

# Vaughan's Agriculture

Vaughan Tomorrow  
Background Paper  
July 2008

DRAFT



# Contents

<b>Introduction</b>	<b>1</b>
<b>Overview of agriculture in the City of Vaughan</b>	<b>4</b>
<b>Agricultural profile</b>	<b>10</b>
<b>Employment in the agricultural industry</b>	<b>14</b>
<b>Classifying agricultural lands</b>	<b>18</b>
<b>Policy context</b>	<b>22</b>
<b>Protecting Vaughan’s countryside</b>	<b>32</b>
<b>Potential tools for consideration</b>	<b>36</b>
<b>Questions and implications for the Official Plan</b>	<b>44</b>

# Introduction

This paper is one of a series of background papers produced in the spring of 2008 to inform the development of a new Official Plan for the City of Vaughan. Similar to the other papers, it surveys existing conditions and identifies issues and opportunities that should be addressed by the Official Plan. Broadly speaking, the paper is based on two streams of research; the first concerning the state of agriculture in Vaughan and the second focused on existing and potential policy frameworks.

The findings of this research are presented as follows: first, an introductory section provides a brief description of Vaughan's agricultural lands, their location and products. This description is, in turn, followed by review of the policy context within which City of Vaughan's agricultural industry operates. Next, a suite of potential policy tools geared towards ensuring the continuing vitality of Vaughan's agricultural industry are presented. Finally, a series of questions are raised about how to best plan for Vaughan's agricultural future.



# Vaughan Agricultural Land Base

The loss of agricultural land in Vaughan is a relatively recent phenomenon. The municipality retained almost all of its agricultural lands throughout the immediate post-war period. In fact, until the 1970s, the developed areas of the original villages took up less than 10% of the land base. By 1991, however, Vaughan had entered a period of rapid urbanization spurred by the building out of Toronto and the extension of municipal infrastructure. Today, less than 20% of Vaughan's original agricultural lands remain designated for agricultural purposes.





3 OVERVIEW OF AGRICULTURE IN THE CITY OF VAUGHAN

## Overview of Agriculture in the City of Vaughan

The City of Vaughan contains some of the most diverse and productive agricultural lands in Canada. Despite having a smaller amount of agricultural lands than neighbouring King or Markham, in 1996 Vaughan had the second most economically productive land in the GTA, at \$1,308 in gross farm receipts per acre. This is the result of the fortunate coincidence of a number of natural, geographical, and historical factors.



A 1994 study, conducted by the City of Vaughan, found that 8,800 ha of Vaughan's land had a high capability for agriculture (Canada Land Inventory Classes 1-4). Of this 8,800 ha, 3500 ha were rated as Class 1 under the Canada Land Inventory (CLI), the Inventory's highest rating for agricultural land. On this strong natural agricultural foundation, Vaughan produces a significant amount of high value specialty commodities. Specialties such as greenhouse products and horse and pony operations respectively constitute the first and third most valuable farm products in the City area. Dairy, vegetables and fruit respectively round out the second, fourth and fifth position of the top 5 ranking by gross farm receipts.

The proximity of Vaughan's agricultural lands to the City of Toronto renders this land more valuable still. In an era of increasingly expensive transportation and rising demand for local, sustainable food, this location is an ever more important asset.

At a finer scale, the contiguous layout of Vaughan's remaining agricultural land is another important characteristic driving up its value. Continuous agricultural land which does not abut other land uses is more easily converted to different agricultural uses, more likely to avoid noise and odour complaints, and is generally more economically viable than land isolated by other uses.

Farm infrastructure in Vaughan is well developed, due to the region's long agricultural history. Transportation routes were a major part of the initial impetus for settlement and agricultural development in the region during the mid-1800s and remain such today. Although true for other industries as well, rapid access to markets is particularly important for agriculture. This access is ensured by Vaughan's position at the intersections of highways 400, 407 and 427. While data for improvements in the form of irrigation systems and tiling is difficult to attain, farm buildings are nevertheless well established, and are a good indicator of the general state of farm infrastructure in the City. These buildings form an important part of both the economic and cultural landscape of Vaughan today.

Traditionally there has been a strong relationship between town and countryside.





A well developed transportation network increases the efficiency of Vaughan's agricultural industry.

Despite the enormous asset it represents, agricultural land in Vaughan today remains under constant pressure from urban development spurred by population and employment growth. Due to its proximity to the City of Toronto, rates of farm closure and agricultural land loss have been notably higher in Vaughan than in most other municipalities in the GTA. In 1976, the City of Vaughan had a total agricultural land area of 17,344 ha. By 1996, thirty years later, this number had declined to 9,340 ha,

a loss of 8,004 ha or 46%. This rate of decline is more than double that for the Region of York as a whole over the same period, and is the second highest for any municipality in the GTA. Since 1996, the rate of decline in agricultural land area for Vaughan and the Region have begun to slow markedly, at 22% and 9% respectively between 1996-2001. Rates of farm loss have shown a similar, if more dramatic trend. Vaughan went from a total of 310 farms in 1976 to 139 farms in 1996 – a 55% decline; this represents the greatest loss of farms for any municipality in the entire GTA. The number of farms in the Region of York, meanwhile, declined by 38% over the same period. Between 1996 and 2001, however, the percentage of farms lost in both Vaughan and the Region of York was reduced to 22% and 9% respectively.

These rates have held roughly constant since 1996. Thus, in the past seven years, Vaughan lost an additional 1,037ha of agriculturally designated land. The net result is that Vaughan now has less than 20% of the agricultural land that it had 40 years ago. If these rates remain the same, Vaughan will have virtually no agricultural land left within 25 years.

While there are signs that this rate of agricultural land conversion is slowing, the preservation of remaining tracts is by no means guaranteed. A population increase of 169,000 people has been forecast for Vaughan. Although the Growth Plan requires that this forecast be partly accommodated through the intensification of existing settlement areas, it is almost certain that it will, also be satisfied through expansion into the current countryside. Given the incredible asset that Vaughan's agricultural industry represents, it would be prudent to ensure that Prime Agricultural Lands are preserved to the greatest extent possible during this period of growth.



This photograph was taken in 1992 from above Islington Rd. looking southwest to Highway 27 and Rutherford Rd.



Today, the same view is dominated by low density suburbs.



Agriculturally Designated Land in the City of Vaughan

## Agricultural Profile

Vaughan currently has approximately 3,509 ha of lands designated as agricultural. These lands are generally located in two strips. One is a broad swath along Vaughan's north end, extending south to Teston Road, east to Bathurst Street and West to Highway 50. The other forms a perpendicular axis along Vaughan's western boundary. This stretches from Highway 50 in the west to Highway 27 in the east, Langstaff Road in the South and Vaughan's northern boundary, just north of King-Vaughan Road, in the north. Parcels of agriculturally zoned land are also found scattered throughout Vaughan's urban fabric.

Sporadically distributed through Vaughan's agricultural lands are areas of specialized, diverse, small-scale agricultural production. These are broadly classified in the Canadian Census of Agriculture as 'miscellaneous specialty,' and are not related to the Specialty Crop Areas, defined in the Provincial Policy Statement as:

Areas designated using evaluation procedures established by the province, as amended from time to time, where specialty crops such as tender fruits (peaches, cherries, plums), grapes, other fruit crops, vegetable crops, greenhouse crops, and crops from agriculturally developed organic soil lands are predominantly grown, usually resulting from:

- a) soils that have suitability to produce specialty crops, or lands that are subject to special climatic conditions, or a combination of both; and/or
- b) 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 (Provincial Policy Statement, 2005).

