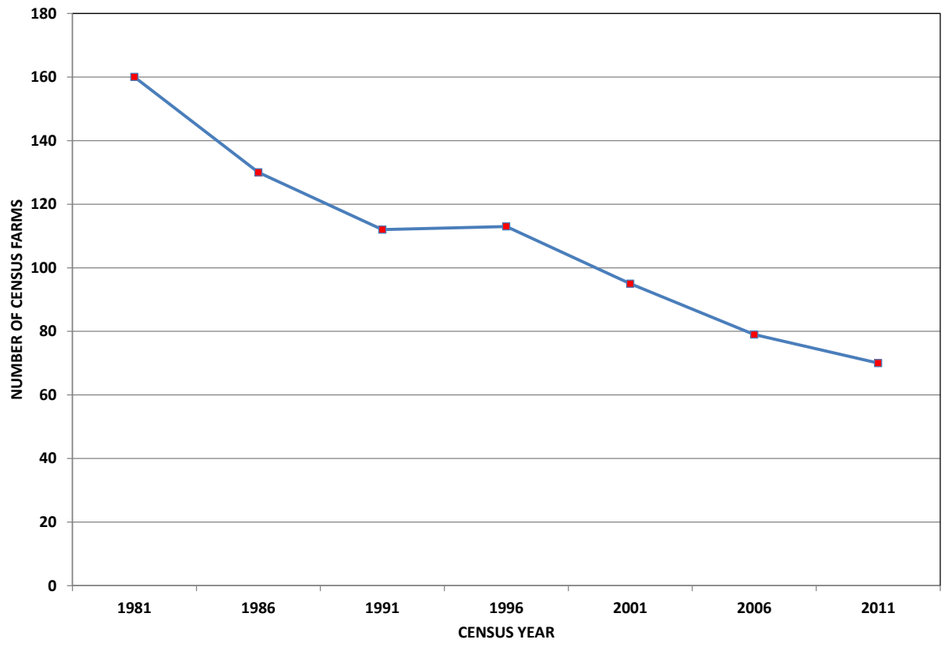


FIGURE 7 HALTON'S CENSUS FARM NUMBER AS A PROPORTION OF ONTARIO'S CENSUS FARM NUMBER 1981 TO 2011

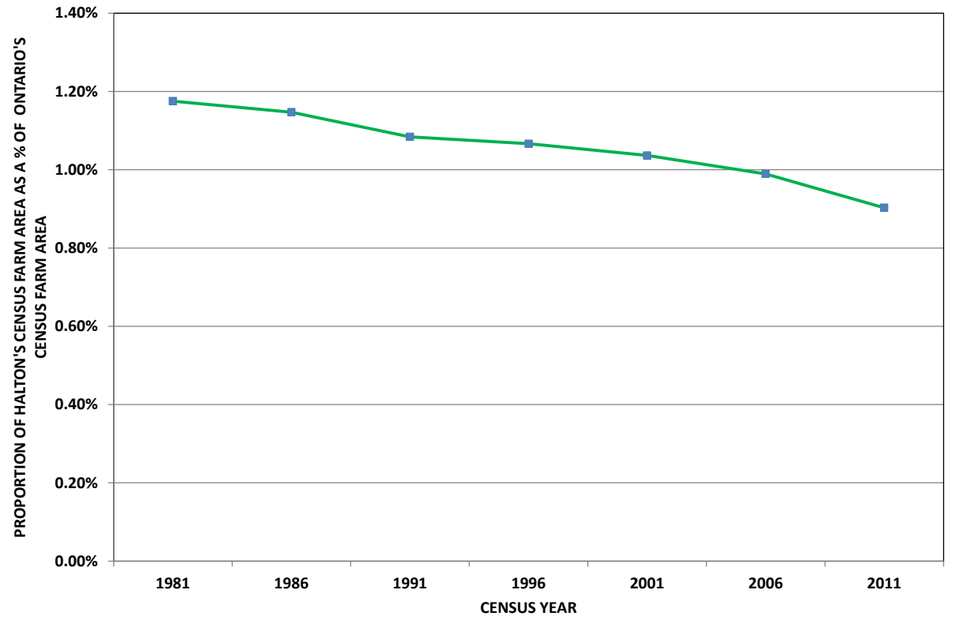


FIGURE 8 BURLINGTON'S CENSUS FARM NUMBER AS A PROPORTION OF HALTON'S CENSUS FARM NUMBER 1981 TO 2011

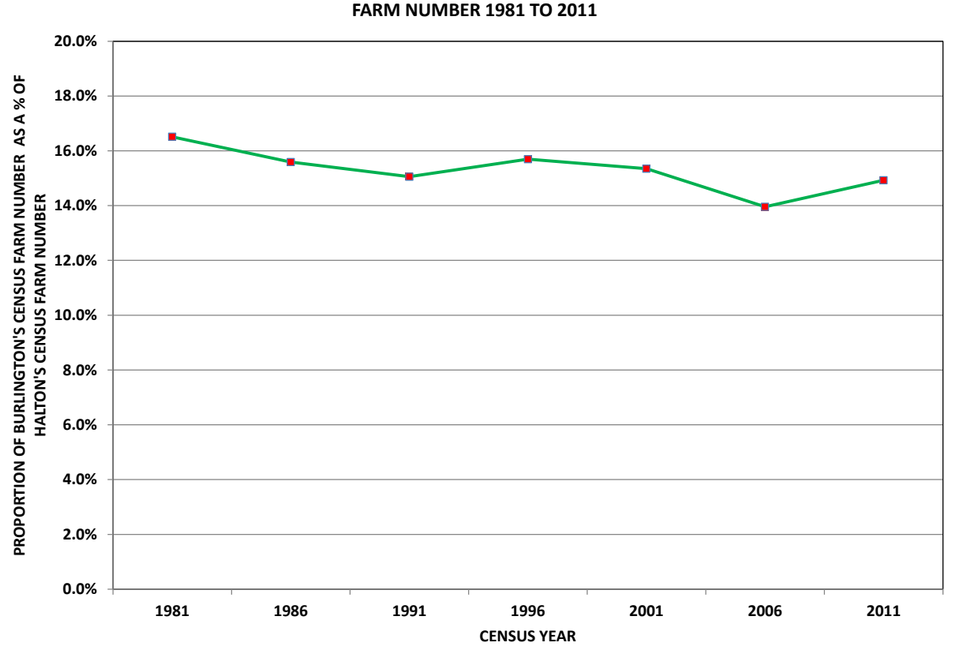


FIGURE 9 LIVESTOCK NUMBER IN HALTON REGION 1981 - 2011

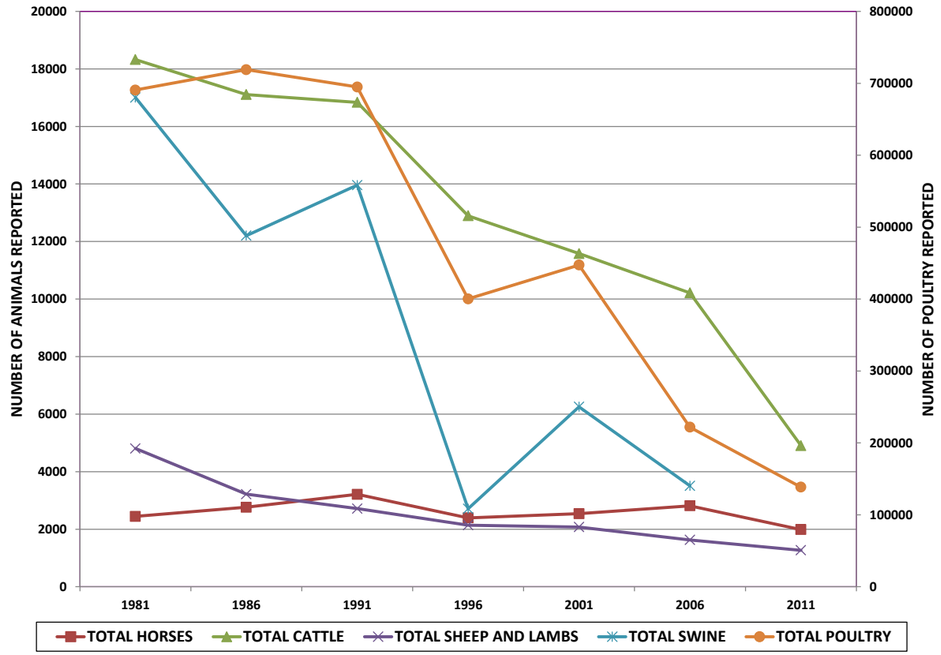


FIGURE 10 LIVESTOCK NUMBER IN BURLINGTON 1981 - 2011

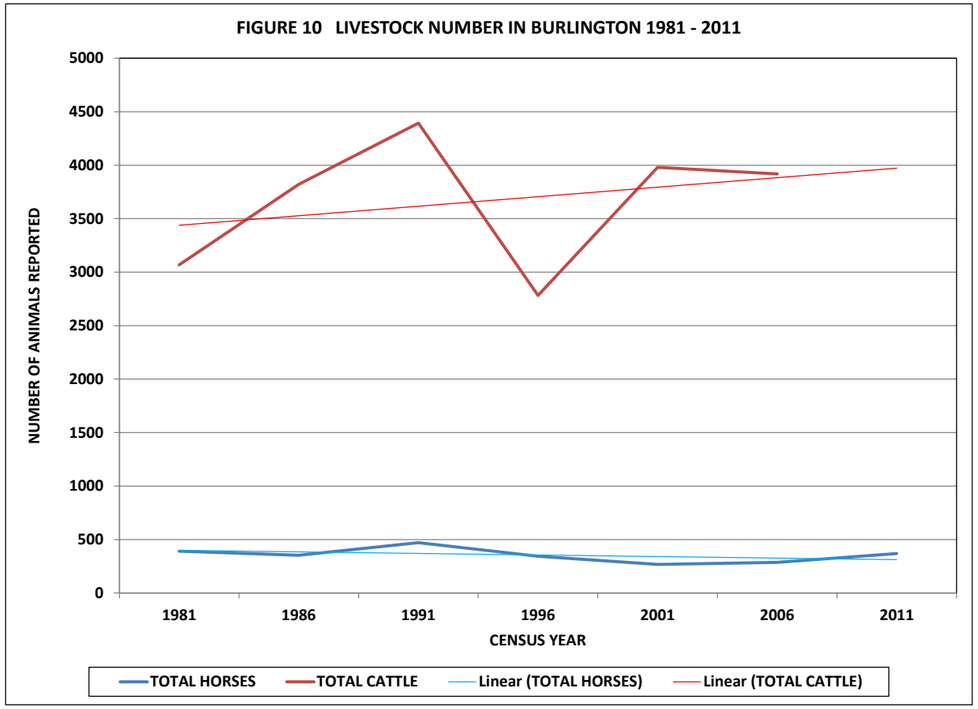


FIGURE 11 LIVESTOCK NUMBER IN HALTON REGION AS A PROPORTION OF LIVESTOCK NUMBER IN ONTARIO 1981 - 2011

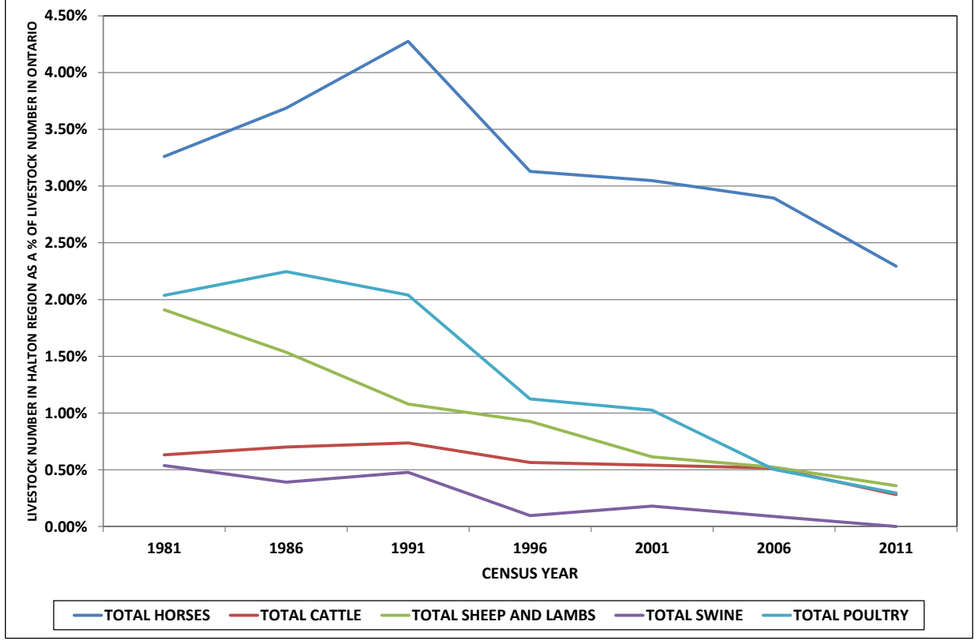


FIGURE 12 LIVESTOCK NUMBER IN BURLINGTON AS A PROPORTION OF LIVESTOCK NUMBER IN HALTON REGION 1981 - 2011

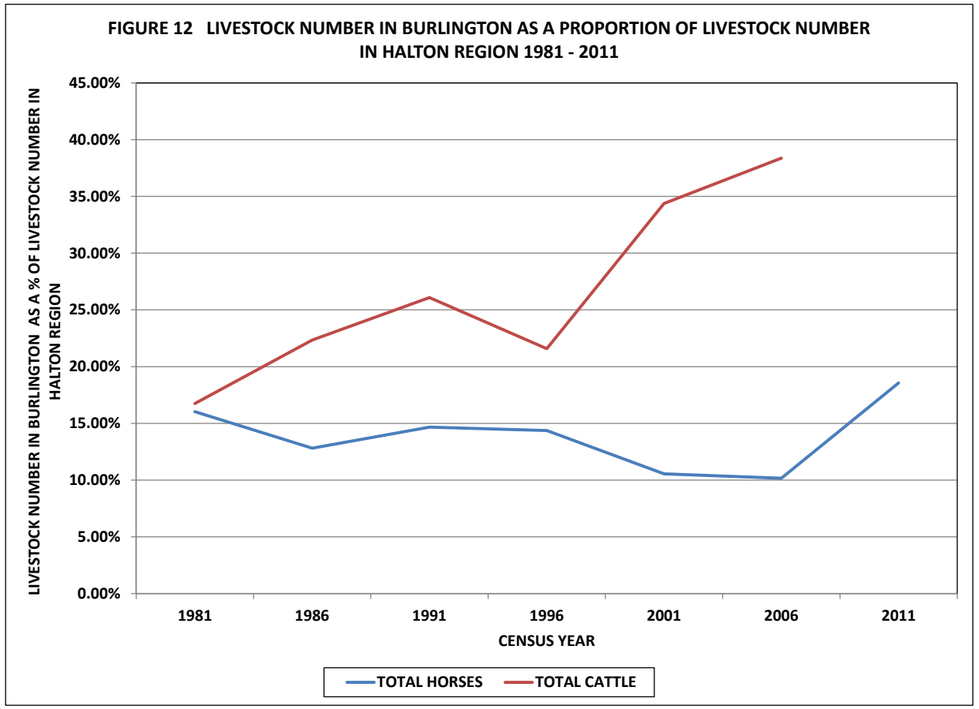


FIGURE 13 NUMBER OF FARMS REPORTING SPECIFIC LIVESTOCK IN HALTON REGION
1981 - 2011

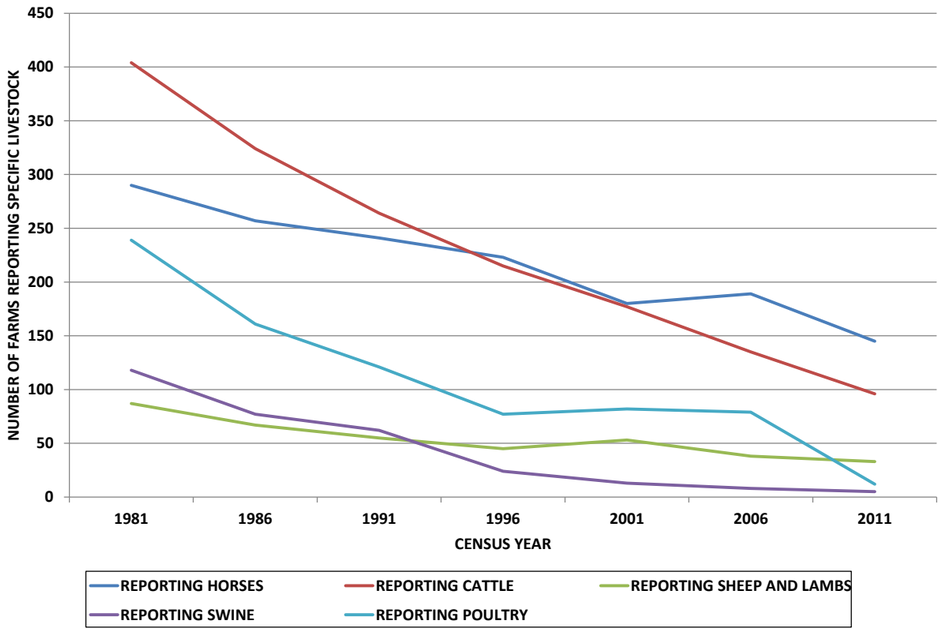


FIGURE 14 NUMBER OF FARMS REPORTING SPECIFIC LIVESTOCK IN BURLINGTON
1981 - 2011

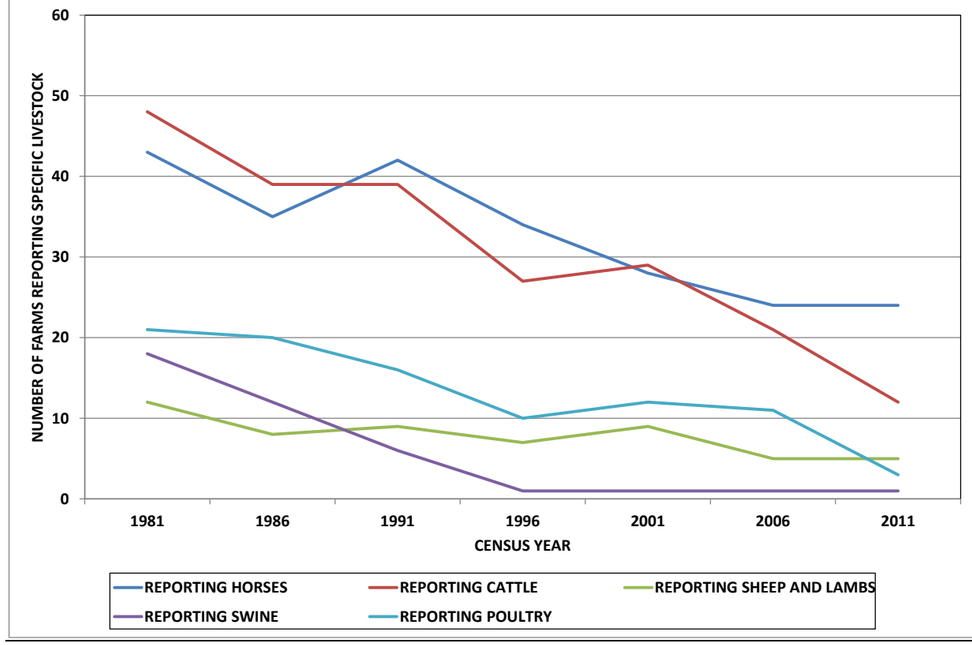


