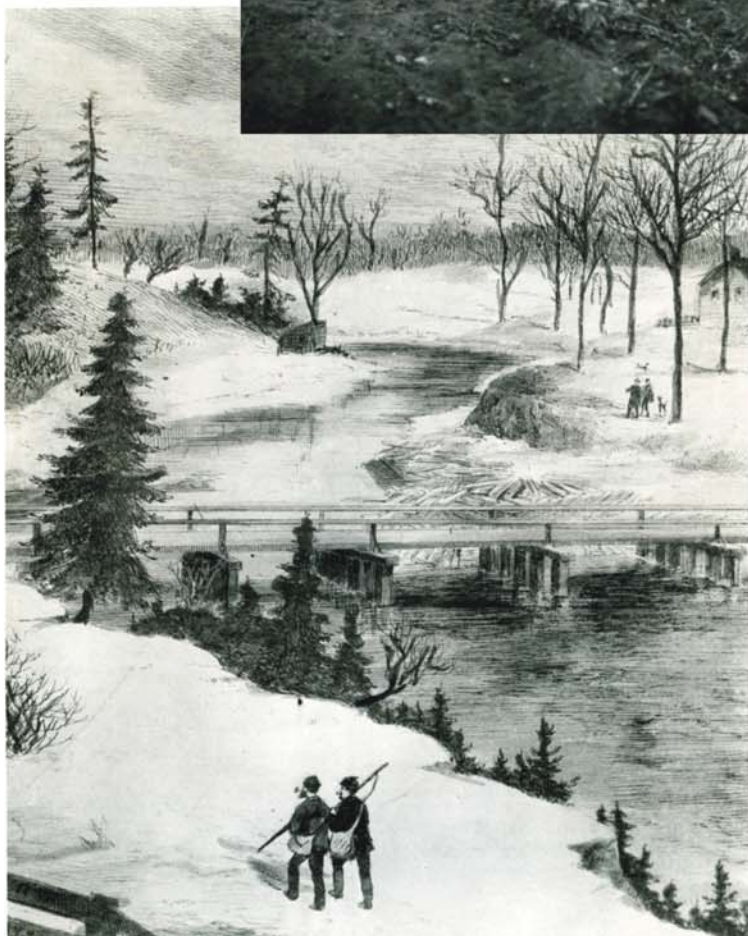


BLACKWELL MARSH AGRICULTURAL STUDY

December 2010



Prepared by:

HCA

Harry Cummings and Assoc.

Executive Summary

The purpose of this study has been to assess the agricultural resource in the Blackwell Marsh area of the City of Sarnia and recommend strategies for maintaining and improving the resource.

The study was completed in consultation with a number of key stakeholders including officials from the City of Sarnia, the County of Lambton, the Ontario Ministry of Municipal Affairs and Housing, and the Ontario Ministry of Agriculture, Food and Rural Affairs. The public was also included in this process through the formation of the Blackwell Marsh Advisory Committee. The Committee helped to identify issues, challenges and opportunities for the Blackwell Marsh area. An extensive review of background documents and reports was also conducted to gain a fuller understanding of the activities, strategies, and policies that currently impact on the resource.

One of the key objectives of the study was to investigate and confirm the characteristics of the Blackwell Marsh area soils. Although the soil analysis established that organic soils no longer exist in the Blackwell Marsh area, the analysis revealed that the Blackwell soils feature slightly better texture and significantly better organic matter levels than surrounding soils. The combination of these features would have a synergistic beneficial effect resulting in greater agricultural potential due to better soil physical, biological and chemical properties. Significant drainage improvements have also been made in the Blackwell Marsh area and have largely eliminated historical drainage constraints.

The Blackwell soils currently support a variety of crops including common field crops such as wheat, soybeans and corn. Compared to surrounding soils, the Blackwell soils also have a greater potential to support less common crops, especially those vegetable crops with a limited root system.

The City of Sarnia can assist in supporting sustainable agricultural activity in the Blackwell Marsh area by adopting a comprehensive approach for protecting the agricultural resource and promoting agricultural uses. The following draft principles are presented to the City of Sarnia for consideration to encourage and optimize agriculture in the Blackwell Marsh area:

1. Achieving a sustainable food system requires the integration of environmental, economic, social and cultural objectives and genuine community engagement.
2. Although the Blackwell Marsh area no longer contains organic soils it remains a priority agricultural area in the City of Sarnia given its close proximity to the City and the presence of soils that have greater agricultural potential due to better soil physical, biological and chemical properties. The primary land use activity in the Blackwell Marsh area will be agricultural uses as defined in the City of Sarnia Official Plan.