According to the Greenbelt Plan, there are only two of these Specialty Crop Areas in the entirety of the Greenbelt Study Area (which includes the City of Vaughan): the Holland Marsh and the Niagara Peninsula Tender Fruit and Grape Area.

A 1994 Agricultural Priority Area Study conducted by the City of Vaughan Planning Department, which surveyed the presence of field vegetables and berries as specialty crops, found eleven areas in the City of Vaughan where such crops were produced. These were all grown on CLI class 1 and 2 soils, and unlike specialty crop areas such as the Holland Marsh, or the Niagara Fruit Belt, they were not the result of particular climatic conditions or uniquely productive soils.

By number of farms, the 2001 census found that Vaughan had 33 miscellaneous specialty farms, 12 grain and oilseed, 11 field crop, 11 cattle, 9 dairy, 7 combination livestock, 4 fruit, and 2 of each poultry and egg, wheat, and other. The 33 miscellaneous specialty farms are broken down into 10 horse & pony, 9 greenhouse product, 5 nursery product & sod, 4 maple & Christmas tree, 2 sheep & lamb farms, 2 other specialty livestock and 1 mushroom farm. Of Vaughan's farm products the top ten by gross farm receipts in 2001 were greenhouse products, dairy, horse and pony operations, vegetables, fruit, oilseed, cattle, and hay and fodder, in descending order of value. These numbers highlight the importance of small scale, high value specialty agriculture to Vaughan's agricultural economy.

The land upon which these farms sit is increasingly rented rather than owned by the farmers who work it. At 58% rented land in 2001, Vaughan is in the mid-range for percentage of rented land of the municipalities in the York Region, but is at the high end compared to other Regions and municipalities. York Region has long had the highest percentage of rented agricultural land in the GTA. This is likely due to high land values in Vaughan making it difficult for farmers to finance land acquisition, and leading them to rent instead. High levels of land rental can make agricultural industry less productive. Short term leases discourage capital investments and long term management strategies, leading to land not being used to its full potential and not being sustainably managed.



## The Value of Near Urban Agriculture

With demand growing in urban areas for locally grown fresh and organic produce, the small scale production of specialty crops for urban markets in near-urban locations is becoming increasingly viable. Farms producing crops with short shelf lives such as herbs and sprouts, pick-your-own operations, and agri-tourism businesses are obvious examples of agricultural ventures that flourish in near urban environments due to their reliance on proximity to consumers. But an increasingly wide range of greenhouse crop, field vegetable and other specialty crop producers in the GTA now take advantage of large urban markets, more developed infrastructure (gas, hydro, sewer, internet), access to services, proximity to processors, and linkages with research facilities. Partly as a result of these factors, the small, smart, diverse, near-urban farms of the GTA have higher gross farm receipts per hectare than larger farms elsewhere in Ontario, and their potential for growth is extremely high. Demand at local farmers markets is not yet being met.



## Employment in the Agricultural industry

Data on the actual number of jobs within and created by the agricultural industry in Vaughan is difficult to attain for a number of reasons. First, due to policies concerning confidentiality, in 1996, Statistics Canada began to amalgamate all data concerning agriculture in the City of Vaughan with the City of Toronto. Figures for jobs in the agricultural industry are therefore predictably skewed by the large and differentiated economy of Toronto. This situation is further complicated by the fact that Statistics Canada aggregates agricultural data with resource based industries.



For the City of Vaughan Official Plan Background Paper on Employment, Hemson Consulting Ltd. was able to attain disaggregated data for the City of Vaughan, and placed the number of jobs in agriculture and mining sectors in 2001 at 400. This number represents 0.4% of employment in the City of Vaughan. While that number may not seem exceptionally large, it is significant when compared to the GTAH Region as a whole, in which the agriculture and mining sectors account for 0.05% of employment. Further, this number does not reflect jobs in food processing, wholesale or retail sales of agricultural products, transportation or other agriculture related secondary or tertiary services. Agriculture is therefore almost certainly responsible for the creation in Vaughan of more jobs than the 400 recorded for the agriculture and mining sectors. In fact, a recent study by Statistics Canada on revenue multipliers found that agriculture had the highest revenue multiplier of any industry in Canada. This means that growth in agriculture in Vaughan will have a higher positive ripple effect on other industries than growth in any other sector: every dollar of additional agricultural output generates another 97 cents of gross revenue throughout the economy.



Although the general trend in the GTA agricultural industry until 2001 was for increasing farm size and decreasing farm numbers due to automation and consolidation, the GTA Agriculture Profile nevertheless notes an increase in the number of agricultural jobs in the GTA between 1996 and 2001. The Profile concludes that this increase was likely due to a healthy economy in Ontario over the same period, and may also have been precipitated by changes in the agricultural industry towards more labour intensive activities such as Greenhouse operations. However, the trend towards increasing farm size has now turned around, and GTA farms registered an average decrease in land area of 4.4% between 2001 and 2006. This is reflective of both the increasing fragmentation of farms and the shift in agriculture away from common field crops towards specialty crops for urban markets. While data on employment remains unavailable, it is likely that this shift towards smaller specialty farms will result in more labour intensive crops, and therefore more agricultural jobs.

## Urban Consumption of Agricultural Land

While Canada has the second largest landmass of any country, only about five percent of that land is free from severe constraints on crop production (CLI Class 1-3). Of these lands, only Class 1 land is free from all restrictions on the production of common crops, and 52 % of Class 1 lands are located in central and southern Ontario.

The coincidence of Canada's highest quality farm land, and its largest urban population is no accident. Colonial settlers historically located cities where the potential for sustaining them through agriculture was the highest. Where cities remain limited in size, their proximity to Prime Agricultural Lands continues to be a fortunate spatial relationship. Static city boundaries have not, however, been a feature of urban regions in North America.

Due to a combination of increasing urban populations and lower density urban form, cities in Canada have sprawled their way into the surrounding countryside, permanently eating up valuable agricultural land. A 2001 Statistics Canada report states that "of the total amount of land converted to urban uses between 1971 and 1996, about half, or 5.9 thousand square kilometers was dependable agricultural land."

Largely due to the coincidence of Class 1 lands and the vast (sub)urbanizing GTA region, over 18% of Ontario's Class 1 farmland had been permanently converted to urban uses by 1996. One of the immediate effects is that, because demand for agricultural land does not decrease with land supply, agricultural production is forced onto more marginal lands. As marginal lands are not suited to stable, long-term production, in the long term, the forced shift to such lands renders Ontario's agricultural industry less productive.

This situation is worsened by two factors:

1) Agricultural productivity depends, to a large extent, on the availability of large, contiguous parcels of land. Farmers cannot efficiently work disjointed or isolated parcels of land that require travelling and hauling heavy agricultural equipment or bulky produce over long distances.

2) Urban land uses do not advance into the countryside at a uniform rate; uncoordinated development tends to fragment otherwise productive lands - as do the road networks which service them.

Thus, the effects of urban expansion onto agricultural lands extend beyond the simple occupation of agricultural space. The fragmentation of land that goes hand-in-hand with expansion can make the farming of remaining Prime Agricultural Lands economically unviable.