FIGURE 15 NUMBER OF FARMS REPORTING SPECIFIC LIVESTOCK IN HALTON REGION
AS A PROPORTION OF FARM NUMBER REPORTING SPECIFIC LIVESTOCK IN ONTARIO
1981 - 2011

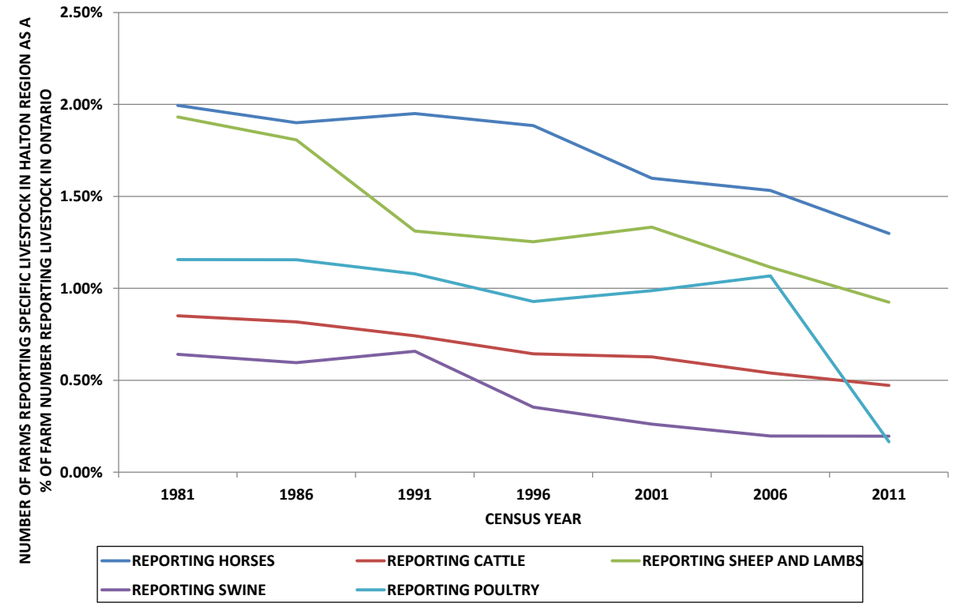


FIGURE 16 NUMBER OF FARMS REPORTING SPECIFIC LIVESTOCK IN BURLINGTON AS A
PROPORTION OF FARM NUMBER REPORTING SPECIFIC LIVESTOCK IN HALTON 1981 - 2011

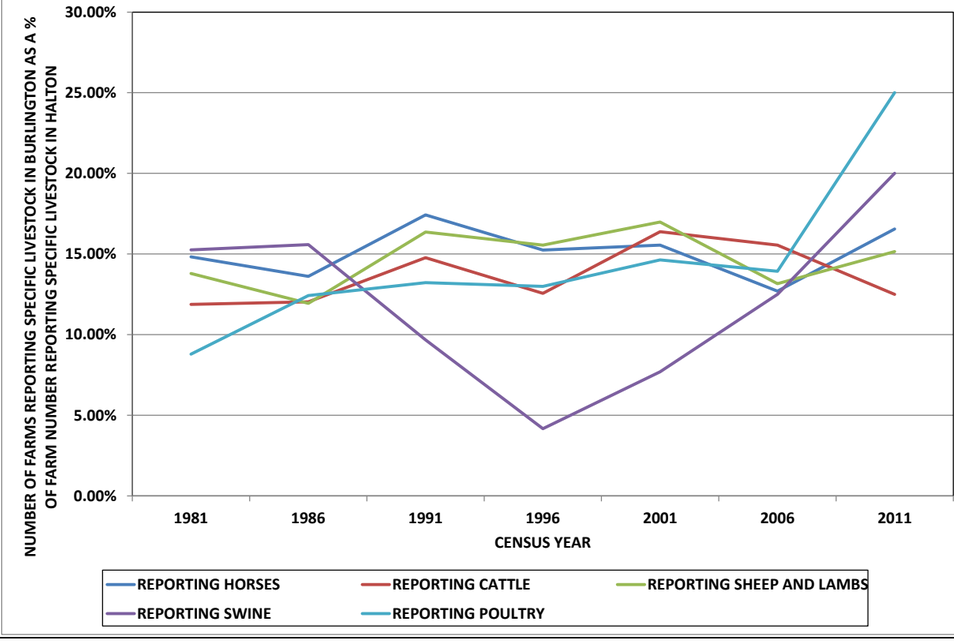


FIGURE 17 PROPORTION OF FARMS WHERE OFF-FARM INCOME EXCEEDS NET FARM INCOME IN WESTERN ONTARIO REGION

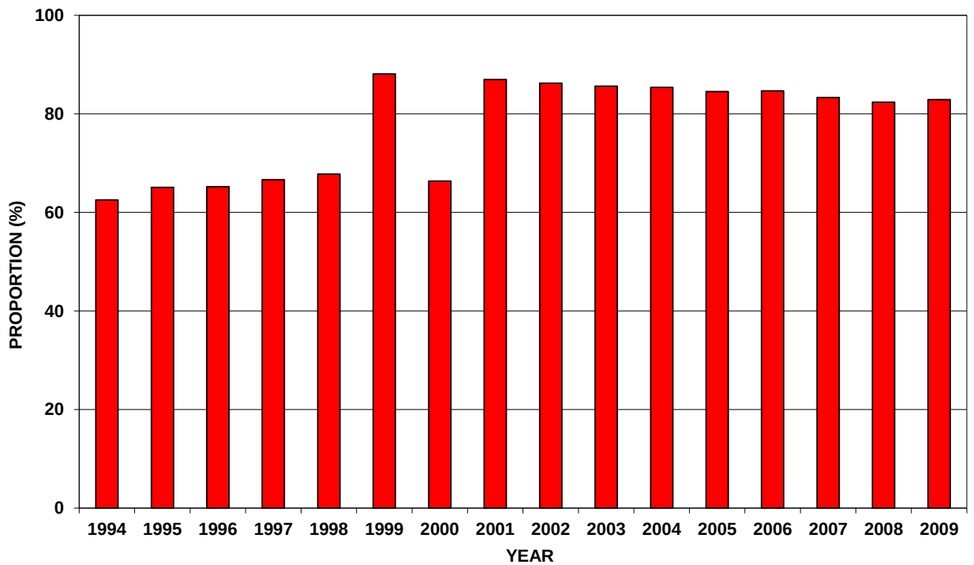


FIGURE 18 BALANCE OF TRADE FOR SELECTED COMMODITY GROUPS ONTARIO AGRICULTURE

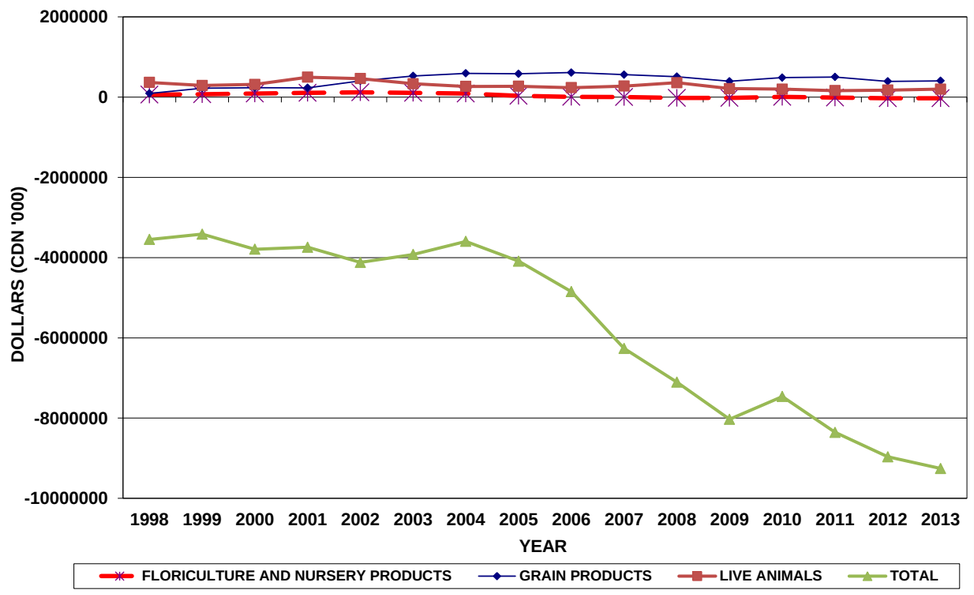


FIGURE 19 ONTARIO BALANCE OF TRADE IN FRUIT & NUTS, VEGETABLES

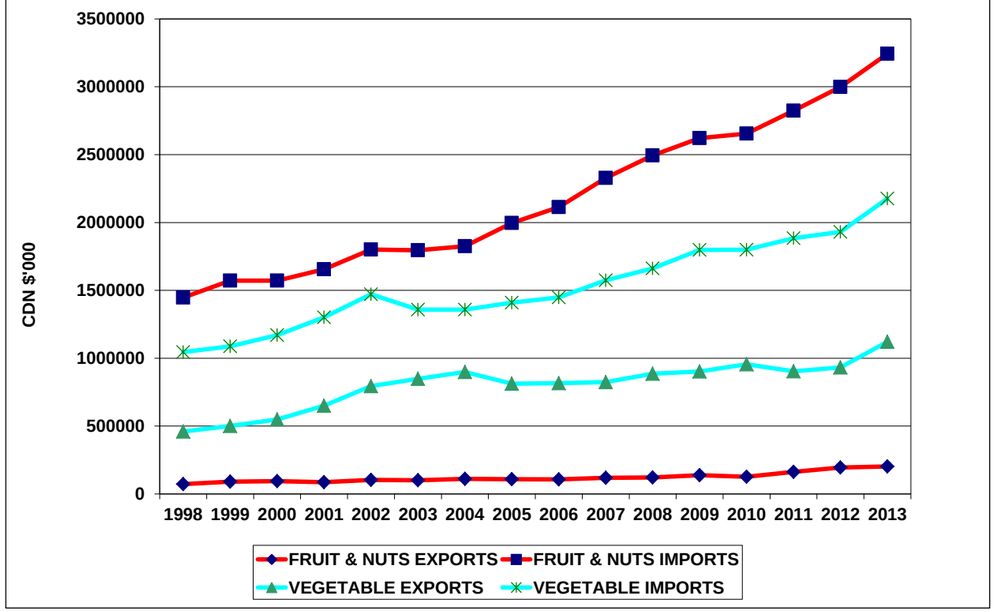


FIGURE 20 PROVINCE OF ONTARIO AVERAGE FARM VALUE ($ GROSS PER ACRE) FOR SELECTED CROPS

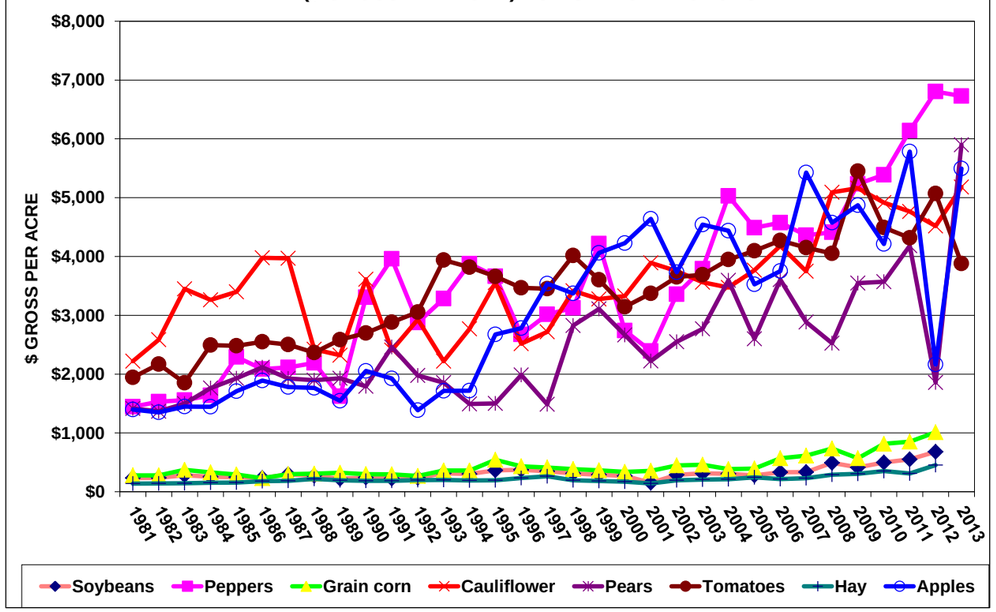


FIGURE 21 GROSS FARM RECEIPTS PER FARM FOR THE CENSUS YEARS 2001, 2006 AND 2011
HALTON REGION, OAKVILLE, BURLINGTON, MILTON AND HALTON HILLS