3. Agricultural productivity in the Blackwell Marsh area depends on the continued maintenance of the established system of drains and ditches and the use of best farm management practices.
4. The Blackwell Marsh area currently features a variety of farm parcel sizes (e.g. <10 acres up to 100 acres +) and small and large farms will continue to be supported in the area. Planning for and supporting small and large farms is necessary given the variation in agricultural production types, commodity types, and farmer and consumer interests.
5. Agricultural sustainability in the Blackwell Marsh area is dependent on maintaining infrastructure linkages that allow for the efficient movement of farm vehicles and products within the area and to/from the wider working countryside, rural communities, and urban centres.
6. On-farm diversification in the Blackwell Marsh area will be supported as a means to provide farmers greater opportunity to obtain additional sources of income.
7. The 'Right to Farm' concept will be supported in the Blackwell Marsh area and farmers will be provided with the necessary support, services and infrastructure that are required for agricultural viability.
8. The City of Sarnia will consider the food production, distribution, consumption and recycling system holistically with the aim of becoming a leader in environmentally sustainable, economically viable local food systems. The City will develop and support policies and programs that support local food production and processing and increase food security and provide a healthy local food supply.
9. Decision-making will be coordinated in a consultative manner with local agricultural interests and will consider all potential impacts on agricultural viability.
10. Residents of the City of Sarnia will be encouraged to learn more about agriculture in the region and to support locally grown agricultural products.
11. The City of Sarnia will lead by example by ensuring that it maintains strong support for any agricultural related policies and strategies it adopts and abides by the conditions it establishes to maintain the trust of the farming community.

Municipal policies and strategies in conjunction with other supports are needed in order to achieve a sustainable and successful agricultural sector in the Blackwell Marsh area and the City of Sarnia in general. This report provides a number of recommendations directed at enhancing existing official plan policies. These include initiatives aimed at promoting farm viability and agri-related economic development, supporting agri-related services and infrastructure, supporting renewable/alternate energy resources and soil conservation practices, supporting strategies to improve community health through access to better quality and more nutritious foods, and increasing public awareness about the importance and benefits of agriculture in the City and surrounding area.

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Cover Page Images:

Top ***Blackwell Marsh Area, 2010.***
Source: Ross Wilson

Middle ***Potato Harvest on Henry Broughtons Farm, 1914 (approx.).***
Source: Clover Leaf Women’s Institute Tweedsmuir

Bottom ***Perch Creek, 1876 (J. C. McArthur).***
Source: Lambton County Libraries, Museums, and Cultural Services Department

List of Acronyms

AAC	Agricultural Advisory Committee
BMAC	Blackwell Marsh Advisory Committee
CLAAC	County of Lambton Agricultural Advisory Committee
CSA	Community Supported Agriculture
HCA	Harry Cummings and Associates
MMAH	Ontario Ministry of Municipal Affairs and Housing
OMAFRA	Ontario Ministry of Agriculture, Food and Rural Affairs
PPS	Provincial Policy Statement
SLEP	Sarnia-Lambton Economic Partnership
TAC	Technical Advisory Committee

1.0 Study Background and Objective

The Blackwell Marsh area in the City of Sarnia was originally drained in the 1860s and marked the beginning of a long history of market garden and vegetable production.¹ However, as market conditions and farming practices changed over the years there has been a general decline in vegetable production in the area and a transition to major commercial crops such as corn, wheat and soybeans. Recent trends are showing expanded potential for these and other types of commercial crops in industrial applications (e.g. ethanol, bio-plastics). There is also growing potential for food related products especially with heightened consumer awareness and interest in locally produced foods such as fresh vegetables and fruit.

These trends point to the need to better understand the current agricultural capability of the Blackwell Marsh area and the opportunities that exist that could position this near urban area as a valuable and sustainable resource over the long term.

Sketch 1:
Wild Pigeon Shooting Near
Blackwell, 1876 (J. C. McArthur).
Source: Lambton County
Libraries, Museums, and Cultural
Services Department



In December 2009, the Blackwell Marsh Agricultural Study was approved by City of Sarnia Council.² The key objective of the study was to complete an assessment of the Blackwell Marsh area and identify possible land use designations, policies and strategies that could be included in the City of Sarnia Official Plan with the aim of protecting, maintaining and improving the resource area.³ The study was guided by the Planning Division of the City of Sarnia with Kevin Edwards, Manager of Planning, acting

¹ The area was historically known as and is still referred to by some residents as the Lake Wawonash area.

² Blackwell Marsh Agricultural Study website: www.sarnia.ca/visit.asp?sectionid=851

³ The City of Sarnia is currently completing a comprehensive review of its Official Plan to ensure consistency with the Provincial Policy Statement and the County of Lambton Official Plan.

as the Project Manager. Harry Cummings and Associates (HCA) was retained as the lead consultant to carry out the research.

1.1 Approach

The Blackwell Marsh Agricultural Study consists of the following three phases:

1. Background Research
2. Community Workshop
3. Synthesis and Final Report

This report is centred on Phase 1 which involves the initial background research for the study. This phase consisted of the following activities:

Establish the Research Process

The research process was initiated by the Technical Advisory Committee (TAC) which was established by the Project Manager to guide the research process as developed and implemented by HCA. TAC consisted of representatives from the City of Sarnia Planning and Building Department, the County of Lambton Planning and Development Services, the Ontario Ministry of Municipal Affairs and Housing, and the Ontario Ministry of Agriculture, Food and Rural Affairs.