17 OVERVIEW OF AGRICULTURE IN THE CITY OF VAUGHAN

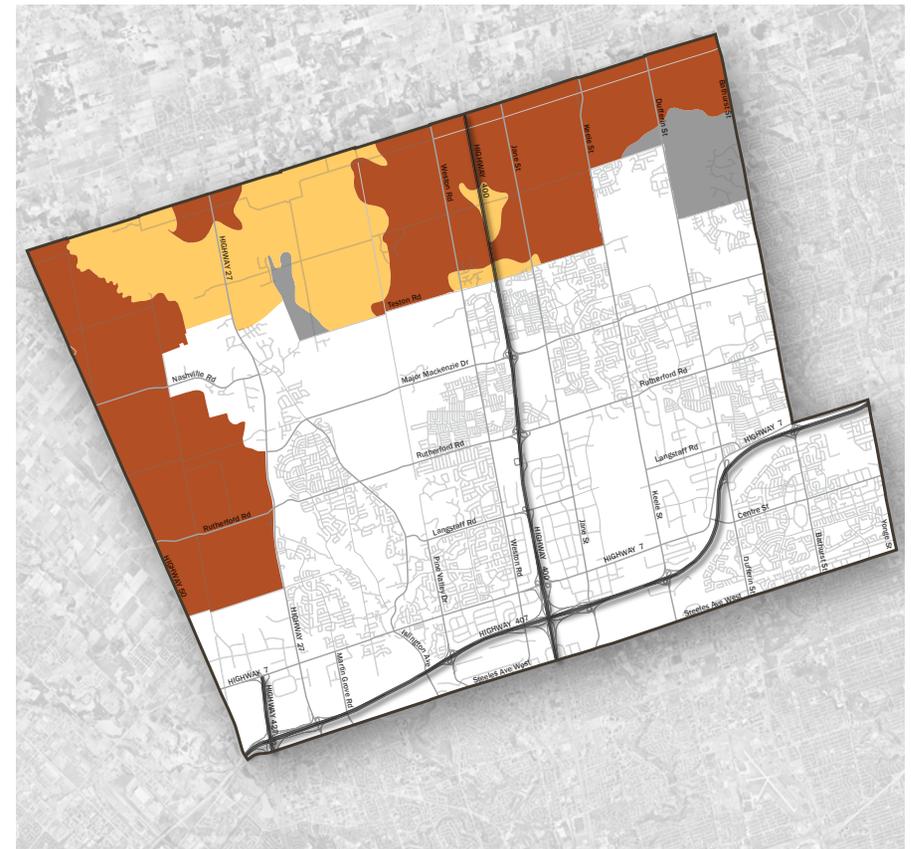
## Classifying Agricultural lands

In Ontario, lands are classified for agricultural purposes by the Canada Land Inventory (CLI) and the Provincial Land Evaluation and Area Review (LEAR) system. The LEAR system builds on the CLI's soil assessment to create a comprehensive picture of the viability of land for agriculture.

## Canada Land Inventory

The primary means of classifying agricultural lands in Canada is by soil capability. The system through which we rate soil capability for land use planning is known as the Canada Land Inventory (CLI) Soil Capability Classification for Common Field Crops. The CLI groups soils into seven classes and 13 subclasses according to their potential for growing common field crops. Common field crops include corn, oats, wheat, barley and alfalfa. It is important to stress that this system pertains to potential for growing crops, and thus a tract of land which is currently a woodlot could be rated as, for example, class 1 land. The system is based on the presence or absence of limitations to growing crops. The greater the limitation, the less potential for growing crops, and the higher the classification number. Class 1 lands are considered the best lands, and have no significant limitation for growing crops. Class 7 lands, meanwhile, have no capacity for agriculture. Subclasses denote the type of limitation to agriculture, such as climate, salinity or stoniness.

Organic soils, those soils consisting of layers of material with greater than 30 percent organic matter and a total thickness of greater than 40 cm, are not included in the CLI, which pertains to mineral soils only. This does not imply that these soils are of less value. Conversely, when converted to agricultural purposes, organic soils such as those found in the Holland Marsh Area, can be incredibly productive – the Holland Marsh currently produces about 90 percent of Ontario’s Asian vegetables, and exports vast quantities to New York and New Jersey as well.



Soil Capability in the City of Vaughan's Agricultural Priority Area

- Class 1 & 2
- Class 4
- Class 6

## Class

1. Soils in this class have no significant limitations in use for crops.
2. Soils in this class have moderate limitations that restrict the range of crops or require special conservation practices.
3. Soils in this class have moderately severe limitations that restrict the range of crops or require special conservation practices.
4. Soils in this class have severe limitations that restrict the range of crops or require conservation practices.
5. Soils in this class have very severe limitations that restrict their capability in producing perennial forage crops, and improvement practices are feasible.
6. Soils in this class are capable only of reproducing perennial forage crops, and improvement practices are not feasible.
7. Soils in this class have no capacity for arable agriculture or permanent pasture.
0. Organic soils (not placed in capability classes).

## Subclass

- C Adverse climate
- D Undesirable soils structure and/or low permeability
- E Erosion
- F Low fertility
- I Inundation by streams or lakes
- M Moisture limitations
- N Salinity
- P Stoniness
- R Consolidated bedrock
- S Combination of subclasses
- T Topography
- W Excess water
- X This subclass is comprised of soils having a limitation resulting from the cumulative effect of two or more adverse characteristics.

Soils are not, however, the only means of classifying lands for agriculture. They give an incomplete picture of the value of a particular piece of land for agricultural purposes. Other factors that may affect agricultural utility include climate, the degree to which a parcel is connected to or separated from adjacent land uses, the size of the parcel, and the existence or absence of improvements to the land such as tile drainage. These factors are conjointly assessed in the Government of Ontario's Land Evaluation and Area Review (LEAR).

## LEAR System

The LEAR system was developed by the Ontario Ministry of Agriculture, Food and Rural Affairs to assess the utility of land for agriculture and was the primary tool used in determining the location of Ontario's Greenbelt. The system is comprised of two components: a Land Evaluation and an Area Review.

The Land Evaluation component takes into account climate and the suitability of soils for agriculture (as measured by the CLI). The Area Review, meanwhile, is made up of the variables parcel size, fragmentation, presence of tile drainage, and farm receipts/cropped area. For every parcel assessed, each variable receives a weighted score, depending on its import to agricultural production, and a total score for every parcel is attained. These scores are input into a GIS model, and the final results are mapped. These maps provide powerful tools to guide agricultural land use decisions.



21 OVERVIEW OF AGRICULTURE IN THE CITY OF VAUGHAN

## Policy Context

This section reviews the provincial, regional and local policy context as it pertains to agricultural land use in the City of Vaughan. It is a survey of the statutes which are most directly relevant to agricultural land use planning per se. This section does not include legislation that is more relevant to farm practice, such as the Nutrient Management Act (2002), legislation related to municipal infrastructure such as the Drainage Act (1990), or laws governing the legal protection of farms and farming practice such as The Farming and Food Production Protection Act (1998). Further, it reviews only those sections of land use planning policy in Ontario directly pertinent to agriculture. Many of the plans and acts surveyed below are, in their entirety, crucial to understanding land use planning in Vaughan. As such, they are the subject of their own background paper, part of this series, entitled Vaughan Tomorrow: The Provincial Policy Context.

In the early 1990s, the Government of Ontario set out to rationalize land use planning policy for the province under a single Ministry (The Ministry of Municipal Affairs and Housing), and a consolidated act (The Planning Act). Where the province is the set approval authority on planning decisions, this consolidated system is known as the One Window Service. Where the municipality is the approval authority, it is known as Municipal Plan Review.

Essentially, both serve the same function by ensuring that the land use related decisions of all government ministries are consolidated in official planning policy documents. This is especially important for agriculture, as it means that all decisions related to agricultural land uses from Ministries such as Environment (MOE), Natural Resources (MNR) and Agriculture, Food and Rural Affairs (OMAFRA), are now consolidated by the Ministry of Municipal Affairs and Housing under the One Window Service, and by municipal planning authorities through Official Plans and Zoning By-laws under the Municipal Plan Review.