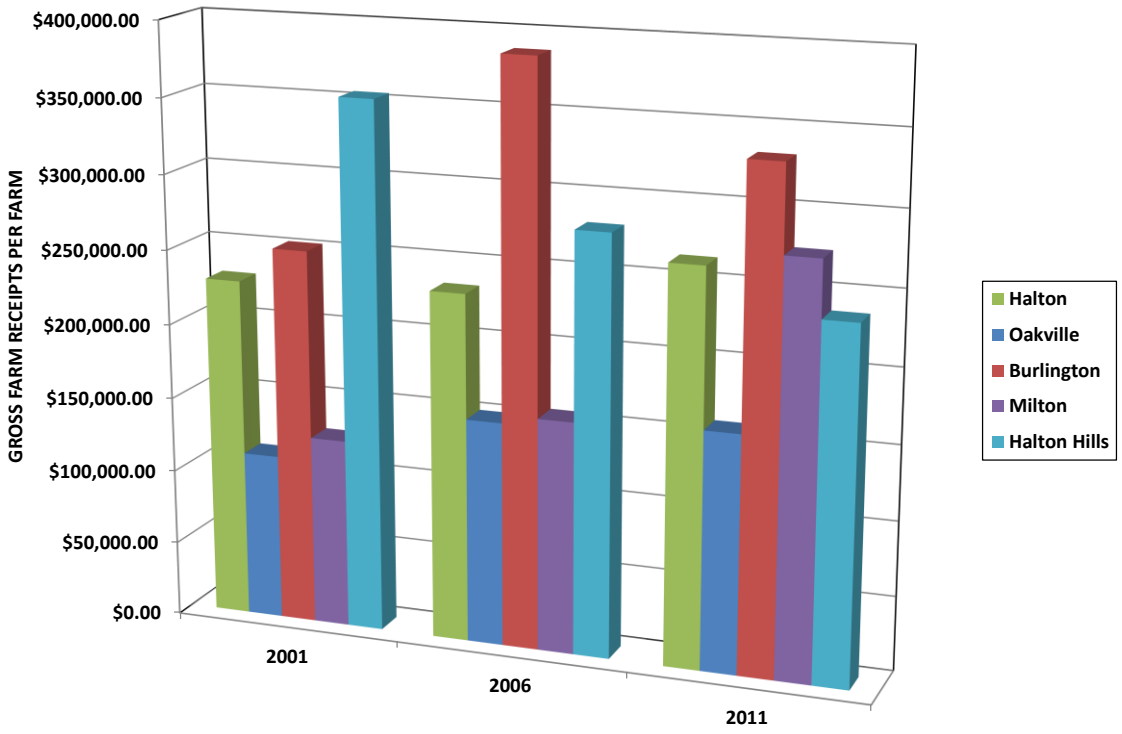
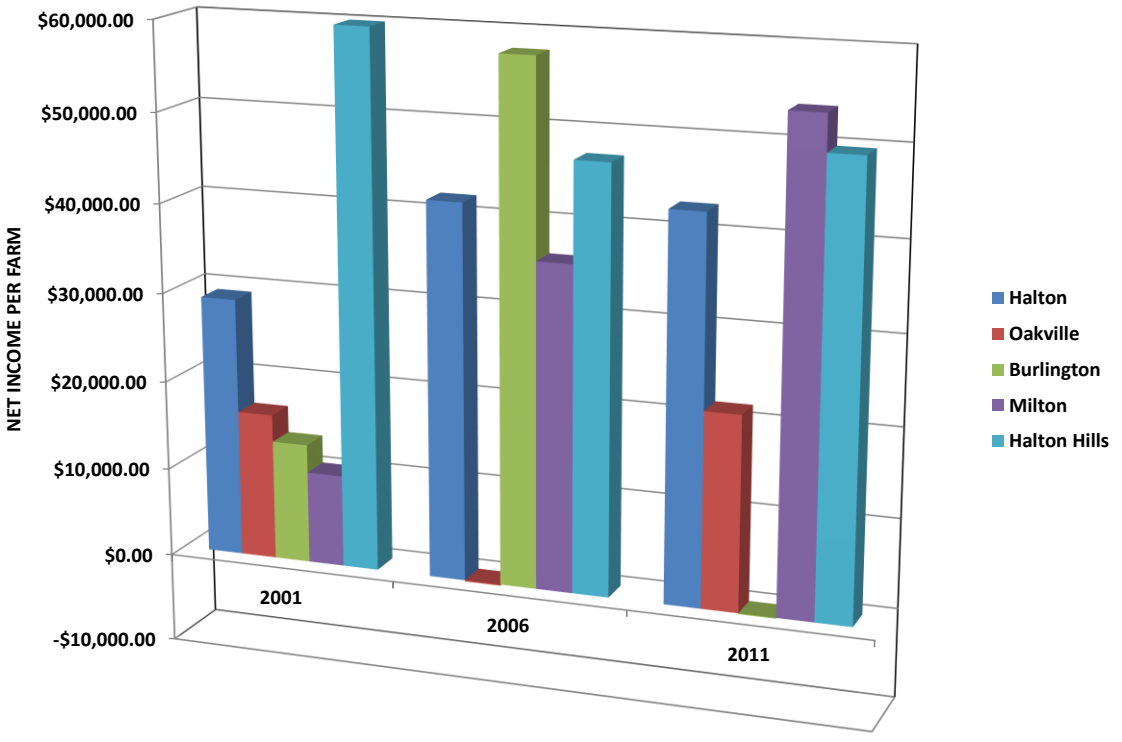


FIGURE 22 NET ON-FARM INCOME PER FARM FOR THE CENSUS YEARS 2001, 2006 AND 2011
HALTON REGION, OAKVILLE, BURLINGTON, MILTON AND HALTON HILLS



MAP 2 AGRICULTURAL MDS - EVERGREEN SITE



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APPENDIX 1
MINIMUM DISTANCE SEPARATION DISCUSSION

The calculation of Minimum Distance Separation I (MDS I) requires some interpretation based on factors such as:

- the MDS calculation method in force at the time the calculation is made;
- type of new land-use proposed;
- number and kind of animals producing manure;
- manure handling system;
- what constitutes a "livestock facility" (barn) intended for livestock use;
- whether a livestock facility is structurally sound enough to allow for the housing of livestock;
- maximum tillable area;
- maximum livestock facility housing capacity given an allowance for feed bins, feed preparation areas, field shade shelters, livestock assembly areas, livestock loading chutes, machinery sheds, milking centres, offices, riding arenas, silos or washrooms; and,
- the presence, location and size of existing non-agricultural development adjacent or near to the proposed new non-agricultural development.

The PPS agricultural policies have been supplemented by a set of MDS Implementation Guidelines (OMAFRA, 2006) for use in the application of MDS. A new set of MDS Implementation Guidelines have been produced in 2014 but have not yet been released for public comment. A number of the 2006 Guidelines are of significance to Evergreen Community Site. Generally, Implementation Guideline number 5 describes when MDS formulae are to be implemented and applied and states that:

> *MDS I is applied at the time of planning and/or development review for proposed new development, such as lot creation, building permits for development on a lot in accordance with Implementation Guideline #6, rezoning or redesignation of agricultural land to permit development, in proximity to existing livestock facilities on an existing or proposed separate parcel of land. MDS II is applied at the time of building permit application to build a first or expanded livestock facility.*

Guideline 2 describes the uses to which MDS applies as follows:

> *MDS applies to livestock facilities. It does not apply to abattoirs, apiaries, assembly yards, fairgrounds, feed storages, field shade shelters, greenhouses, kennels, livestock facilities that are less than 10 m^2 (108 ft^2) in floor area, machinery sheds, mushroom farms, pastures, slaughter houses, stockyards, or temporary field nutrient storage sites (as defined under the Nutrient Management Act, 2002).*

A livestock facility and existing livestock facility are defined as:

> *Livestock facility - One or more barns or permanent structures with livestock occupied portions, intended for keeping or housing of livestock. A livestock facility also includes all manure or material storages and anaerobic digesters.*
>
> *Existing livestock facility - A livestock facility, or a portion of a livestock facility, intended for keeping or housing of livestock and containing one or more barns or structures. Includes manure or material storages, whether associated with a livestock facility or not, and anaerobic digesters, which have already been constructed.*

Both a livestock facility and existing livestock facility definitions contain the phrase intended for keeping or housing livestock. I interpret the word "intended" to mean that the structure was purpose built for livestock production thereby eliminating the need to consider building/structures originally built for, or intended for, uses other than livestock production.

Therefore, for example, an abandoned house or a former drive shed currently used to shelter livestock would not require an MDS calculation.

MDS arcs are usually drawn with a center point at the livestock occupied portion of the livestock facility for barn where livestock occupied portion is defined as follows:

> *Livestock occupied portion – Areas of livestock facilities where livestock spend the majority of their time, allowing substantial amounts of manure to accumulate, but not including feed preparation rooms, milking centres, offices, washrooms, riding arenas, livestock loading chutes, or livestock assembly areas.*

However, empty livestock facilities also require MDS calculations and under those circumstances, there will need to be a decision made about what the most likely area of the facility that was, or likely will be, the livestock occupied portion. Empty livestock facilities are to be included only if they are structurally sound and reasonably capable of housing livestock or storing manure as described in Guideline 20 (2006).

> *MDS I applies to empty livestock facilities if they are structurally sound and reasonably capable of housing livestock, or storing manure. The MDS I calculation should be based on the most probable Factors A,[type of livestock and its relative potential for emanating offensive odours] B,[the number, or equivalent number, of Nutrient Units (NU) in housing capacity at a livestock facility] and D [the type of manure or material and its relative potential for emanating offensive odours].*

There are disagreements about what practically is the meaning of the phrase "structurally sound and reasonably capable of housing livestock or storing manure". Livestock is often observed occupying structures that were formerly barns but are now foundations with the former ceiling/floor of the barn now acting as a roof. I am of the opinion that these structures should not be included as livestock facilities for the purposes of the calculation of MDS.

There are some exceptions to the application of MDS made on the basis of existing development. Guideline number 12 states that:

> *MDS I is applied to new proposed development, even though there may be existing non-agricultural uses that do not conform to MDS I requirements. Where there are four, or more, existing non-farm uses closer to the subject livestock facility and in immediate proximity to the current application, MDS I will not be applied. The current application must not be located closer to the livestock facility than the four, or more, existing non-farm uses.*

Guideline 12 has been included because there are severances for non-agricultural use found within 1 km of the horse barn located to the north of the proposed Evergreen Community. On the basis of the Agricultural Information Atlas (OMAFRA, 2015), there are 5 severances (located east of the horse farm having an MDS arc) identified at the corner of Tremaine and Burnhamthorpe Roads, for example.

The presence of scattered residential development as well as rural subdivisions and settlement areas results in existing conditions that affect the application of MDS. The 1 or 2 km MDS Study Area is based on MDS Guideline 6 which states that:

> *MDS I is applied to all livestock facilities reasonably expected to be impacted by the proposed development, lot creation, rezoning or redesignation. For Type A applications, apply MDS I for livestock facilities within a 1000 metre radius. For Type B applications apply MDS I for livestock facilities within a 2000 metre radius. Separate MDS I calculations should be undertaken for each livestock facility located on a separate parcel of land. See Implementation Guidelines # 34 and # 35 for a discussion regarding Type A and Type B land uses. MDS II is applied to all*

development reasonably expected to be impacted by the proposed first or expanded livestock facility.

There is a need to make assumptions about the characteristics of adjacent or near land uses when calculating either or both of MDS I and MDS II. Use of Type B land uses doubles the separation distance of the Type A land use. These different types of land uses are defined as follows:

Guideline 35 - Type A land uses are typically characterized by uses that have a lower density of human occupancy, habitation or activity. For the purposes of MDS I, Type A land uses include applications to rezone or redesignate agricultural lands for industrial, agricultural-related or recreational use – low intensity purposes. Type A land uses include applications to permit:

- *construction of a dwelling on an existing lot where the municipality has determined that MDS I should be applied, or the*
- *creation of up to three lots either by consent or plan of subdivision*

For the purposes of MDS II, Type A land uses include areas zoned or designated industrial, agricultural-related or recreational use – low intensity. Type A land uses include residential dwellings on lots zoned agriculture, rural residential, residential, or other similar zoning. This includes existing residential uses on separate lots not recognized through Official Plan designation as a residential area.

Guideline 36 - Type B land uses are typically characterized by uses that have a higher density of human occupancy, habitation or activity. For the purposes of MDS I, Type B land uses include applications to rezone or redesignate agricultural lands for residential, institutional, recreational use – high intensity, commercial or settlement area purposes. Type B land uses include applications to permit:

- *creation of residential subdivisions in rural areas, or*
- *expansion of a settlement area, or*
- *creation of multiple residential development, or*
- *the creation of a lot which results in a rural residential cluster.*

For the purposes of MDS II, Type B land uses include areas zoned or designated settlement area, recreational use – high intensity, institutional, or commercial. Type B land uses include areas designated in an Official Plan as residential for:

- *residential subdivisions, or*
- *multiple residential, or*
- *estate residential development.*

The definition of Type A and B land uses is predicated on the interpretation of the phrase *density of human occupancy, habitation or activity*.

Minimum Distance Separation can be calculated on the basis of the current number and kind of livestock existing in the barns, the farmer's opinion about the livestock capacity of the existing livestock facility, a livestock facility square footage measurement used as input to the OMAFRA livestock capacity indicated as part of the MDS software and/or, the total tillable hectares of the property on which the livestock facility is located.

Guideline 41 specifies how distances need to be measured, that is, from what area or location to another area or location.

For MDS I, measurements are taken as the shortest distance between the area to be rezoned or redesignated and the livestock occupied portion of the livestock facility (or storage). For MDS II, measurements are taken as the shortest distance between the point of new construction for the livestock occupied portion of a first or expanded livestock facility and the dwelling/lot line/road allowance/or area zoned or designated.

Opportunities for variances are also discussed. Guideline 46 describes the opportunities and some of the conditions associated with MDS variances:

> *MDS I setbacks should not be reduced except in accordance with these implementation guidelines. Where a municipality applies MDS I to development on existing lots, minor variances to MDS distances can be considered based on site specific circumstances. Circumstances that meet the intent, if not the precise distances of MDS I, or mitigate environmental impacts, may warrant further consideration. Minor variances to MDS II distances can be considered based on site specific circumstances. Circumstances that meet the intent, if not the precise distances of MDS II, or mitigate environmental impacts, may warrant further consideration.*

APPENDIX 2
FIRST AGPLAN AGRICULTURAL ASSESSMENT

AGRICULTURAL IMPACT ASSESSMENT REPORT FOR THE PROPOSED EVERGREEN COMMUNITY IN THE CITY OF BURLINGTON

Prepared for:
Evergreen Community (Burlington) Ltd.

By:
AgPlan Limited

February 6th, 2008.

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EXECUTIVE SUMMARY

This study was completed to:

- Evaluate the proposed Evergreen Community located at the northwest corner of Dundas Street and Tremaine Road in Burlington (the "Evergreen Site") from an agricultural policy perspective and determine the agricultural impact of that proposed development.
- Provide mitigation measures for any agricultural impacts identified.