## Planning Act (1996)

The Planning Act is the Act which coordinates planning in the Province of Ontario. The Planning Act administers land use planning on all provincial lands, both rural and urban. In terms of agricultural land use policy specifically, the Planning Act is important in two respects. First, it requires that municipal planning authorities “shall have regard to matters of provincial interest.” Among the primary “matters of provincial interest” is “the protection of the agricultural resources of the Province.” Second, the Planning Act provides for the issuance of Provincial Policy Statements and mandates that municipal planning authorities’ decisions “shall be consistent with” said statements. Further, the Act requires municipal planning authorities’ decisions to conform to the provincial plans effective at the time decisions are made.

## Provincial Policy Statement (2005)

The Provincial Policy Statement (PPS) defines Prime Agricultural Lands as “land that includes specialty crop areas and/or Canada Land Inventory Classes 1, 2, and 3 soils.” Prime Agricultural Areas, meanwhile, are much broader and include CLI Class 4-7 soils, and areas with “a local concentration of farms which exhibit characteristics of ongoing agriculture.” The PPS directs that Prime Agricultural Areas should be protected for long term agricultural use. Crucially, it directs that Specialty Crop Areas are to be provided the highest level of protection, followed by lands with Class 1, 2 and 3 soils – in this order of priority (2.3.1).

The PPS permits all types, sizes and intensities of agriculture under normal farming practice(2.3.3.2), as well as secondary and agriculture-related uses, within Prime Agricultural Areas (2.3.3.1). It restricts the conversion of Prime Agricultural Areas to Settlement Areas to cases where it is demonstrated that the lands are not Specialty Crop Areas, that there are no alternatives which avoid Prime Agricultural Areas, and finally that there are no alternatives on lower priority agricultural lands (1.1.3.9).

The creation of new residential lots within Prime Agricultural Areas is prohibited, with the exception of surplus farm dwellings as a result of farm consolidation. In addition, lot adjustments may only be permitted for legal or technical reasons. Any new, non-agricultural uses on Prime Agricultural Lands must seek to minimize conflict with agricultural uses, and must comply with the Province’s Minimum Distance Separation formulae (MDS).

## Greenbelt Plan (2005)

The Greenbelt Plan is designed to provide protection to valuable agricultural lands and natural heritage resource areas, by restricting the spread of urban uses into these areas. It builds on the Oak Ridges Moraine Conservation Plan (ORMCP) (2002) and the Niagara Escarpment Plan (NEP)(2005) through the designation of Protected Countryside Areas, and together, the lands covered in these areas comprise the Greenbelt. The Protected Countryside Areas are constituted by the Natural System, the Agricultural System and Settlement Areas.

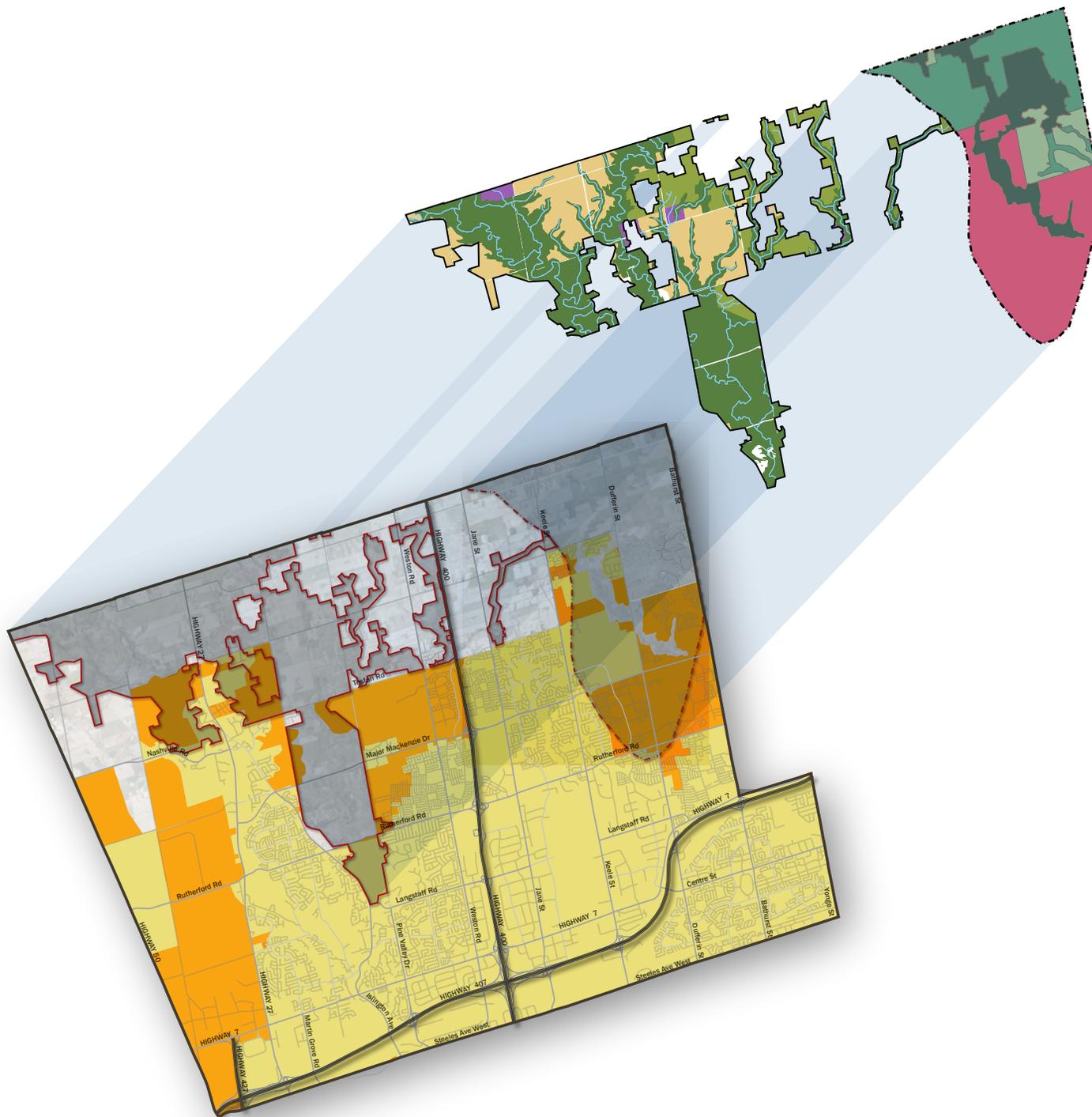
The Agricultural System is made up of Specialty Crop Areas, Prime Agricultural Areas, and Rural Areas. The plan defines two specialty crop areas: the Niagara Peninsula Tender Fruit and Grape Area, and the Holland Marsh; neither of which extend into Vaughan. The remainder of the Agricultural System in the Protected Countryside is covered under Prime Agricultural Areas designation. Prime Agricultural Areas are those areas designated as such by municipal official plans.

Within the Protected Countryside, Prime Agricultural Areas are protected by forbidding the redesignation of such lands in municipal plans for non-agricultural uses, except for the purpose of refining the Prime Agricultural and Rural Area designations to conform with the Plan, and for the limited expansion of settlement areas already within the Greenbelt.

Rural Areas allow a full range of recreational, tourism, institutional and resource based commercial and industrial activities. Permitted uses are identified in municipal plans, with the exception of a restriction on new multiple units or lots for permanent residential dwellings.

The Greenbelt Plan allows lower-tier municipalities to refine or rationalize Prime Agricultural Areas in bringing Official Plans and zoning by-laws into conformity. Since Vaughan's Official Plan review will be the document which brings the municipality into conformity with the Greenbelt Plan (along with the Growth Plan and the ORMCP), this is a crucial moment in shaping Vaughan's agricultural future.





**Legend**

-  Municipal Boundary
-  Built-Up Area
-  Designated Greenfield Area
-  Agricultural and Rural Area (Whitebelt)
-  Greenbelt
-  Valley & Stream Corridor
-  Agricultural Area
-  Rural Use Area
-  Estate Residential
-  Oak Ridges Moraine
-  Settlement Area
-  Countryside
-  Natural Linkage
-  Natural Core

Provincial Agricultural Policy Designations in the City of Vaughan

## Oak Ridges Moraine Conservation Plan (2002)

The ORMCP functions as a part of the backbone of the Greenbelt. While it forms a critical component of the plan area, it is not governed by the Protected Countryside policies of the Greenbelt plan. The ORMCP divides its subject lands into four increasingly flexible land use designations: Natural Core Areas, Natural Linkage Areas, Countryside Areas, and Settlement Areas. Even Natural Core Areas, the most restrictive designation, allows for both existing and limited new agricultural uses.

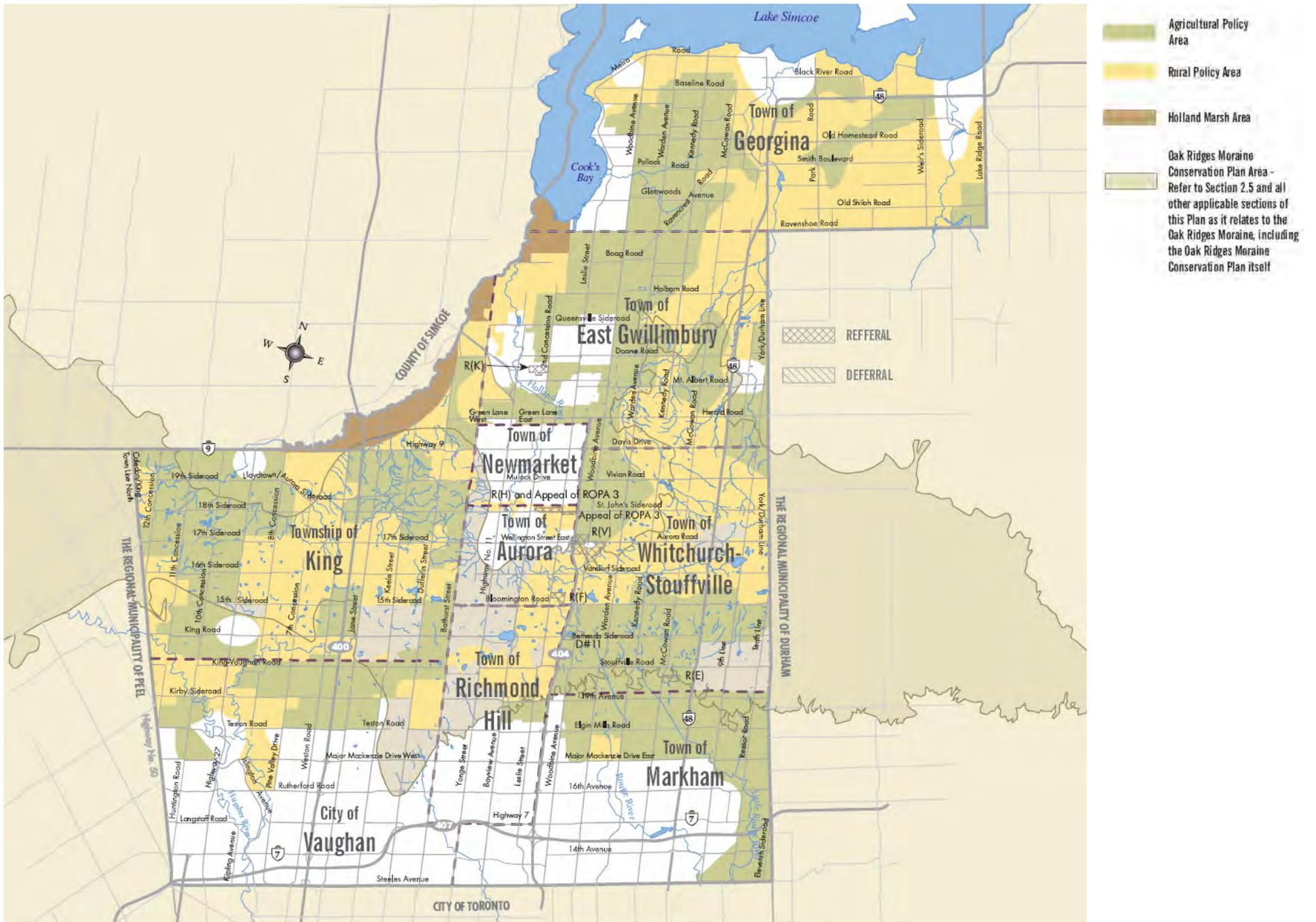
Neither Natural Core Areas, Natural Linkage Areas or Countryside Areas allow for areas of new residential development. While there are a few location specific exceptions to this rule, none apply to the City of Vaughan. Settlement Areas within the ORMCP, conversely, are permitted urban intensification within their boundaries, and may also be permitted to expand slightly into Countryside Areas for the purpose of the minor “rounding-out” of rural settlements.

## Places to Grow - A Growth Plan for the Greater Golden Horseshoe (2006)

The Growth Plan for the Greater Golden Horseshoe (Growth Plan) provides the structure for growth for municipalities in the Greater Golden Horseshoe. As such it is essential to understanding the land use context in which agriculture must function. While its main function is not to regulate agricultural land use per se, the policies it sets out nevertheless direct where and how future population and employment growth will take place, and how much of that growth will occur on agricultural land.

Areas not yet designated for growth, which occur between the Growth Plan’s settlement area boundary and the Greenbelt Area, may yet be re-designated for urban growth by municipalities as they strive to accommodate increasing populations within the framework of Places to Grow. Unfortunately, these areas also contain significant amounts of prime agricultural land. A 2005 Neptis Foundation study, for example, found that 74% of the prime agricultural land in the Toronto Metropolitan Region was located outside of the Draft Greenbelt boundary. While the boundary has been adjusted since, it nevertheless remains the case that the vast majority of prime agricultural land lies outside of the Greenbelt Area. This conclusion holds true for the City of Vaughan.

The future of these “whitebelt” lands will be determined by balancing the objectives for accommodating forecasted growth, promoting intensification and compact urban form and protecting the agricultural and natural heritage assets of the countryside. A strong Official Plan will help to achieve these goals.



Agriculture and Rural Area of York Region (2007)

## York Region Official Plan (1994)

Under the framework of the Planning for Tomorrow: York Region Growth Management initiative, York Region will be undertaking, over the course of 2008 – 2009, a comprehensive review of its existing Regional Official Plan to bring it into line with Places to Grow: The Growth Plan for the Greater Golden Horseshoe, The Greenbelt Plan, and The Oak Ridges Moraine Conservation Plan. As this initiative is a work-in-progress, this section refers to the current Office Consolidation of the York Region Official Plan (2007), which incorporates all amendments to the Regional Official Plan between Ontario Municipal Board approval on October 17, 1994 and September 1, 2007.