Generally, Agricultural Impact Assessments are not completed on lands that are found within urban boundaries where agriculture is an interim use. Regardless, urban lands that have an interim agricultural use, or are located adjacent to interim agricultural uses, prior to their development, as well as urban lands that are located adjacent to rural or agriculturally designated areas, have the potential to affect agricultural operations. Because of this potential effect on agriculture, an evaluation of agricultural impacts related to the Evergreen Site has been completed. However, policy as well as guidelines on the recommended approach to the assessment of the effects of development on interim use agriculture or on agricultural lands adjacent to urban boundaries has not been written specifically for Halton Region or for the Province of Ontario. Therefore, this report uses existing policy and other published literature as a guide to information collection and impact evaluation.

Much of this assessment is based on the requirements of the *Planning Act* and specific information in the *Provincial Policy Statement (PPS) (2005)* related to the protection of agricultural land. Protection is based on an assessment of need for a change in use; in addition to the presence of *specialty crop areas* and lands with soil capability ranging between classes 1 and 3 (The soil capability system has seven classes that range from class 1, which is the best, to class 7, which is unsuitable for agricultural production). The need to designate additional lands for urban development in Burlington has already been determined because the Evergreen Site is part of an area within the urban boundary. In addition, soil capability class and specialty crop areas were previously considered when the urban boundary was expanded and the Evergreen Site included within the urban boundary. Therefore, issues of need and site characteristics related to soil capability and specialty crops have not been analyzed as part of this report. However, some discussion about the soil potential or capability and specialty crop characteristics of adjacent lands has been included in the report.

However, the *PPS* (2005) also states in section 2.3.5.2 that *impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands should be mitigated to the extent feasible.* It is this section of the *PPS* (2005) that applies to the Evergreen Site.

Agricultural information was collected, evaluated and presented at a number of different scales. Some general descriptive information is discussed at the international level and this is followed by a description of agriculture at the provincial level. Subsequently, spatial and numerical analyses were completed as follows:

- firstly, a multi-regional analysis and evaluation for 22 Counties or Regions spanning central to southwestern Ontario; and
- secondly, by an analysis of agricultural characteristics within the Evergreen Site and adjacent area (described in Section 5.0).

The analyses were completed to provide information about the changing agricultural environment within Ontario, Halton Region, the Evergreen Site and on the lands adjacent to the Evergreen Site. The findings of the AgPlan analyses include the following:

- The number of farms and farmers within Halton Region and Burlington has been diminishing over time.

- The database analyses indicate that there are a number of trends that make farming difficult.
- Economic returns associated with agriculture are generally low.
- Livestock operations are at risk with respect to disease transmission.
- The relative performance of agriculture within Halton, when compared to other Counties and Regions in central and south-western Ontario, is low.
- The farmland designated for agricultural use and found to the north of the proposed Evergreen Site has a restricted and relatively lower soil potential for specialty crop production.
- Specialty crops are not grown on lands adjacent to the Evergreen Site and the lands to the North are not *specialty crop areas* as defined within the *PPS*.
- Land use within the urban boundary as well as adjacent to the urban boundary includes common field crop and livestock production. Of the livestock operations, two horse farms are the nearest farm operations to the Evergreen Site.

In summary, conclusions of the report are that:

- Existing livestock operations are relatively separate from the proposed development area because that area is bounded by roads on three sides and the Bronte Creek system to the West.
- The Bronte Creek system already provides a corridor and habitat for wildlife movement which has the potential to be a vector for disease to livestock. Therefore, the presence of storm water management ponds in the proposed development will only marginally increase wildlife populations which may act as a vector for disease.
- The presence of a greater urban population immediately adjacent to the lands to the north of the Evergreen Site has the potential to provide a positive impact to agriculture by increasing the customer base for direct farm sales.

Therefore, the Evergreen Site can be used for development with minimal agricultural impacts. The proposed development meets the requirements of the PPS in section 2.3.5.2 that *impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands should be mitigated to the extent feasible.*

1.0 STUDY OBJECTIVES

AgPlan Limited was retained by the Evergreen Community (Burlington) Ltd. in June 2007 to complete an agricultural impact study to:

- Evaluate agricultural impacts due to the development of the Evergreen Site and to propose mitigation for any impacts identified; as well as
- Describe international, national and regional trends affecting the agricultural industry which provide context for agricultural impacts identified.

More specifically, this report assesses:

- The agricultural characteristics of lands adjacent to the proposed development located in the City of Burlington within the Region of Halton. The Evergreen Community Site is bounded by the Bronte River Valley to the west, Highway 407 to the north, Tremaine Road in the east and Dundas Street to the south as shown on Map1;
- Characteristics of agriculture which relate to the planned use of agricultural lands generally and which provide context to the use of the proposed development area;
- An assessment of agricultural impacts associated with the proposed development given the aforementioned findings on agricultural characteristics and context; and
- A description of mitigation measures to agricultural impacts described to the extent that these mitigation measures are feasible.

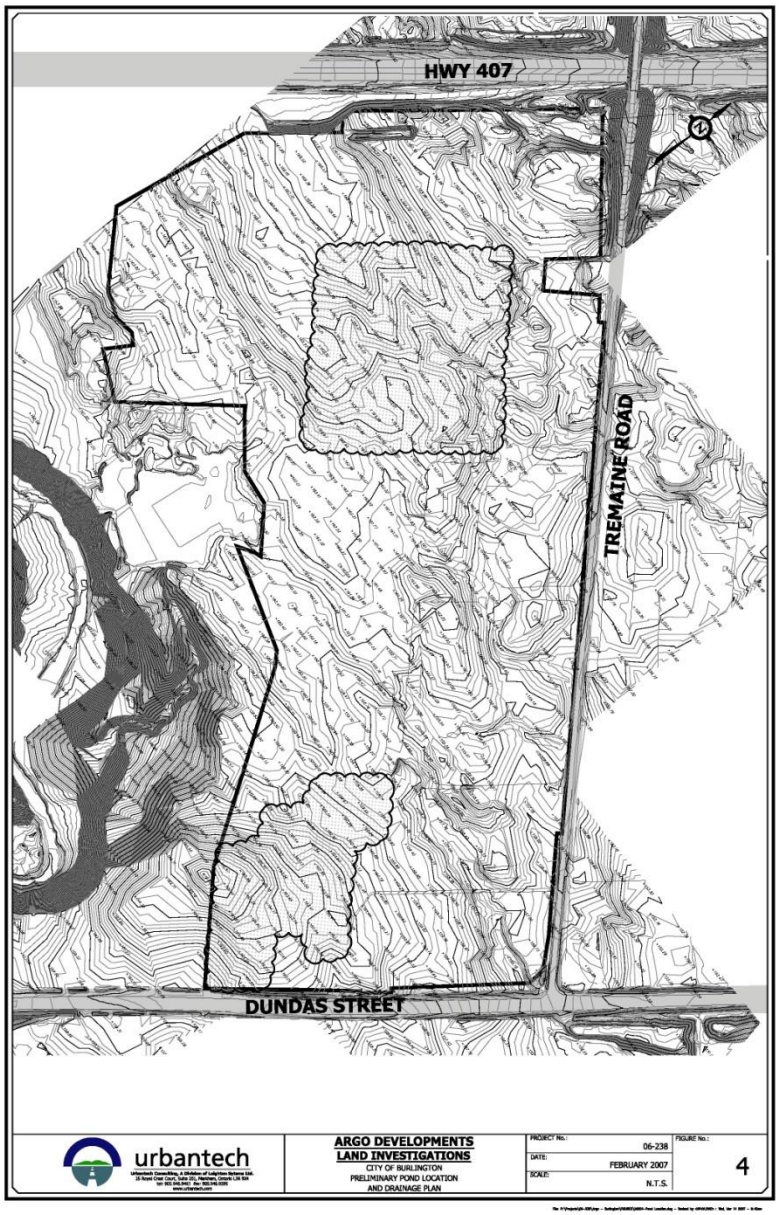
1.1 Report Format

This report is based on AgPlan's review of existing published and unpublished information as well as the results of field work. Methods are described generally as part of the text; however, in some instances, more specific information is outlined in the Appendices.

Reference is made to existing published information. Discussion includes references to literature prepared by various authors (Section 8.0). Additionally, AgPlan's report should be read in conjunction with reports prepared by other consultants.

Generally, Agricultural Impact Assessments are not completed on lands that are found within urban boundaries where agriculture is an interim use. Regardless, urban lands that have an interim agricultural use, or are located adjacent to interim agricultural uses, prior to their development, as well as urban lands that are located adjacent to rural or agriculturally designated areas, have the potential to affect agricultural operations. Because of this potential effect on agriculture, an evaluation of agricultural impacts related to the Evergreen Site has been completed. However, policy as well as guidelines on the recommended approach to the assessment of the effects of development on interim use agriculture or on agricultural lands adjacent to urban boundaries has not been written specifically for Halton Region or for the Province of Ontario. Therefore, this report uses existing policy and other published literature as a guide to information collection and impact evaluation.

MAP 1 SITE LOCATION



2.0 STATUTES, REGULATIONS, POLICIES AND GUIDELINES

In preparing this report, the following statutes, regulations, policies and guidelines, among others, have been considered:

- *Planning Act*;
- *Provincial Policy Statement (PPS), Policy 2.3, Agricultural Policies* (2005)
- *The Regional Plan, Official Plan for the Halton Planning Area*, *Regional Municipality of Halton* (1994, office consolidation to August, 2006);
- *City of Burlington Official Plan (1994, office consolidation to August, 2007);*
- *Greenbelt Plan* (2005); and
- *Minimum Distance Separation I* – (MDS I, 2006).

Additional references used in the preparation of this report are outlined in Section 8.

2.1 The Provincial Policy Statement (2005)

The approach for addressing Agriculture in this report is generally premised on the *Planning Act* and on the requirements of *Policy 2.3* of the *Provincial Policy Statement* (Government of Ontario, 2005). *Policy 2.3* provides direction to municipalities for land use planning and outlines the expectations of the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) for assigning priorities to different types of agricultural land. *Policy 2.3* indicates how lands, that are suited to the growing of specialty crops and lands rated in the seven-class soil capability system of the Canada Land Inventory (CLI), are to be treated in differentiating amongst agricultural lands. Previous planning within the City of Burlington and the Region of Halton has already resulted in the urban designation of lands south of Highway 407. This area, designated for urban use and therefore no longer part of a *prime agricultural area*, includes the Evergreen Site. As a result, this report will address section 2.3.5.2 in the *PPS* (2005) which states that *"impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands should be mitigated to the extent feasible".*

2.2 Regional Municipality of Halton Official Plan

PPS Policy 2.3 and section 2.3.5.2 is reflected in the current Official Plan (1984, office consolidation to September, 2006) for the Regional Municipality of Halton and the Plan states:

> *It is the policy of the Region to… recognize, encourage and protect agriculture as an important industry in Halton and as the primary long-term activity and a land use throughout the agricultural rural area and to this end… require the proponent of any non-farm land use that as permitted by specific policies of this Plan but has a potential impact on adjacent agricultural operations to carry out an Agricultural Impact Assessment (AIA), based on guidelines adopted by Regional Council* (Sections 101(1) and 102(2)(d)).

2.3 Burlington Official Plan

The wording related to agriculture within the Burlington Official Plan reflects that outlined previously by the Regional Municipality of Halton. The Burlington OP in section 13.2 contains the following objectives:

- *13.2 d) to protect farms from incompatible land uses which would limit agricultural productivity and efficiency.*
- *13.2 e) to encourage agriculture related tourism as a means of economic diversification for the farming community.*
- *13.2 f) to encourage the development of value-added production and such secondary agricultural industry as will enhance the economic viability of the agricultural industry.*

The Burlington Official Plan contains the following policy:

- *13.3 b) The City shall apply the Minimum Distance Separation formulae and other relevant Provincial regulations to ensure that farm operations are protected from incompatible activities and land uses that would limit agricultural productivity or efficiency. The City shall discourage complaints from nonfarm uses concerning normal farm practices.*

2.4 The Greenbelt Plan

The aforementioned ranking of agricultural land and the interpretation of the agricultural policy environment within Ontario has been affected by the Greenbelt Plan (2005). The Plan has a number of objectives related to environmental and agricultural protection – only the agricultural component will be discussed in this report. The Plan does state that: *non-agricultural uses are*

not permitted in the Specialty Crop Area or within Prime Agricultural Areas (as designated in municipal official plans) except for the policies governing existing uses.

Given the fact that no technical or scientific information specific to the Greenbelt plan is available for review, no specific reasoned analysis of the Greenbelt Plan's agricultural land characteristics relative to the agricultural characteristics of the Evergreen Site can be completed. However, the Greenbelt Plan has created a hierarchy of agricultural land where those agricultural lands defined/designated by the Greenbelt Plan have been given higher priority, that is, given greater protection than lands located outside of the Greenbelt. The Evergreen Site lies outside of the Greenbelt and therefore comprises lands that have lesser protection. In addition, lands to the north of Highway 407 which are also north of the Evergreen Site are not part of the Greenbelt but have been designated for agricultural use. Therefore, there is some probability of agricultural use continuing to the north of the Evergreen Site at least in the short term and this continuing use provides the rationale for the agricultural impact analysis contained within this report.

3.0 POLICY INTERPRETATION

Agricultural policy in all of the aforementioned documents has as its objective, the preservation of the better agricultural lands. The objective relates to the resource base and does not include individual landowners and/or farmers as resources necessary for agriculture. Secondarily, when land use does change from agriculture to an urban use, agricultural policy seeks to minimize the effects of the new urban use on remaining agricultural lands. However, policy is mute with respect to the kinds, magnitude and probability of those impacts to agriculture. As well, OMAFRA (Turvey, 2007) does not currently have any documentation prepared that discusses agricultural impacts and mitigation. Therefore, a review of some of the published literature as well as professional experience has been used to derive a list of potential positive and negative impacts of adjacent urban development on agriculture. Because impacts are a function of existing and potential land use, this report describes existing agricultural conditions and the impact evaluation and mitigation process followed can be divided into two subcomponents as follows:

- a contextual subcomponent - defined by the gathering and analyzing of broader-based information to provide context to the Evergreen Site characteristics;
- a site-specific study subcomponent - characterized by observations supported by fieldwork and aerial photo interpretation.

The two subcomponents provide the information to help distinguish those impacts already existing regardless of the proposed Evergreen Site development. Additionally, existing conditions assist in characterizing those impacts where mitigation is feasible.

4.0 DISCUSSION OF TRENDS IN AGRICULTURE

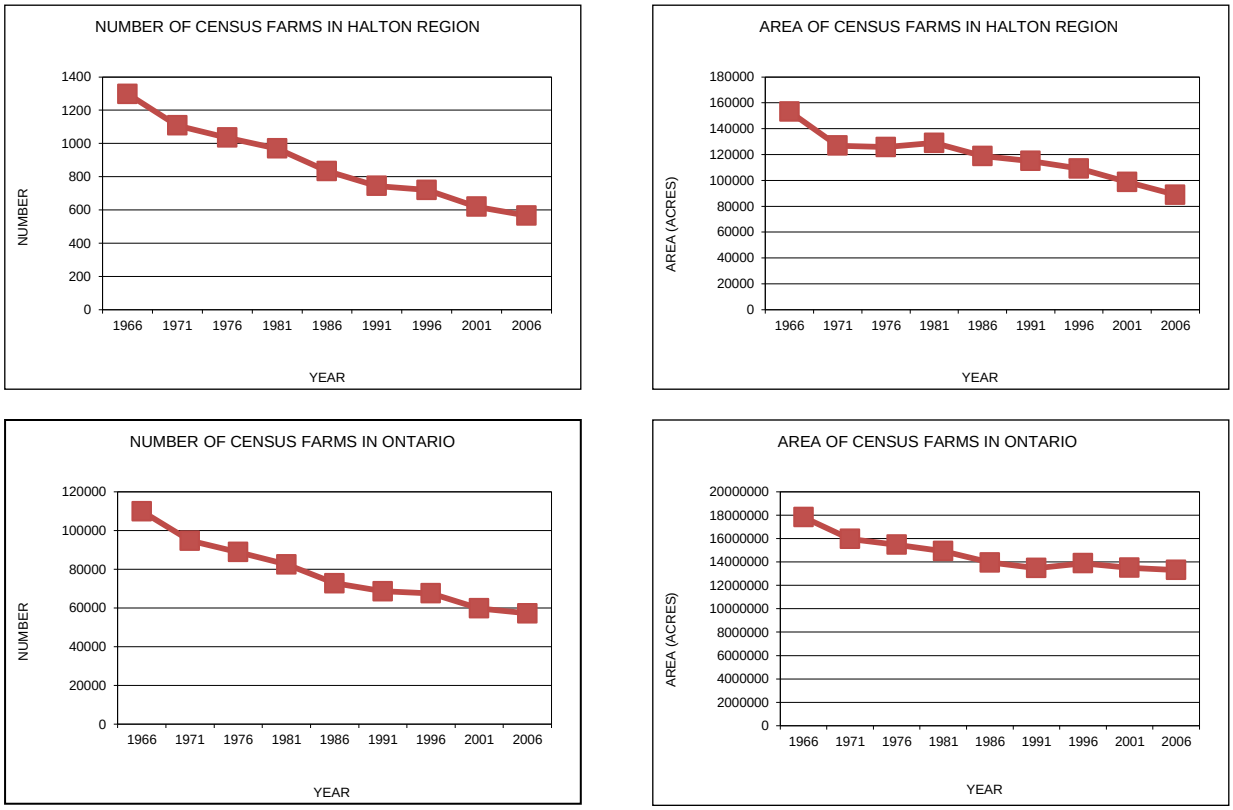
4.1 Number of Farms and Farmers

In general, land use decisions have resulted in the reduction of the amount of agricultural land. This change has been happening globally while at the same time total food production has been increasing.