The currently-in-force Region of York Official Plan contains two primary land use designations for agriculture: Agricultural Policy Area and Rural Policy Area. Agricultural Policy Areas are primarily comprised of Canada Land Inventory soil classifications 1-4, and farmed organic soils used for market gardening (such as those found in the Holland Marsh). The York Region Official Plan seeks to protect agricultural land by directing urban uses to hamlets, towns, villages, and urban areas and preserving the Agricultural Policy Area for agricultural uses. As the upper-tier municipality, it mandates that the Agricultural Policy Area be designated and refined in municipal official plans. However, the Plan allows non-farm development in the Agricultural Policy Area subject to a Regional Official Plan amendment. A development application seeking to amend the Official Plan will be evaluated by several criteria: whether the development will reduce or impede nearby farm operations; whether the development is necessary; whether the site is suitable; and whether alternative locations on lower quality land have been considered.

The Rural Policy Area, conversely, consists of less agriculturally productive CLI classes 5, 6 and 7 lands. Rural Policy Areas allow a much broader mix of land uses, with agriculture, forestry, conservation and farm-related uses being the primary uses. Although it states that industrial, commercial, institutional and residential uses will generally be directed to urban areas, it allows that limited rural industrial, commercial, institutional and estate residential uses will be permitted in the Rural Policy Area, subject to an area municipal official plan amendment. Development applications requiring an amendment to the area municipal plan must meet a set of criteria similar to those required by a development application in the Agricultural Policy Area. These criteria discourage the fragmentation of agricultural land, and encourage the preservation of environmental function, adequate servicing, and the rational location of land uses.



- Legend**
- Municipal Boundary
  - Rural Area General
  - Major Open Streams & Valley Lands
- Land Uses**
- Agricultural Area
  - Rural Use Area
  - Estate Residential

City of Vaughan OPA 600: Rural Area - General (2001)

## City of Vaughan Official Plan

The City of Vaughan Official Plan Amendment 600 (2000) gives the broadest, most thorough, and most recent summary of agricultural land use policy in the City of Vaughan. Following from OPA 400 (1991), the Agricultural Priority Area Study (1994) and OPA 400 (modified) (1994), OPA 600 designates lands outside of urban areas and villages as Rural Area – General, which is then subdivided into two classifications: Rural Use Area and Agriculture Area. The distinction is based on the 1994 Agricultural Priority Area Study, which used several criteria to evaluate the relative potential of rural lands for agriculture: soil capability, farm infrastructure, continuity of agricultural land, specialty crop areas, environmental lands, and fragmentation of land ownership. High priority agricultural lands, with high soil capability, developed farm infrastructure, contiguous land, specialty crops, low presence of environmental features and concentrated land ownership were classified as Agricultural Lands, while those lands with a low priority, showing the opposite characteristics were classified as Rural Areas. Agricultural uses are a priority in both areas, as both areas contain arable land and functioning farms. Development within the Rural Area – General is not permitted if it requires the extension of municipal infrastructure (i.e. water or sanitary sewer) to support it.

Agricultural Areas support a full range of normal farm practices. Farm related uses which require proximity to agricultural land are also permitted, provided that they are deemed essential to agriculture and cannot be located on less agriculturally productive lands. Additional non-farm land uses require an amendment to the Official Plan. A set of criteria similar to that of the Regional Official Plan is required to be met by any development seeking to amend the Official Plan for non-farm uses (OPA 600 - 6.1.2). These pertain to the necessity and suitability of the development, suitability of the site, impact on farm operations, servicing, and compatibility of the development with the surrounding area.

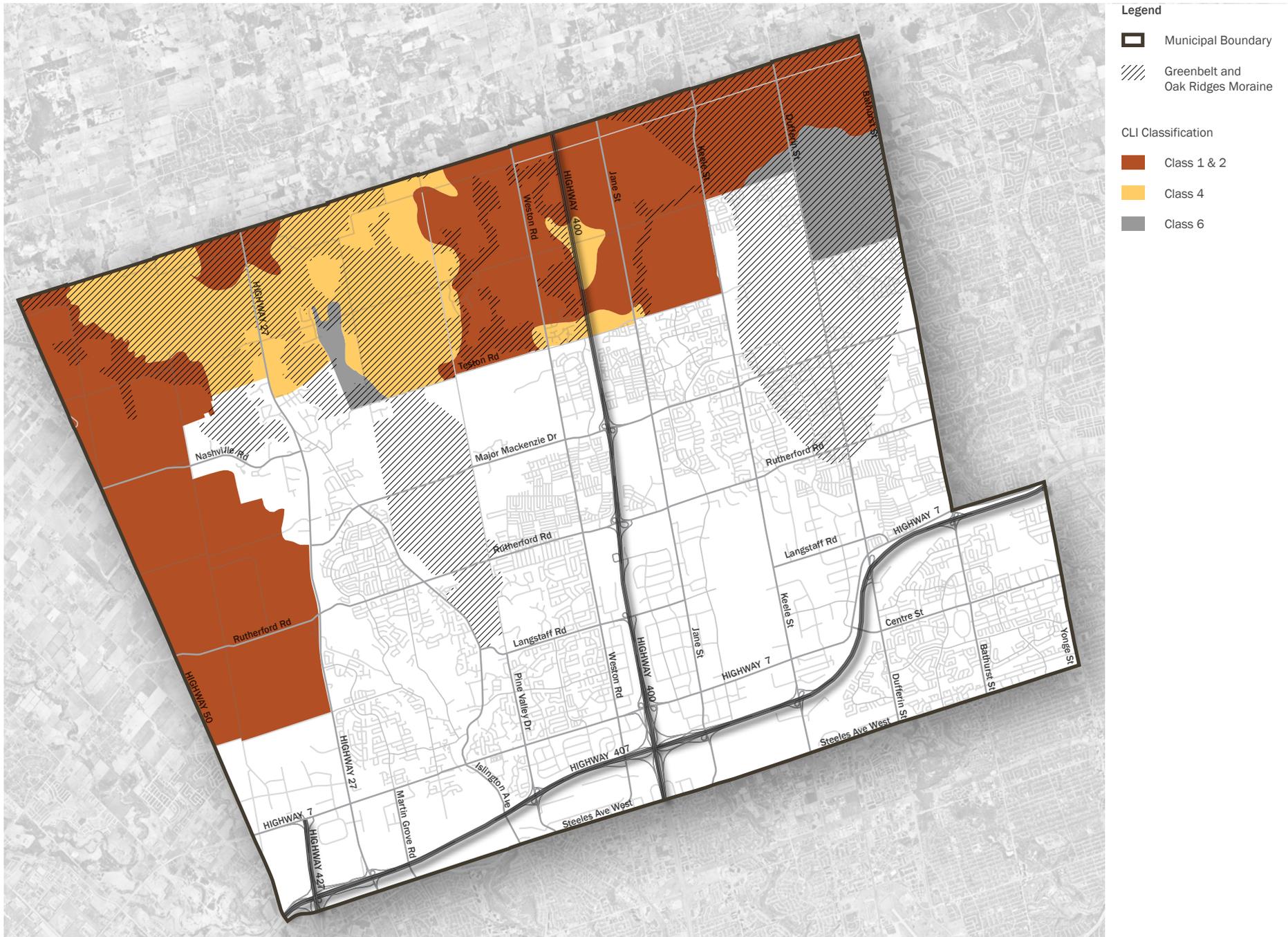
The Rural Use Area supports a full range of normal farm practices, as well as forestry, conservation and farm related uses. Commercial, industrial, recreational, cemetery and institutional uses require an amendment to the Official Plan, subject to the same basic criteria as above.



31 OVERVIEW OF AGRICULTURE IN THE CITY OF VAUGHAN

## Protecting Vaughan's Countryside

This brief introduction to the policy context in which agriculture in Vaughan functions shows that agricultural land preservation is indeed a priority of Provincial, Regional and Municipal government policy. Policies at all levels seek to protect prime agricultural land for agricultural use against urban encroachment. Within agricultural land use areas, they limit uses that are not essential to farming and other primary resource activities.



Soil Capability and the Greenbelt in the City of Vaughan

Despite the Provincial policies encouraging agricultural land preservation, agricultural lands in Vaughan remain vulnerable. The conversion of agricultural lands to settlement areas, while subject to certain criteria, is ultimately permitted by the existing policy framework: from the PPS to the York Region Official Plan, to City of Vaughan Official Plan. It is only under the protective cover of the Greenbelt Area that settlement expansion is prohibited. Yet, in Vaughan, there is a striking negative correlation between the presence of Prime Agricultural Lands and the coverage of the Greenbelt. Put differently, the Greenbelt does not protect the majority of Prime Agricultural Lands within the City of Vaughan. In fact, only 38%, or 1913ha, of Vaughan's Class 1-4 lands are protected by the Greenbelt, leaving 62% or 3116ha, potentially subject to development. Meanwhile, 82%, or 3395ha, of Vaughan's lands with severe limitations to no capacity for agriculture are protected by the Greenbelt, and only 18% or 738ha, of these lands remain available for development. Additionally, of the 42% of rural lands in Vaughan left outside of the Greenbelt, 81% is Agricultural Policy Area (CLI class 1- 4).

These prime agricultural lands are left to the protection of the York Region and Vaughan Official Plans. However, by Vaughan's calculation, between January 2000 and year-end 2007 approximately 23% of land in Vaughan originally designated for agriculture was re-designated for other purposes. If Vaughan is to provide for a contiguous countryside area along its northern boundary and establish an appropriate transition from its urban areas in the south to its rural communities in the north then the promotion and protection of agriculture and food production will need to play an important role in the city's future urban structure.

## The Minimum Distance Separation Formulae (MDS)

The MDS is a calculation which must be used by planners within the Province of Ontario to determine the minimum allowable distance between a non-agricultural land use and a livestock operation or manure storage facility. Its prime objective is to mitigate odour complaints against farm operations. Under the Municipal Plan Review system, the MDS must be incorporated within Official Plans and Zoning By-Laws.



35 OVERVIEW OF AGRICULTURE IN THE CITY OF VAUGHAN

## Potential Tools for Consideration

The following are a series of potential policy tools that could be incorporated into Vaughan's Official Plan. These policy tools pertain to agricultural land use at the scale of the local municipality. As such, this section does not present agricultural policies such as tax incentives or municipal local food purchasing programs that are not directly relevant to land use. Nor does it suggest policy which is more relevant to Regional or Provincial governments. Rather, this series of policy considerations has been specifically tailored to fit Vaughan's new Official Plan.

## LEAR Based Policy

The LEAR System maps provide the City of Vaughan with a powerful tool to guide the rationalization of rural and agricultural land use designations and the protection of Prime Agricultural Lands. Benefits of the LEAR include the fact that it considers multiple variables contributing to agricultural viability, and that it is the current provincially established and accepted methodology .

## Growing the Greenbelt

One means of protecting prime agricultural land is through the current provincial effort to consider municipal requests for the expansion of the Greenbelt. The Greenbelt currently provides an effective protection against the encroachment of urban uses on Prime Agricultural Lands within the City of Vaughan. Extending it to cover other CLI Class 1, 2 and 3 lands left outside the Greenbelt is a logical way to offer those lands the same measure of protection as those within.

## Land Use Designations

The creation of land use designations pertaining specifically to Prime Agricultural Areas is a critical first step in protecting the agricultural industry in the City of Vaughan. To this end, Vaughan's OPA 600 defined the Agricultural Area within the City of Vaughan based on then available data. The current Official Plan could seek to reaffirm and refine these designations based on newly available data and current Provincial policy direction. Prime Agricultural Areas should be incorporated into an overall urban structure that seeks to achieve a compact, sustainable urban form integrated into an ecologically and agriculturally productive countryside.

## Near Urban Agriculture Centre of Excellence

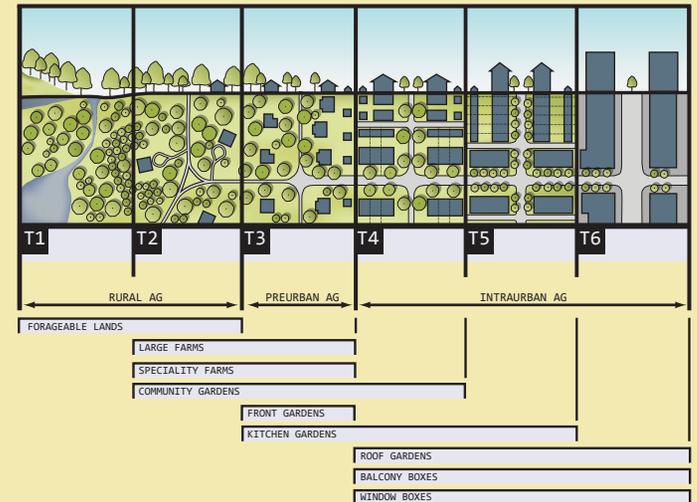
The development of effective policy governing sustainable and profitable near-urban agriculture will require a significant transition from present practice. This transition should be based on a thorough understanding of innovative practices in agriculture and the food system. A Near Urban Agriculture Centre of Excellence is one way to help establish best practices. The Centre could capitalize on Vaughan's abundance of productive agricultural lands for research into progressive programming and policy. In partnership with educational institutions, the centre could focus on several key strands of research:

- 1. Understanding the farm to table supply chain.** Making the most of our agricultural capacity means eliminating inefficiencies and reducing waste. An examination of the farm to table supply chain can pinpoint areas for improvement.
- 2. Valuing ecological goods and services.** Farmers provide a number of goods and services to society beyond the production of food; among them the protection of habitat and the preservation of open space. There now exist precedent programs to attach a monetary value these ecological goods and services and provide farmers with compensation for supplying them. Arriving at just, sensible compensation requires complex research and analysis – such as could be provided by a Near Urban Agriculture Centre of Excellence.
- 3. Zero waste strategy.** A fundamental principle of ecological sustainability is that the waste from one process becomes the food or fuel for another. Applied to the food system, this could mean that residential compost becomes the fodder for crop production or that restaurant grease becomes the biofuel which powers harvesters. A Near Urban Agriculture Centre of Excellence could design and model systems of production and consumption based on ecological principles.

## Intensification

Balancing agricultural land preservation with the demand for urban growth is a tricky proposition. On the one hand, Vaughan's Prime Agricultural Areas are nationally significant food production lands, and are an important asset to preserve in this era of increasing shipping costs and demand for local food. Moreover, the capacity to produce food near where it is consumed is required for sustainable development. On the other hand, Vaughan must find the space to locate an additional 169,000 people over the next 25 years, and much of the remaining, unprotected whitebelt lands are Prime Agricultural Lands. Meeting and exceeding the targets for intensification and density set out in Places to Grow- The Growth Plan for the Greater Golden Horseshoe is one way for Vaughan to alleviate the pressure on its Prime Agricultural Lands. The City of Vaughan has the opportunity to create a vibrant, dense and sustainable urban structure within its built boundary and allotted Greenfield lands; in so doing it may preserve its remaining agricultural capacity. Conversely, allowing low density development will contribute to the steady erosion of Vaughan's ability to support a viable agricultural industry. Every effort should be made to direct growth to within the built boundary and designated Greenfield areas, and away from prime agricultural land.