The number as well as the area of census farms is decreasing in Halton as well as Ontario as can be seen in Figure 1. [Like most of the statistical data available from Statistics Canada, the data on census farms is subject to limitations - not the least of which is the changing definition of Census Farms. The definition has sometimes included a relatively low farm income component and in other years has not. In other words, if one wanted to call oneself a farmer and be included in the agricultural census, one had to be making some money from farming. The

income requirement was removed in 1996, for example.] It is clear from information such as that presented in Figure 1 as well as from information from other sources (particularly that related to crop yield), that more and more food is being produced on less and less land.

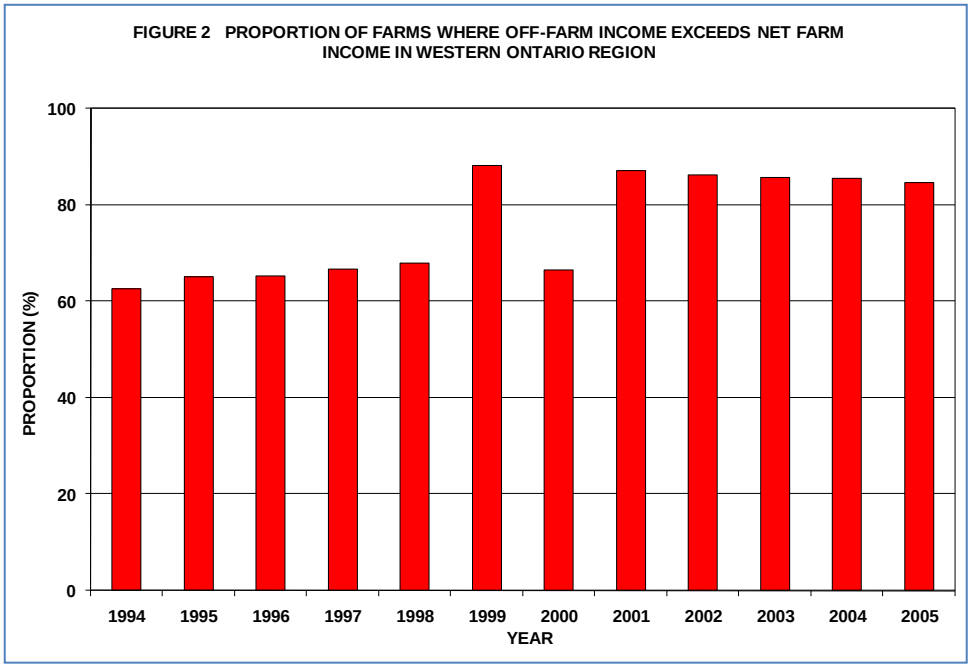
FIGURE 1

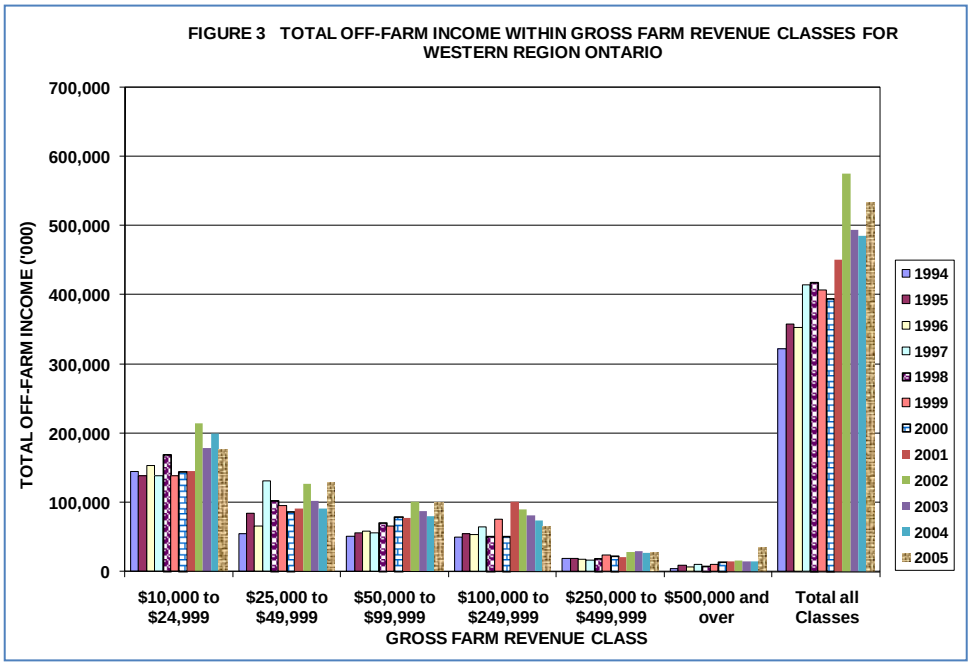


4.2 Economics

In general terms, Canadian agriculture has received some subsidy payments from government and, in some agricultural industries/segments, has been protected from competition (by methods such as supply control). The level of subsidy and protection for Canadian agriculture tends to be less than that applied to agriculture in Europe and the United States. At the same time, Canadian farmers are subject to competition from farmers outside of Canada where labour costs are significantly lower. Therefore, because of the aforementioned competition at an international scale, Canadian farmers are restricted in their ability to raise prices as well as to control input and labour costs.

In fact, at present, most farmers in Ontario supplement their income from off-farm sources. In the Western Ontario Region, which is defined by OMAFRA and within which Halton Region is located, the majority (greater than 80% of farms in the years 2001 -2003 as shown in Figure 2) of farms (these are the ones that are in the gross farm revenue classes of less than $250,000.00 for the year 2001) have off-farm income that exceeds net farm income.





Data for 1994 – 2005 (OMAFRA web site, 2007) have been graphed in Figure 3 to demonstrate this relationship. Off-farm income is defined by OMAFRA as including *income from wages and salaries, net off-farm self-employment, investments, pensions and other sources.* Irrespective of income class, net farm income is supplemented by off-farm income. Additionally, when the database is not subdivided into income classes, average off-farm income exceeds net farm income as shown in the "total" column in Figure 4. For example, in the year 2001, total off-farm income for farmers in Western Ontario Region was $450,463,000 and total net farm operating income was $197,380,000. When net farm operating income is divided by off-farm income, the value calculated is equal to 0.438 as outlined in Figure 4. Net farm income exceeds off-farm income when the dividend shown on the y-axis in Figure 4 exceeds the value 1. The relationship between farm and off-farm income levels has been changing with off-farm income increasing as

can be seen in the average values for Western Ontario in Figure 4. Net farm income is a reflection of a number of factors including relatively low farm produce price received and relatively high input costs.

FIGURE 4 NET OPERATING INCOME DIVIDED BY OFF-FARM INCOME WESTERN ONTARIO REGION

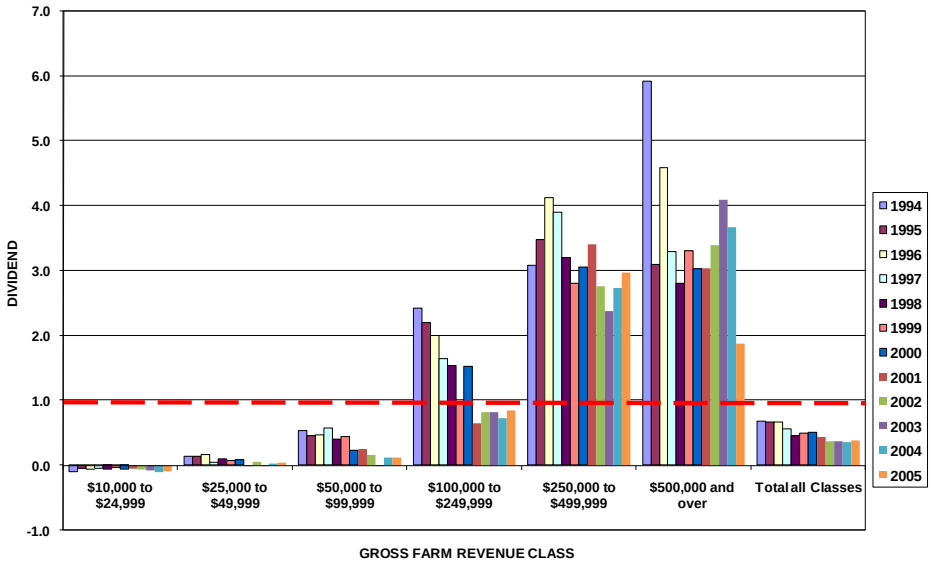
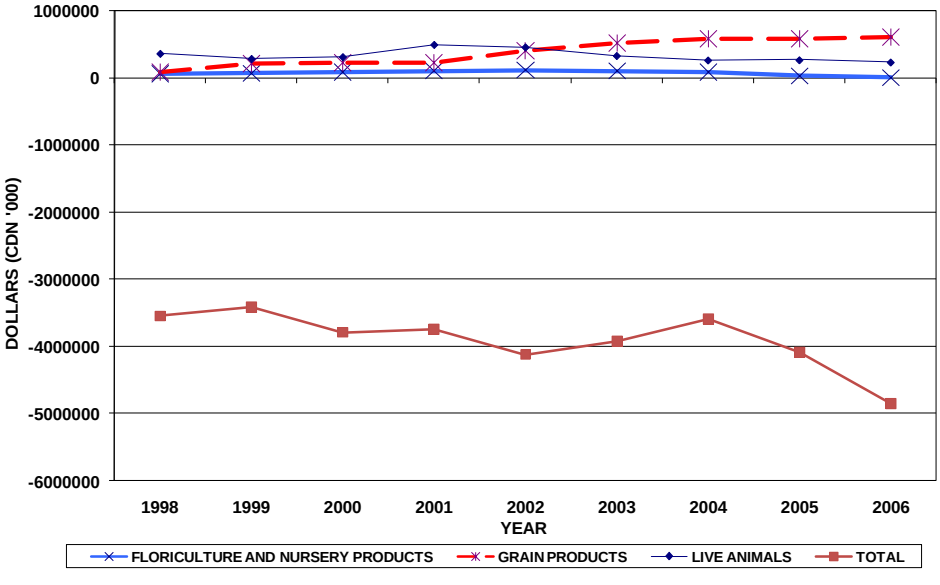


FIGURE 5 BALANCE OF TRADE FOR SELECTED COMMODITY GROUPS ONTARIO AGRICULTURE



The difficulty associated with making money by farming is also reflected in the balance of trade data for Ontario. Figure 5 outlines the balance of trade in Canadian dollars calculated as export dollar value minus import dollar value. The Figure shows selected commodity groups as well as the total trade value. Very few commodity groups show a positive balance of trade (where positive balance of trade means that export values exceed import values). Those better but fewer performing commodity groups where exports exceed imports are shown in Figure 5. Products for direct human consumption (fruit and vegetables) have a negative balance of trade

as discussed in Section 5.2 and shown in Figure 12. The total value of agricultural imports relative to exports is tending to increase. The balance of trade data suggest that agricultural product buyers including consumers are spending more money on produce from foreign sources.

In summary, in Ontario as well as Halton Region there are fewer farmers growing more food on less land with higher farm input costs, lower net returns, increasing off-farm income requirements, in a market with more competition from areas with lower labour costs and/or higher farm subsidies and/or import protection. Other literature demonstrates that farmers are on the average older, that they farm in an industry with relatively high risks associated with occupational health and safety, and that capital costs associated with staying in and/or expanding a farm business are increasing. Most of these trends in agriculture in Ontario make farming more difficult - especially because the trends are combined with the uncertainty of markets and the weather.

The aforementioned discussion indicates that small economic impacts could have significant effects on farms and farm operators.

4.3 Multi-Attribute Regional Analysis

A comparison of Regions and Counties in Central through to Southwestern Ontario was completed following two methods. A general comparison of soil capability or soil potential was completed to provide context to the soil potential of lands in Halton Region. A comparison of soil capability is subject to limitations as follows:

- Soil capability, summarized for the Province of Ontario, is relatively old and does not reflect possible changes to proportions of different capability classes that have resulted because of nonagricultural development. In using the old data, the assumption has been made that development has used agricultural land in a manner that has not affected the proportion of different soil capability classes found within a Region or County.
- In some instances, soil capability classes applied to specific soil series have been changed over time. For the most part, these changes have resulted in a downgrade of a soil series' capability class when those soils have high clay content. These capability changes have not been applied to older soil surveys within the Province. Therefore, in this part of the report, a capability comparison has been made using the original capability classes that have been supported by research based on crop yields.
- The capability comparison that is part of this section of the report assumes that all land improvements necessary to reach a particular soil capability class have been made (the theory). However, in many cases, improvements have not been made (the practice).
- Soil capability maps are based on soil maps. The scale, accuracy and precision of these maps have tended to change over time. These changes are not reflected consistently throughout the different Regions or Counties of Ontario. Regardless, soil capability information for Halton Region and the Evergreen Site is based on existing published soils information.

The class, the broadest category in the capability classification, is a grouping of subclasses that have the same relative degree of limitation or hazard. The limitation or hazard becomes progressively greater from class 1 to class 7. The class indicates the general suitability of the soils for agricultural use.

Class 1 - Soils in this class have no significant limitations in use for crops.
Class 2 - Soils in this class have moderate limitations that restrict the range of crops or require moderate conservation practices.
Class 3 - Soils in this class have moderately severe limitations that restrict the range of crops or require special conservation practices or both.

Class 4 - Soils in this class have severe limitations that restrict the range of crops or require special conservation practices or both.

Class 5 - Soils in this class have very severe limitations that restrict their capability of producing perennial forage crops, and improvement practices are feasible.

Class 6 - Soils in this class are capable only of producing perennial forage crops and improvement practices are not feasible.

Class 7 - Soils in this class have no capability for arable agriculture or permanent pasture.

Subsequently, research by Hoffman (1973) indicated that soil capability class was an indicator of common field crop yields and productivity (yield) indices could be derived on the basis of those yields. The indices, described more specifically in Appendix 1, are used as an "average" for three crops: oats, barley, and corn.