## Agricultural Urbanism an alternate model



This past May, a community planning team working on a 538-acre parcel of land just outside of Vancouver British Columbia, developed a plan for the land which would see over 40 percent of the site devoted to agricultural uses. The master plan for the community – known as Southlands, is structured to allow a mix of sizes and scales of agriculture. Agricultural plots progressively decrease in size from the periphery, where both large farms of 20 -160 acres and small farms of 5-20 acres co-exist, to the sub-urban zone, where specialty farms between 1 and 5 acres and community gardens are found. Food production continues right through to the urban core zone, where window boxes, as well as front yard gardens and kitchen gardens are encouraged. In this manner, the development is planned to both house and feed 2000 residents. Vaughan could institute a similar model through the promotion of small-farm zones on near-urban lands, and through land use policies which expressly allow for the cultivation of suburban and urban spaces.

## Near-urban Agriculture Toolkit

Near-urban agriculture still faces significant challenges, and can be supported by embracing the new and innovative policy suggestions coming forth from the GTA Agricultural Action Committee and others providing planners with a toolkit of options. These include:



### **Incorporating Minimum Distance Separation**

As mandated by the PPS (1.1.4.1), the MDS formulae should be incorporated within both official plans and zoning by-laws. The incorporation of these formulae in designating land uses and zones can act to mitigate conflict between farm and non-farm uses before they begin.



### **Renewable energy generation**

Expanding permitted land uses within agricultural areas to include renewable energy generation (wind, solar, biomass or geothermal) can help diversify the rural economy, and provide farmers with an additional sustainable revenue stream. Partnerships between farmers and wind energy companies are especially lucrative; farmers generally net in the thousands of dollars annually from a single turbine. Both electricity from biogas (methane produced from farm waste) and biodiesel (from soy, canola or farm wastes) are increasingly profitable commodities. The Ontario Government now offers prime rates for renewable energy distributed back to the the grid.



### **Small farm enterprise zones**

Because of the strength, diversity and value of near urban agriculture in the GTA, the GTA Agricultural Action Committee is now recommending the establishment of small farm enterprise zones. Within these zones, the development of small farms using innovative agricultural techniques would be encouraged. Land use regulations governing severance and subdivision would be relaxed specifically for the purposes of small-farm creation. Preferential tax options could be considered. New partnerships and spatial organizations could be explored between small scale agricultural operations on the principles of industrial and agricultural ecology.



### **Mixed use countryside**

Despite higher average economic productivity per unit area, farms in the GTA still struggle to survive. Allowing a mix of secondary business types to exist on farms means allowing farmers to diversify their economic options and persevere when the going gets tough. Economic diversity is accepted as a fundamental basis for evaluating the health of urban economies. It only makes sense to apply the same criteria to the countryside, where a limited range of options has long created extremely vulnerable economies. In near-urban agricultural contexts like the City of Vaughan, allowing a mix of on-farm uses makes a great deal of sense because of proximity to markets and better infrastructural capacity.

## Urban Agriculture

Food production is an integral part of cities the world over. Urban agriculture can provide a secure source of low cost food that is more nutritious, tastes better and is less environmentally degrading due to its lack of associated transportation, processing, preservation and packaging. Moreover, community gardens provide aesthetically pleasing spaces for social engagement, low intensity exercise, and relaxation.



### Corridors

To a large extent, Vaughan already possesses the basis for a Continuous Productive Urban Landscape in its natural and utility corridors. Recognizing the value of these lands in creating more holistically sustainable cities, the Toronto Region Conservation Authority is now in the process of developing a policy which could see portions of its lands used for sustainable, near-urban agriculture. The City of Vaughan could follow the lead of the TRCA and include sustainable agriculture as an acceptable use within carefully delineated sections of its natural and utility corridors.

## Continuous Productive Urban Landscapes

Continuous Productive Urban Landscapes are created using paths of green space that include natural, agricultural and recreational features. These form corridors connecting Natural Core Areas through the city and provide the structural framework for extending agricultural production from rural areas into the urban core. The agricultural potential of urban landscapes can be realized through a policy focused on four key structural features: corridors, rooftops, open spaces and lots.



### Rooftops

A quick glance at an aerial photograph of Vaughan reveals that much space which might otherwise be converted to agricultural purposes is already occupied by some form of the built environment: roads, parking lots, or buildings. Rooftop gardens can reclaim this latter area for food production, and offer a host of other benefits, from increased rainwater retention, to carbon dioxide absorption to building insulation and reducing the 'urban heat island' effect. Permitted land uses and zoning by-laws could be written to include rooftop gardens, and realize these benefits.



### **Open Space**

Public open spaces can function as locations for community or allotment gardens. The social spaces of local parks are enlivened through the institution of public food gardens, which can provide a positive aesthetic and social presence on the landscape. Additionally, public open space land use designations and zoning bylaws can be adapted to provide the infrastructure for food distribution. In Etobicoke, for example, Public Open Space zones allow for the on-site marketing of garden produce. In Toronto, The Stop Community Food Centre, a nonprofit focused on food security issues, is currently working on zoning ordinances that would allow for the marketing of garden produce on outdoor rink facilities throughout the city.



### **Lots**

Within the city, nearly all land use designations could explicitly allow for urban agriculture. Small lots of urban land can be surprisingly productive. Growing Power, an urban agriculture operation in Milwaukee, Wisconsin uses an innovative agricultural system combining aquaculture (growing fish), vermi-compost (composting with worms), hydroponics and greenhouses to attain incredibly high yields; producing enough to feed 2000 people on 2 acres of land. This translates to an economic productivity of five dollars per square foot, as opposed to one dollar per square foot for conventional farming practices. In addition, heat generated by the composting process is enough to keep greenhouses sufficiently warm to produce crops right through the winter.



## Questions and Implications for the Official Plan

The protection of Vaughan's agricultural lands is an important and challenging task. As population pressure and demands to convert these lands increases, Vaughan must find ways to support a viable and productive agricultural industry. The City's new Official Plan provides a unique opportunity to set aside prime agricultural land for generations to come. In doing so, Vaughan will be taking a significant stride towards a more sustainable future.

This paper has raised a number of key agricultural issues and concerns that the City of Vaughan must attempt to tackle in the creation of its new Official Plan. The following is a summary of these fundamental questions:

- Should Vaughan establish a firm ‘countryside line’ to help protect the City’s agricultural resources?
- How can Vaughan best prioritize and protect its most valuable agricultural lands?
- What is the best way to incorporate agricultural lands within Vaughan’s overall urban structure?
- How can agriculture, such a historically and culturally important industry, be used in place-making activities?
- Should Vaughan seek to permit agriculture within a wide range of traditionally urban land use categories to promote urban agriculture?
- Can Vaughan utilize the green corridors provided by its valleys and stream lands to create a Continuous Productive Urban Landscape?
- Could Vaughan create a small-farm enterprise zone to help promote small-scale, near-urban agriculture?
- How can Vaughan best assist farmers in diversifying their on-farm businesses and resources?
- What is the most effective way of supporting secondary and tertiary industries, such as processing, packaging, transportation, marketing and financial services, to realize the multiplier effect of a strong local agriculture industry?

- Could a wholesale distribution centre for GTA produce, similar to the Ontario Food Terminal, be created in Vaughan?
- Should Vaughan consider an extension of the Greenbelt to cover its most valuable and vulnerable agricultural lands?
- What is the most effective means of safeguarding against the fragmentation of Vaughan's prime agricultural lands?