The soil capability class ordinal scale could then be converted into an interval scale using Hoffman's (1973) data. The data used to create the interval scale are based on older soil surveys and the soil capability class summaries associated with the older surveys are summarized by Hoffman and Noble (1975). Subsequently, new surveys have been completed for Regions such as Middlesex, Elgin and Niagara. In these new surveys, as a result of work by McBride (1983), the soil capability classes for some soils have been modified (changed to a lower class), particularly for soils with a high clay content. While McBride's work has been related to average yield data, on a County or Regional basis, no site specific yield data has been used to confirm that the newer changes to soil capability class are supported by specific yields as was completed in Hoffman's (1973) research. Therefore, the capability classes used in the newer soil surveys, such as the one for Niagara, might better be described as being part of an ordinal scale.

Regardless of the difference of opinion concerning arithmetic scale, yield data, and productivity indices, both data sources and methods have been investigated as part of the work described in the following paragraphs. The following outlines at a broader scale, in general terms and on a provincial basis, the relative soil capability rating of Halton Region which includes the Evergreen Site. It is clear that the lands from Central through to Southern Regions in Ontario contain prime lands given that they are predominantly soil capability classes 1 through 3. This fact (related to prime lands) can be put in context using information from a report by Hoffman and Noble (1975). Hoffman and Noble (1975) calculated the area of different soil capability classes in the Counties and Regions of Southern Ontario. This data, in combination with productivity indices derived by Hoffman (1971, 1973) and following the methodology outlined in Appendix 2 of this report, can be used to calculate a single numerical productivity index for each County or Region. These productivity indices were calculated for those Counties or Regions in central through to southwestern Ontario (Durham Region and all Counties/Regions west through to Essex County). The indices are summarized graphically in Figure 6. Figure 6 has a dark horizontal line marked at the productivity value 0.64 which is a value for class 3. On a relative basis, the data from the Region of Halton show an average productivity index of 0.65 that is equivalent to capability class 3 soils. Thus, there is a reasonable probability that any urban expansion in Halton and the City of Burlington will need to occur on prime agricultural lands.

A review of the soil map for Halton (Gillespie *et al*, 1971) shows that poorer lands, that is, lands that are in soil capability classes 4 through 7, are likely to be found in hazard lands such as flood plains associated with creeks or rivers or are found in association with the Niagara Escarpment. Therefore, the soil map review supports the productivity index calculations and the conclusion

that any urban expansion within Burlington and Halton Region will affect some prime agricultural lands.

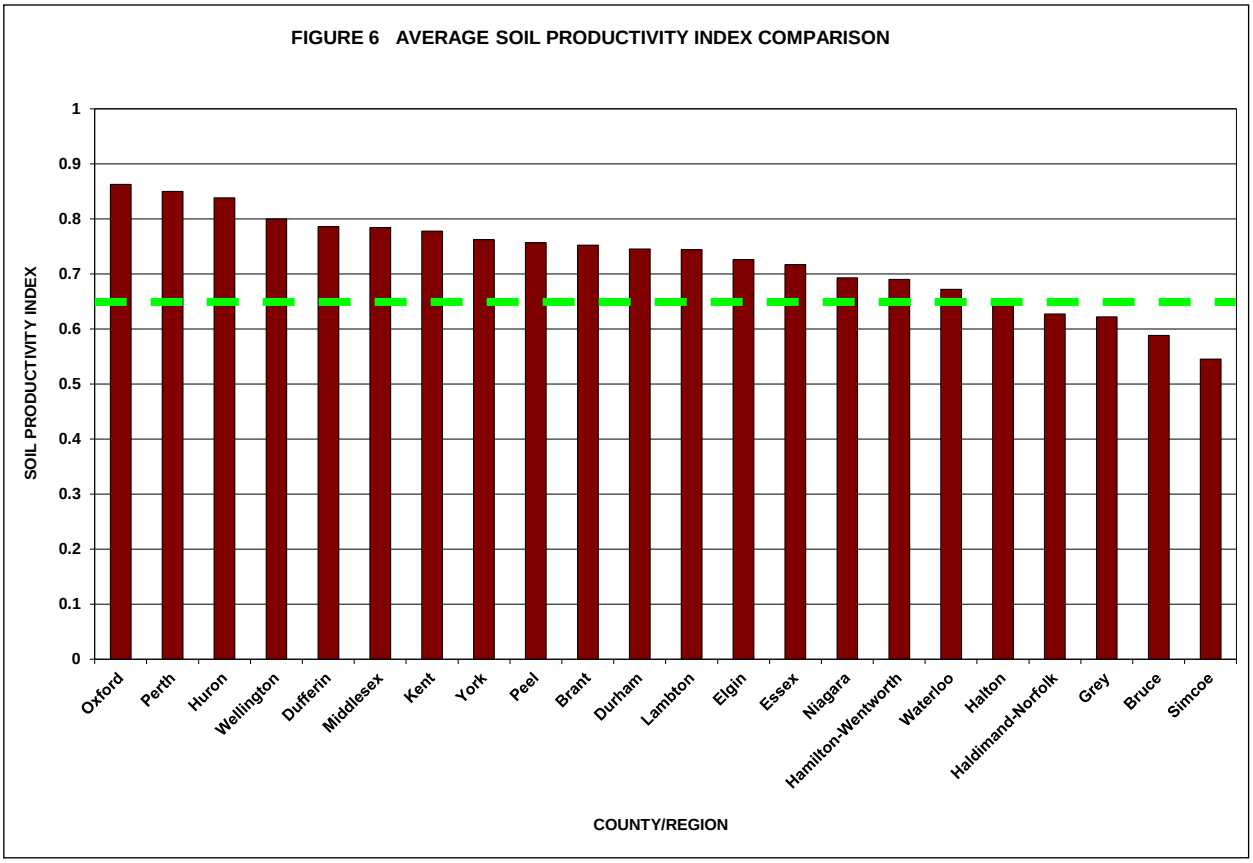
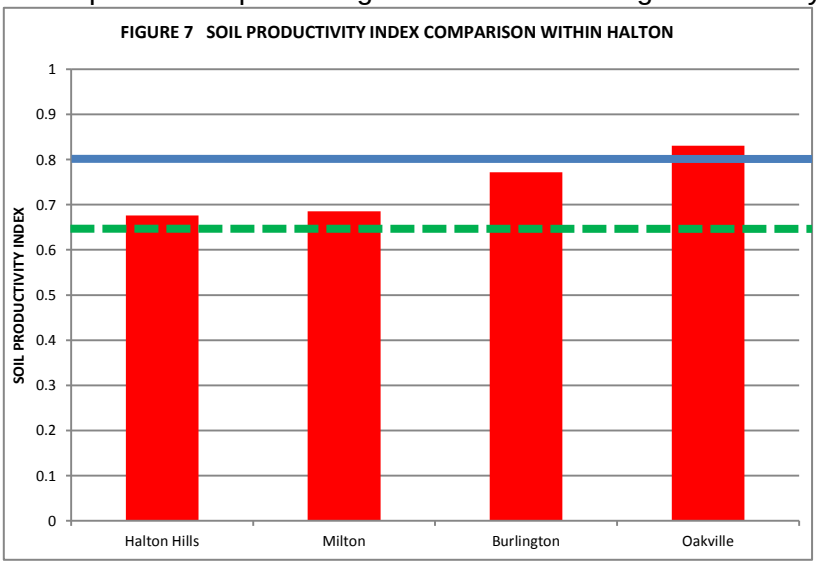
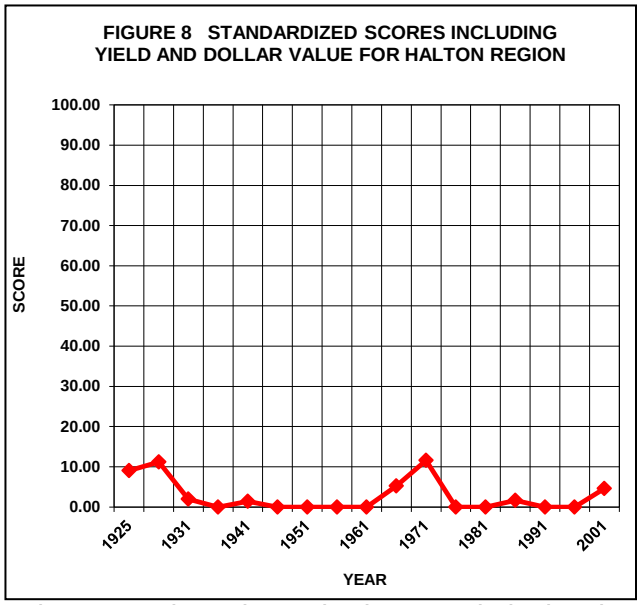


Figure 6 also shows that there are a number of Counties or Regions which have an average soil productivity index which is better than that for Halton including York, Peel and Durham Regions. Additionally, Huron, Perth and Oxford have average soil productivities which are higher than class 2, that is, have a value greater than 0.80. As the productivity index approaches the value 1, the area of land in soil capability classes 4 - 7 diminishes. As a result, Counties or Regions with lower average productivity indices have a greater opportunity to accommodate urban development on poorer agricultural land. A general analysis of soil productivity therefore indicates that it is better to accommodate urban boundary expansions in Halton than it is in some other Counties or Regions in central through to southwestern Ontario - many of which are not experiencing a relatively high rate of urbanization and/or growth pressures.

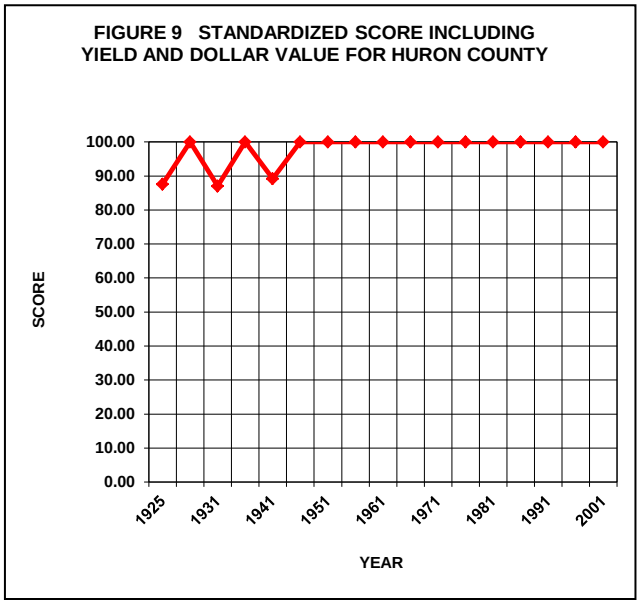


Soil productivity varies with municipalities within Halton. A comparison based on old data in Figure 7 demonstrates that average soil potential varies

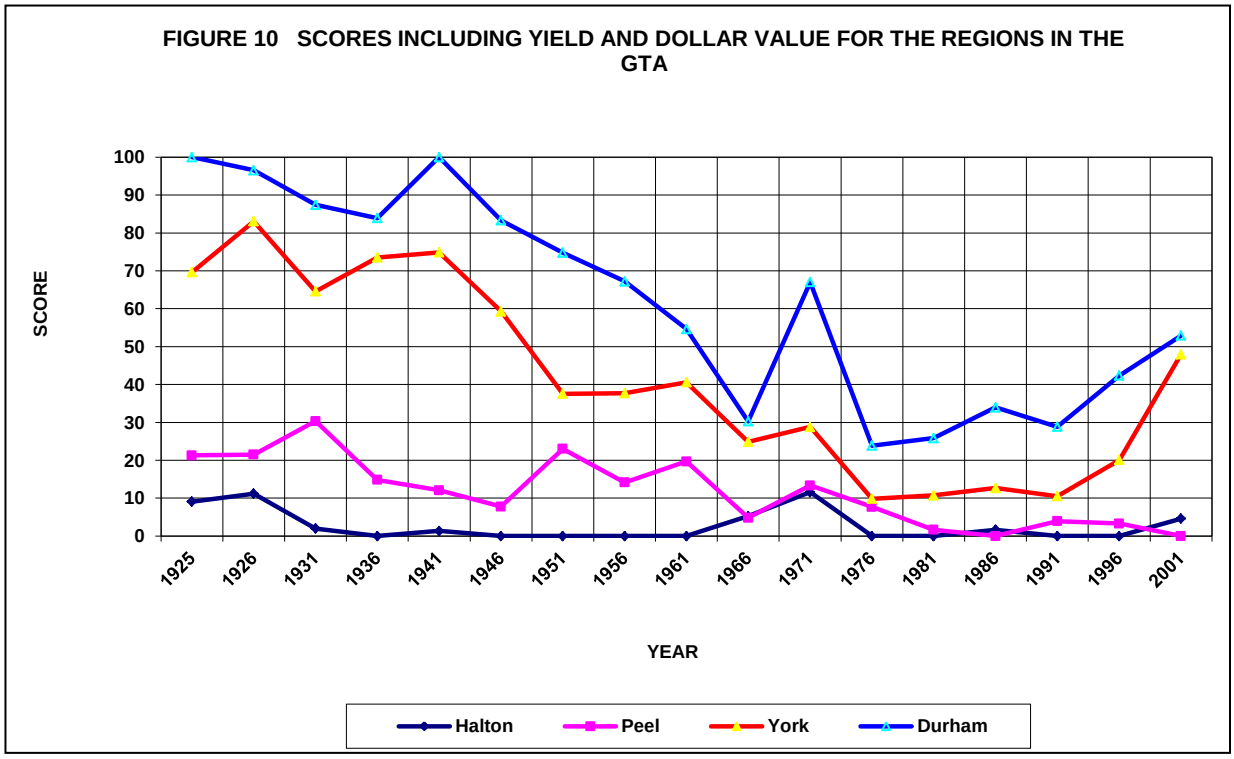
from a low of a class 3 equivalent for Halton Hills and Milton to an average of a class 2 equivalent in Burlington and Oakville.



The relative importance of Halton for agriculture can also be ascertained by comparing a number of different agricultural characteristics on a regional basis throughout the Province. Data from Statistics Canada (which included information on crop production, crop types, yield, farm size, farm area, farm receipts, soil productivity, population characteristics, income and other agricultural variables) were compared using a number of quantitative evaluation or classification methods. The comparisons amongst different Counties or Regions were made from central through to southwestern Ontario (Durham Region and all Counties/Regions west through to Essex County). The evaluation demonstrates that Halton Region has had a relatively low agricultural value when compared to other Counties and Regions located in the area bounded by Durham Region in the east through to Essex County in the west and Bruce County to the north. Figure 8 demonstrates that from 1921 to 2001 Halton had a relatively low level of agricultural performance. The performance in Halton can be contrasted to that of Huron (Figure 9) where agricultural performance has been consistently high and recently has been highest of the Counties or Regions in central to southwestern Ontario. These data support the view that in central through to southwestern Ontario, Halton is an appropriate location for urban development where agricultural impacts will be relatively lower because the probability of loss of relatively productive farms will be lower.



If the analysis of relative agricultural performance is restricted to the Greater Toronto Area (GTA), Halton Region has a relatively poorer score when compared to York and Durham as well as a similar low score relative to Peel (Figure 10). The data analysis indicates that impacts to agriculture due to urban development will be lower because relative agricultural performance within Halton is already lower.



5.0 STUDIES - EVERGREEN SITE

The following sections summarize our findings with respect to land use, soil capability for common field crops, soil potential for specialty crops, minimum distance separation as well as agricultural barns within the Evergreen Site. Where possible, data summaries are presented graphically as part of the text. All of the information presented was subsequently used in an evaluation outlined in Section 9.

5.1 Land Use

Land use within the Evergreen Site was ascertained based on aerial photo interpretation (colour air photography) and fieldwork completed in August 2007. The results of the fieldwork were subsequently summarized into land use categories such as common field crops, hay and pasture, natural systems and built areas. For the Evergreen Site as well as lands to the north and the east of the Site, agricultural uses predominate. Because fruit and vegetable crops are not on the Evergreen Site, specialty crop use is not predominant, that is, fruits and vegetables do not occupy more than 50 percent of the Site or, alternatively, do not comprise the largest component by area of the land use categories within the Site. As well, there are no special conditions of climate and soil for fruit and vegetable crops nor is there *a combination of farmers skilled in the production of specialty crops, and of capital investment in related facilities and services to produce, store, or process specialty crops*. Therefore, it can be concluded that the Evergreen Community Site and the land surrounding the Site do not meet the tests for *specialty crop areas* as defined within the *Provincial Policy Statement* (2005). Therefore, the Evergreen Site and surrounding lands do not contain *specialty crop areas*.

Common field crops such as soybeans and corn as well as hay and pasture predominate on lands both north and south of Highway 407. However, this predominance is likely to soon change on the land south of Highway 407. As well, there is an application present to allow resource extraction on lands north of the Site and to the west of Tremaine Road. Such an

extractive use would also change the agricultural characteristics of lands north of the Evergreen Site.

5.2 Soil Potential/Capability

The original soil capability classification is part of the Canada Land Inventory (CLI) and used an ordinal scale having the numbers 1 through 7. The CLI capability interpretation was derived on the basis of "*research data, recorded observations, and experience*" and was not intended for use as an indicator of the "*most profitable use of land*".

Soil capability for some soil series varies within different published and unpublished documents. Regardless, Table 2 summarizes information about the different soils found around the Site (with capability modifications based on Kingston and Presant 1989) and gives a soil capability rating assuming drainage is in place where it is required. The original soil capability information placed Oneida and Chingacousy soil series in soil capability class 1. The newer soil surveys place the same soils in class 2. Soils with agricultural uses and found on lands adjacent to the proposed Evergreen Site have subclass limitations that include:

- adverse topography, steepness or complexity of slopes (subclass T) ;
- excess water other than flooding which limits agricultural use (subclass W);
- undesirable soil structure and/or permeability (subclass D).

It should also be noted that the descriptions of the soils are generalized and relate to those provided by Hoffman and Richards (1953) and Gillespie *et al. (*1971).

TABLE 1 SOIL CHARACTERISTICS AND COMMON FIELD CROP CAPABILITY

Soil name	Parent materials	Surface texture	Drainage	Soil capability
Chinguacousy	Calcareous clay loam till	Clay loam	Imperfect	2 D
Jeddo	Calcareous clay loam till	Clay loam	Poor	3W
Oneida	Calcareous clay loam till	Clay loam	Well	2D, 3DT, 4DT

A soil rating system for specialty crops was developed by Hoffman and Cressman in 1984 for Ontario Hydro (Ecologistics and Smith, Hoffman, 1984). This is a three-class system – good, fair, and poor. Application of this system to the soils in the Evergreen Site and adjacent lands would result in a capability rating of poor to good for a narrow range of fruit and vegetable crops. Those soils on the Evergreen Site, which have the better specialty crop capability, tend to correspond with the common field crop class 2 soils. Those having a poor rating are limited for the most part because of poor drainage, slopes or flooding.

The Ontario Institute of Pedology has compiled specialty crop capability systems for some areas such as Niagara Region, Middlesex, Elgin and Haldimand-Norfolk. However, no regional data on soil potential for specialty crops is available for the Evergreen Site or adjacent agricultural areas. Regardless, application of a seven class system published as part of the Niagara soil survey demonstrates that soil potential for specialty crops for the soils adjacent to the Evergreen Site ranges from Class 1 through 7 for a restricted range of specialty crops. The specialty crop soil potential ratings that are summarized in Table 2 assume that drainage and irrigation have been applied as required. The crop groups used in Table 2 are defined within Table 3. The average soil potential ratings listed in Table 2 are relative and a function of two main characteristics that are:

- the number of different specialty crops that can be grown on a particular soil or soil series, and
- the relative success or yield that could be obtained on a particular soil or soil series.

The predominant soils adjacent to the Evergreen Site include Oneida and Chingacousy series which have an average specialty crop soil potential rating of class 3.5. The average rating ranges between class 3 and 4 because the range of crops is diminished for which reasonably good yields can be obtained. However, the limited range of specialty crops that are suitable for the Oneida and Chingacousy clay loam series includes peppers, eggplant, broccoli, cauliflower, cabbage, brussels sprouts, tomatoes, labrusca grapes, apples, pears, plums, gooseberries, and currants.

TABLE 2 SOIL POTENTIAL RATINGS FOR SPECIALTY CROPS

Soil Name	FRUITS CROP									VEGETABLES CROP										Score	Average Soil Potential Rating
	GROUPS									GROUPS											
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
Alluvium	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	140	7
Chinguacousy	7	7	7	2	3	2	1	3	1	2	5	5	2	3	4	5	2	3	3	3	70	3.5
Jeddo	7	7	7	4	4	4	3	4	3	3	5	5	3	4	5	5	3	3	3	4	86	4.3
Oneida	7	7	7	2	3	2	1	3	1	2	5	4	2	3	4	5	2	3	3	3	69	3.5

TABLE 3
KEY TO RATING AND CROP GROUPS

Ranking of Soils for Averaging Method:

1 Good
2 Fair to Good
3 Fair
4 Poor to Fair
5 Poor
6 Very Poor
7 Unsuitable

Best Suitability Score: 20
Worst Suitability Score: 140
(Using 20 crops in total)

Crops Used:

Tree Fruits, Grapes and Small Fruits:

A Peaches, Apricots, Nectarines
B Sweet Cherries
C Sour Cherries
D Labrusca Grapes
E Vinifera Grapes
F Apples
G Pears, Plums
H Strawberries, Raspberries
I Currants, Gooseberries

Vegetable Crops:

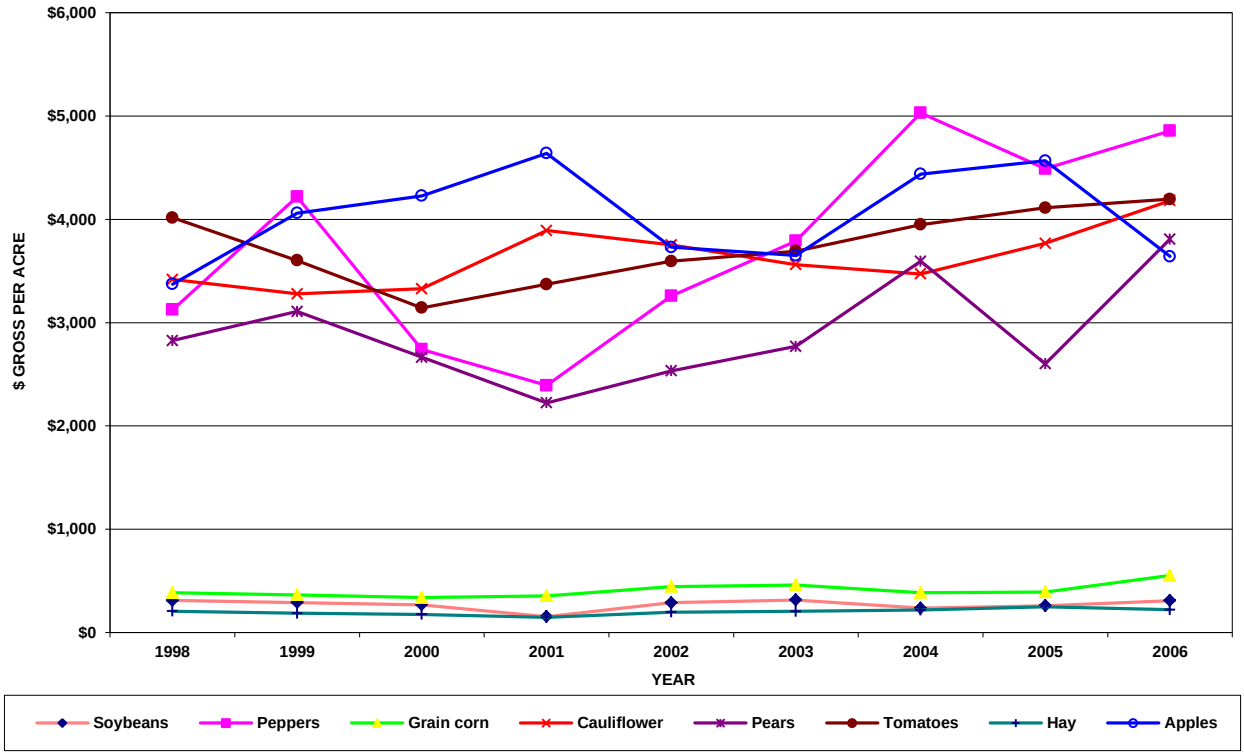
J Broccoli, Brussels sprouts, Cauliflower
K Bulb Onions, Garlic
L Green (Bunching) Onions
M Eggplant, Peppers
N Cucumbers
O Muskmelon
P Potatoes
Q Tomatoes
R Sweet Corn
S Celery, Lettuce
T Pumpkins, Squash

Notes: (1) Drainage and irrigation class upgrades are included in soil ranking
(2) Ranking assumes soils with B or C slopes in Table 3 for most soils.

Assuming that drainage and irrigation have been applied, soil potential for specialty crops of the soils on the lands adjacent to the Site ranges from Class 2 through 7 for a restricted range of specialty crops. The areas with some potential for specialty crops would be similar to lands currently under production and that is shown on the underlying photograph which is part of Map 2. Regardless, the limited range of specialty crops suitable to the Site is also suitable for production in much of Southern Ontario. Therefore, the specialty crop potential of the adjacent lands is not unique.

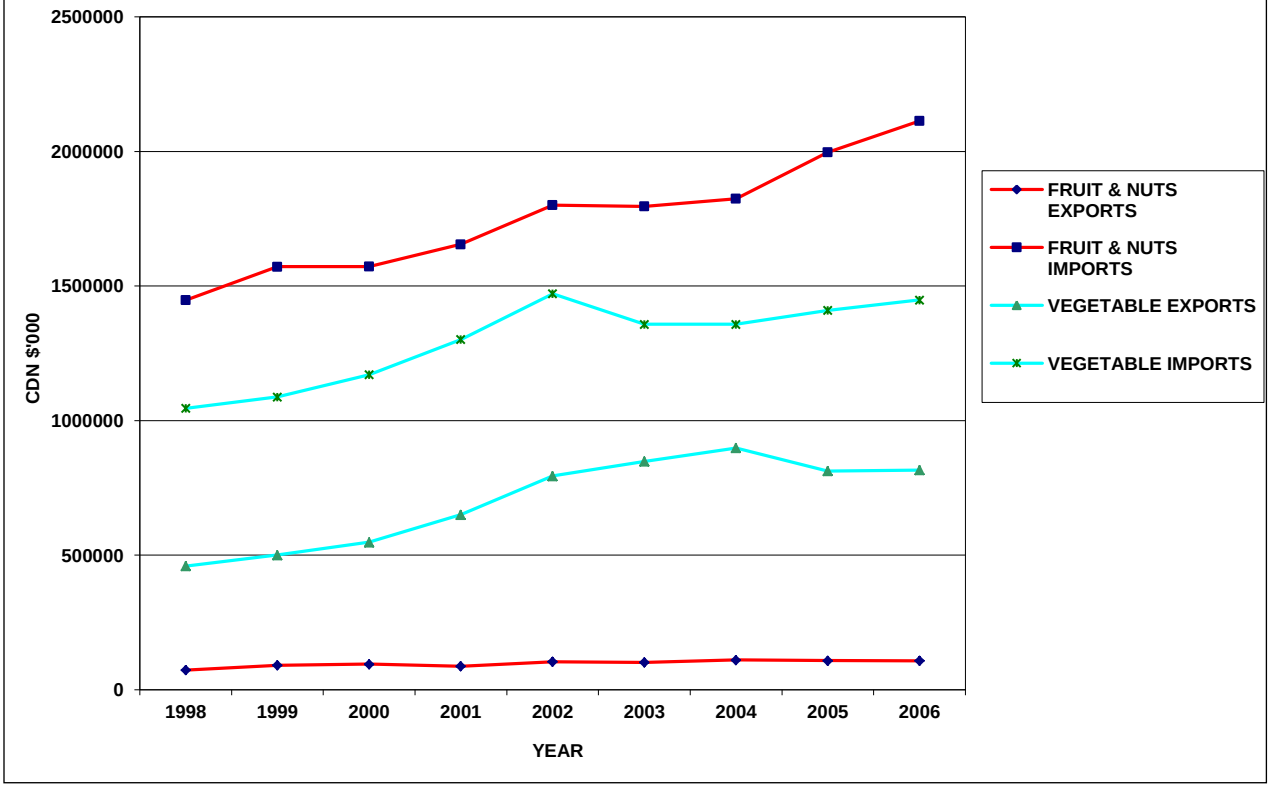
Economic conditions associated with specialty crop production are, in some instances, more positive for farmers than the conditions for common field crops as outlined in Figure 11. For example, in the year 2006 farm gross value in dollars per acre was as high as $3641 for apples, $3808 for pears, $4857 for peppers and $4182 for cauliflower. Given this level of gross revenue per unit area, one would expect that more Ontario farmers would be getting into the specialty crop business. A reasonable hypothesis would be - that with more farmers as producers and as specialty crop production in Ontario increased, product imports would decrease. However, agri-food fruit and vegetable imports are increasing relative to exports as outlined in Figure 12. Additional factors such as characteristics of the marketplace and physical labour (its cost and availability) are likely influencing Ontario and Halton farmers' decisions about entry into the specialty crop business.

FIGURE 11 PROVINCE OF ONTARIO AVERAGE FARM VALUE ($ GROSS PER ACRE) FOR SELECTED CROPS



In summary, the lands adjacent to the Evergreen Site have limited soil potential for the production of some fruit and vegetable crops and would require drainage and irrigation for that limited production. The soil potential found within the land adjacent to the Evergreen Community Site lands is not unique within southern Ontario.

FIGURE 12 ONTARIO BALANCE OF TRADE IN FRUIT & NUTS, VEGETABLES



5.3 Agricultural Infrastructure

Agricultural infrastructure is defined generally as farm buildings and improvements to land. Improvements to land would include systematic and/or random tile drainage systems and conservation management such as grassed/planted waterways. Infrastructure was determined on the basis of fieldwork. Fieldwork included the observation of different farm building clusters from the roadside. Farm building size and condition were used as a surrogate measure for the level and condition of farm improvements made to any given farm property because:

- farm improvements such as conservation structures and tile drainage are difficult to ascertain over an entire farm property using roadside visual observations and/or aerial photo interpretation,
- published literature available for tile drainage is not always current and is sometimes inaccurate.

Because some of the land north of Highway 407 is in farm ownership, farm infrastructure is present and in relatively good condition. However, there is some evidence of recent change in farm infrastructure within the non-farmer owned lands south of Highway 407. As would be expected, some farm buildings are not maintained because the lands within the urban boundary are slated for non-farm uses. However, there are two buildings near the Subject Property which have the potential for Minimum Distance Separation (MDS) conflicts. The barns north of Highway 407 are within an area designated for agriculture whereas the barn located to the east

is located in Oakville on lands that will likely be used for industrial purposes. MDS is described in the following section.

5.4 Minimum Distance Separation

MDS calculations were made to give an indication of where potential livestock odour conflicts are present. MDS was calculated based on the following assumptions:

- MDS formula 1 (2006),
- calculation based on livestock number,
- animals units are horses,
- open manure pile is solid and stored in an area within the farm building cluster,
- adjacent land uses would be "Type B",
- all calculations completed using software provided by OMAFRA.

Both farm building areas used in the MDS calculations currently have horses. As well, on the basis of an analysis of livestock numbers over time, horses are more likely to be present because they are the only livestock type that have not been diminishing within Halton as summarized in Table 4 and Figure 13. MDS calculations are also summarized in Appendix 2.

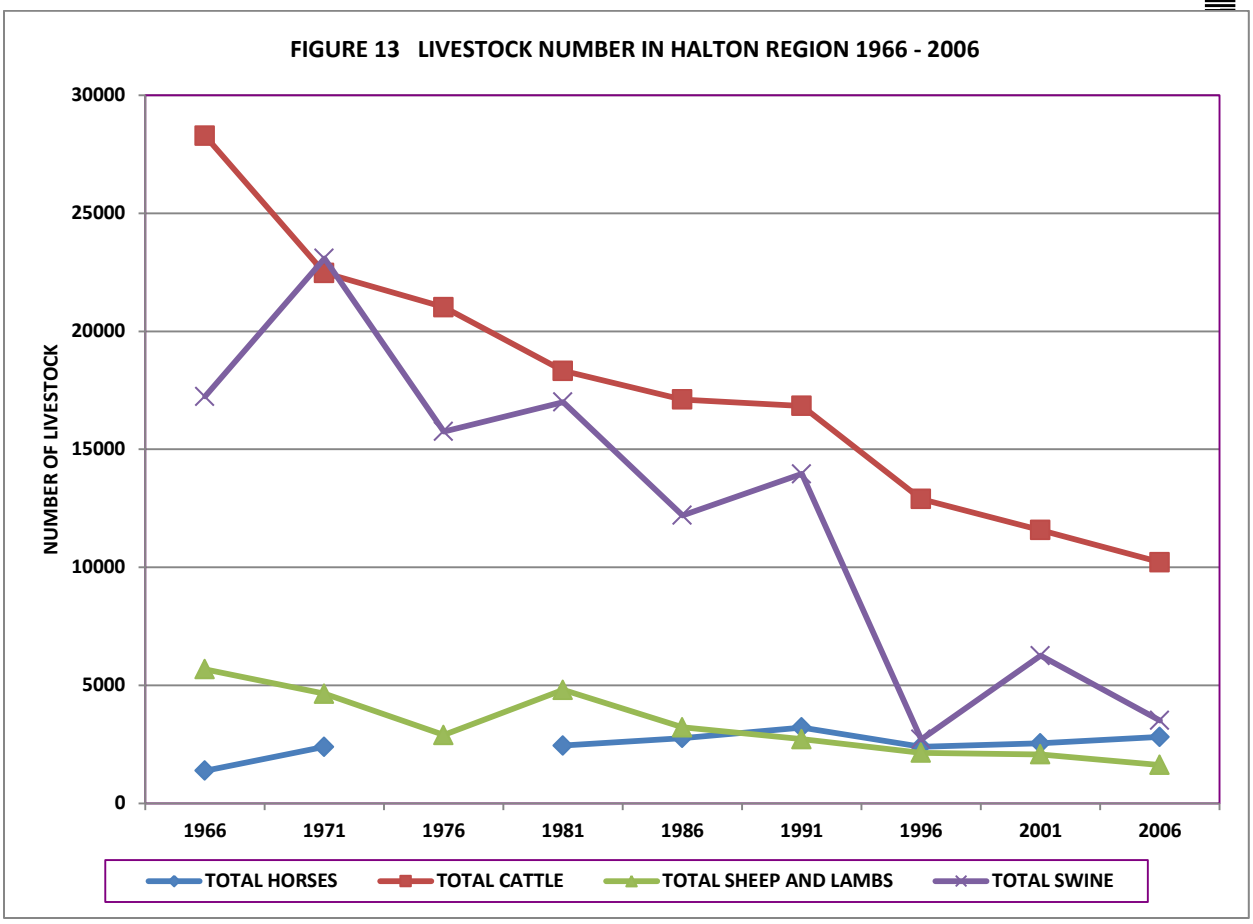
TABLE 4 HALTON REGION LIVESTOCK NUMBER

Halton Region	TOTAL HORSES	TOTAL CATTLE	TOTAL SHEEP AND LAMBS	TOTAL SWINE	TOTAL POULTRY	MILK SHIPMENTS
	NO.	NO.	NO.	NO.	NO.	KL
1966	1383	28287	5677	17243	716415	
1971	2393	22476	4644	23089	827062	
1976		21024	2892	15753		16192
1981	2445	18324	4805	17005	690607	15049
1986	2764	17109	3218	12204	828441	13355
1991	3212	16838	2715	13961	694900	10236
1996	2395	12895	2141	2709	400266	
2001	2540	11581	2075	6254	447321	6671
2006	2815	10215	1627	3508	221811	4120

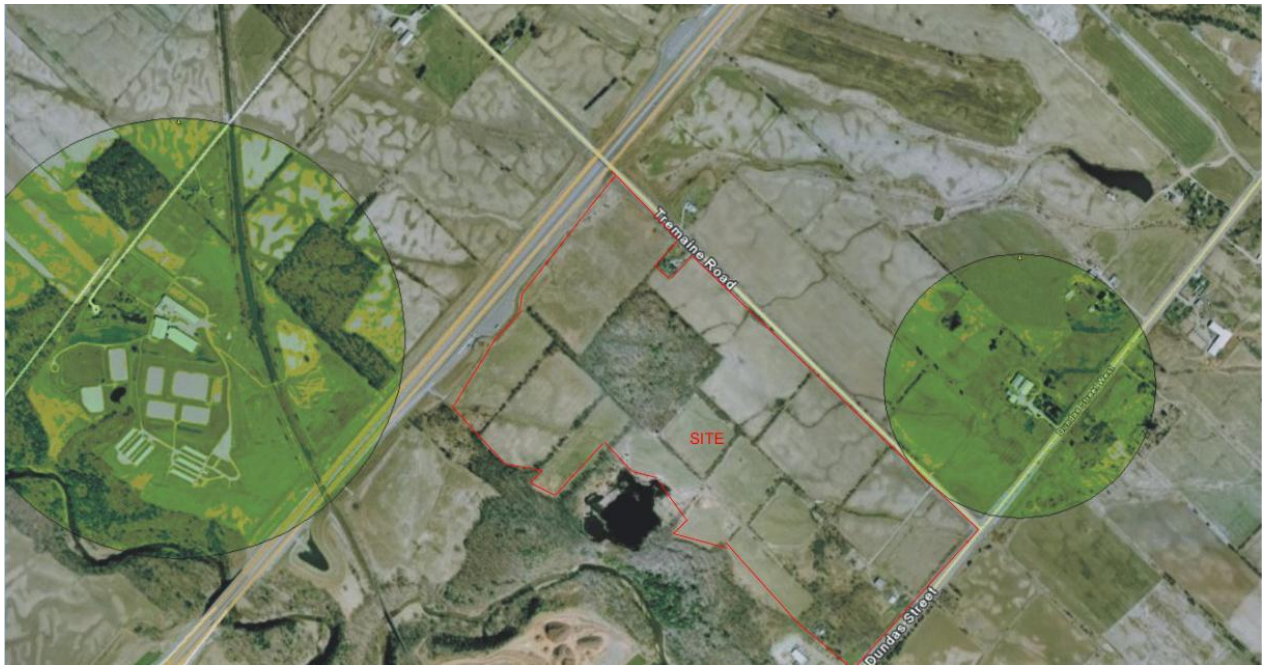
The number of livestock used in the MDS calculations is based on telephone conversations with the owners/operators of the stables north and east of the Evergreen Site. The stables east of the Evergreen Site had 50 horses at the time of communication. The farm operation north of Highway 407 would have approximately 85 horses at any one time. However, that number could be increased by upwards of 300 horses for short time periods of approximately 4 days when shows are occurring. The MDS was not calculated for this short term horse show use. However, the number of horses used in the MDS calculation was increased to 100 to reflect the greater housing capacity rather than the number of horses currently reported.

MDS arcs, derived on the basis of the calculations and shown on Map 2, demonstrate that property lines associated with the proposed development of the Evergreen Site are not within the MDS arcs.

FIGURE 13 LIVESTOCK NUMBER IN HALTON REGION 1966 - 2006



MAP 2 AGRICULTURAL MDS - EVERGREEN SITE



6.0 DISCUSSION INCLUDING MITIGATION

Impacts to agriculture associated with urban development are described in the published literature. However, policy is less directed to impact mitigation once an agricultural area has been chosen and re-designated for nonagricultural use. For example, OMAFRA currently does not have a list of potential impacts and mitigation measures related to agriculture situated adjacent to urban areas (Turvey, 2007). Therefore, Table 5 summarizes potential agricultural impacts and feasible mitigation based on a limited review of the literature. The purpose of the table is not to include all possible impacts and mitigation measures, but outlines generally those impacts described in the literature (agricultural impacts are described in the Food Land Guidelines, 1976; Heimlich and Anderson, 2001 and Perch, 1997).

TABLE 5 POTENTIAL AGRICULTURAL IMPACTS AND MITIGATION

IMPACT CATEGORY	POSITIVE OR NEGATIVE IMPACT	IMPACT DESCRIPTION	POSSIBLE MITIGATION
labour pool	positive	urban centers provide a labour pool to agriculture for peak periods such as harvesting	none required
off-farm employment opportunities	positive	employment lands provide employment opportunities for earning off-farm income	none required
direct sales market	positive	close proximity to urban areas provides opportunities for direct marketing of fruit and vegetable produce, horse shows and boarding, nursery stock, maple products etc.	none required
increased land costs	negative, positive	competition or demand for land increases land costs however at the time of land sale significant returns to farmers may occur	intervention in the real estate market
increased taxation	negative	taxation tied to land value increases as value increases	tax reduction programs for farmers
farm management complaints	negative	dust, light, noise, odours, pesticides, water use,	legislation such as farm practices protection act, separation distance
theft, vandalism	negative	produce loss, crop trampling damage to fences etc.	law enforcement, separation distance
transportation	negative, positive	Conflict between	improved

		slow-moving farm machinery and urban commuters, road systems provide access to multiple markets	transportation design, law enforcement
disease, biosecurity	negative	Storm water management ponds may provide habitat for wildlife species that may carry disease livestock	separation distance, biosecurity programs

Table 5 describes possible agricultural impacts and makes no estimate of the probability of those impacts. The literature reviewed contained no data on probability of different kinds of impacts likely under different conditions. Regardless, impacts have been minimized by choosing an urban/agricultural interface which is already buffered by the Highway 407 corridor. As well, urbanization is occurring in an area of diminishing agricultural production. For example, previously described broad scale data indicate that Halton has fewer farmers and less area of Census Farms over time. Halton has been one of the poorer performers in agriculture relative to 22 Counties or Regions within Central and Southwestern Ontario. As well, within the GTA, Halton's performance is also relatively poorer. Additionally, agricultural statistics for Central and Southwestern Ontario show that total farm income is supplemented by off-farm income and the relative amount of off-farm income has tended to increase over time. The data indicate that it is difficult to make a living entirely from farm income. Generally, farm input costs have been increasing relative to gross income. As a result, any increases in farm operation costs can have impacts on the economic viability of a farm operation. This fact is particularly significant within the Study Area because of the requirements for drainage.

Farm infrastructure investment within lands north of the Evergreen Site is still relatively high but because there is a trend to less ownership of land and buildings by farmers, it is possible that the condition of infrastructure will deteriorate as a result of that non-farm ownership.

Given economic problems associated with farming as well as the proximity of urban development and the nature and location of the Evergreen Site, there is potential to create additional farm businesses which cater directly to a relatively close urban market. Horse businesses present currently benefit from residential development because that development supplies its customer base. Farms which sell produce, particularly fruits and vegetables, directly to the public could also benefit from new urban development. However, production of fruits and vegetables is not occurring on the clay soils found north of the Evergreen Site.

In areas north of the Evergreen Site, where agriculture is likely to continue, there is currently low potential for MDS conflict because an arc for a hundred horse operation can be accommodated without encroaching on the Evergreen Site. To the east of the Evergreen Site, land is to be used for employment purposes and therefore farm uses will eventually cease. However, MDS conflict is not likely because a 50 horse operation can be accommodated without the MDS arc entering the Evergreen Site.

Other impacts are already present because of the characteristics of the area. For example, transportation impacts are already present due to commuting and movement of goods within and through Halton Region. Some transportation impacts are reduced in an east-west direction because some roads do not extend across the Bronte Creek Valley and are therefore used

predominantly for local use. Wildlife movement is already part of the Bronte Creek River Valley system and storm water management systems are likely to link to the Valley. Therefore, the presence of storm water management ponds in the proposed development will only marginally increase wildlife populations which may act as a vector for disease. Complaints about farm-related dust, noise and light are less likely because these impacts are already present due to traffic movement on Highway 407.

7.0 CONCLUSIONS/OPINIONS

The findings of these agricultural analyses include the following:

- The lands north and east of the Evergreen Site currently have a restricted and relatively lower potential for specialty crop production.
- No fruits and vegetables are grown on lands adjacent to the proposed development.
- The lands are not *specialty crop lands* as defined within the *PPS*.
- The soil capability of the Regional Municipality of Halton is relatively lower when compared to the average capability of agricultural lands in other Counties or Regions in central to southwestern Ontario.
- Active agricultural uses are predominant north and east of the Evergreen Site.
- The Evergreen Site's location allows for relatively large livestock operations to the North and East without Minimum Distance Separation conflicts.
- Current horse farm operations may experience an increase in business as a result of relatively close urban development.
- Lands to the North of highway 407 may evolve to produce a restricted range of specialty crops that will allow for direct sales to adjacent urban development.
- Other impacts to agriculture are already present or are mitigated by the separation distance provided by Highway 407.

In conclusion, development of the Evergreen Site can be completed with relatively low impacts to adjacent agricultural operations. There is potential for improvements to farm business because of the relative proximity to an urban market. Therefore, impacts to agriculture have been mitigated to the extent feasible.

AgPlan Limited



Michael K. Hoffman
Agricultural Analyst

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APPENDIX 1

SOIL PRODUCTIVITY INDEX CALCULATION

RATING FOR COMMON FIELD CROPS

The soil productivity index is an arithmetic mean that expresses the relative occurrence of soil capability classes 1 to 7 on selected properties or within specified boundaries. The index is based on soil productivity ratings (Hoffman, 1973). Areas with the highest soil capability index will have mainly class 1 land. Areas with a low index will consist of lower soil capabilities.

The productivity index method has been used because it provides a single number derived from a listing, by proportion, of the soil capability classes 1 through 7 which allows for direct comparison among different areas or sites.

Impacts on soil capability will generally be greatest on an area with a high soil capability index; that is, impacts will be highest when good (higher capability land) is lost to development.

Method

Soil Productivity Index = (proportion of area of class 1 soils x 1.0) + (proportion of area of class 2 soils x 0.8) + (proportion of area of class 3 soils x 0.64) + (proportion of area of class 4 soils x 0.49) + (proportion of area of class 5 soils x 0.33) + (proportion of area of class 6 soils x 0.17) + (proportion of area of class 7 soils x 0.02)

The area of each soil map unit was measured and areas of similar soil capability were summed for CLI classes 1 to 7 lands. The area was calculated for each CLI class and subsequently multiplied by a productivity index corresponding to each soil class. The productivity index is specific to each capability class.

The proportion of each area occupied by each soil capability class was multiplied by the corresponding soil productivity value (following Hoffman, 1973) and products were subsequently summed to obtain a soil productivity index for lands affected by or potentially affected by development.

APPENDIX 2

AgPlan Limited,
84 Callander Drive,
Guelph, ON. N1E 4H8.
Telephone - 519-822-0750
Fax - 519-822-0756
Email - mkhagpln@sentex.net

Minimum Distance Separation (MDS) CALCULATION SUMMARY	
Project: Evergreen	Date: September 1, 2007
Location: Bertin Stables	Building Number: 1
Assumptions: •Livestock: 50 Horses •Land base: n/a •Land use: type B •Manure storage: solid open pile •Housing capacity or land area: existing livestock number	
MDS: 280 m from barn and the manure pile	
Additional notes (if any): based on 2006 MDS I, medium framed horses, manure with greater than 30% dry matter stored outside	

Minimum Distance Separation (MDS) CALCULATION SUMMARY	
Project: Evergreen	Date: September 1, 2007
Location: Hendervale	Building Number: 2
Assumptions: •Livestock: 100 Horses •Land base: n/a •Land use: type B •Manure storage: open pile solid •Housing capacity or land area: greater than existing livestock number	
MDS: 500 m from the barn and the manure pile	
Additional notes (if any): based on 2006 MDS I, 50/50 medium and large framed horses, manure with greater than 30% dry matter stored outside	