TAC met on two occasions at the outset of the study to review and finalize the research process with HCA (December 21, 2009 and February 11, 2010). As the research progressed it was determined that some modifications to the process were necessary (e.g. soil sampling) and revisions were discussed and agreed upon with representatives from the City of Sarnia Planning and Building Department.

Community Open House / Public Meeting

A Community Open House was hosted by the City of Sarnia at the Blackwell United Church on February 27, 2010 which served as the kick-off event for the Blackwell Marsh Agricultural Study. Current and previous residents from the area were invited to share their recollections and observations on agricultural and non-agricultural activities in the Blackwell Marsh area to help the City of Sarnia and the researchers better understand the community history and its transformation over the years. The Community Open House was also used to assess local interest in participating in a community based advisory committee (see Blackwell Marsh Advisory Committee below).

The City of Sarnia also hosted a Public Meeting at the Mandaumin United Church on March 4, 2010 which served to bring together a broader audience of community and agricultural sector stakeholders to discuss the agricultural resource in general in the City of Sarnia. The event was attended by over 80 people and the discussion focused on addressing four key questions:

- What issues arise for agriculture from operating in the City?
- What are the benefits for farm operators who are in close proximity to the urban area?
- How do/could farm operators add value to their agricultural operation?
- How can farming and rural communities remain sustainable and viable over the long term?

The input and feedback provided during these two public sessions was reviewed alongside the additional findings from the other background research methods and used to draft the summary findings presented in Section 6 and 7 of this report. The findings served to inform the development of the preliminary recommendations presented in Section 8 of this report.

Review Relevant Background Documents / Reports

An extensive review of background documents and reports was conducted to gain a fuller understanding of the different stakeholder and community interests in the local agricultural resource and the activities, strategies, and policies that currently impact on the resource.

This included a review of documents and reports from the City of Sarnia Planning and Building Department and the County of Lambton Planning and Development Services including the Official Plans for both jurisdictions and other related planning documents (e.g. Zoning By-law, land use maps, soil maps, aerial photos, MPAC farmland property maps, etc.). The Provincial Policy Statement on Agriculture was also reviewed.

Other relevant information and publications reviewed came from the Lambton Federation of Agriculture, the County of Lambton Health Services Department, the Sarnia Lambton Economic Partnership, the St. Clair Region Conservation Authority, the Ontario Ministry of Food, Agriculture and Rural Affairs, the University of Guelph, and other groups and organizations. Additionally, historical documents from the County of Lambton Libraries, Museums, and Cultural Services Department were examined and the literature on agricultural opportunities and challenges in the near urban context was reviewed for insights into lessons learned elsewhere.

**Photo 1: Telfer Brickyard
Blackwell, 1895 circa.
Source: Lambton County
Libraries, Museums, and
Cultural Services Department**



Prepare Profile of the Local Population and Agricultural Sector

A profile of the socio-demographic characteristics and agricultural activity in the County of Lambton and the City of Sarnia was prepared to gain a better understanding of the context in which agriculture in the Study Area operates. The profile includes a trend analysis for the period 1986-2006 which was developed using Statistics Canada data from the Population and Agriculture Census.⁴

The agricultural profile reveals the size and diversity of the local agricultural sector and its important contribution to the local economy while the socio-demographic profile helps to define the local and regional market area for agricultural commodities. The development of local food systems is a growing area of interest in North America and elsewhere and is viewed as a logical strategy to improve community economic vitality (Feenstra, 2007).

The full analysis is presented in a separate report, “*Overview of the Agriculture Sector in Sarnia and Lambton County, 1986 to 2006*”, and a brief summary of the findings are presented in Section 3 of this report.

Establish the Blackwell Marsh Advisory Committee (BMAC)

The Blackwell Marsh Advisory Committee (BMAC) was established as a way to engage the community in the research process. The role of BMAC was to help City Planning staff and HCA better understand agricultural related issues and opportunities within the Study Area and the larger City and to provide insights and suggestions on how the

⁴ Census data specific to the Study Area could not be obtained due to the small number of farms in the Study Area and related confidentiality issues. An account of agricultural activity within the Study Area was prepared through consultations with local stakeholders and is presented in Section 3 of this report.

agricultural resource could be supported. The committee was comprised of area property owners and residents including farmers and non-farmers and was supported by representatives from the City of Sarnia Planning Advisory Committee, the County of Lambton Development Services, and the Sarnia Lambton Economic Partnership.

In those cases where the BMAC members were only able to attend one or two meetings HCA contacted the members by phone to further engage them in the process and collect their observations and insights.

Members of the general public were welcome to attend the BMAC meetings and observe the discussion and ask questions.

A total of four BMAC meetings were conducted between March 25 and July 8, 2010.

1. The initial BMAC meeting was conducted on March 25 at City Hall. This meeting was used to introduce the purpose of the study and review background information. This included a presentation on current land use designations, relevant planning policies (at the municipal, county and provincial level), and general trends in local food production in near urban environments. The committee provided some general observations and insights on current agricultural trends and issues in the Study Area.
2. The second BMAC meeting was conducted on May 19 at City Hall. This meeting was used to present the results from the soil analysis that was conducted in the Study Area in March/April 2010. The soil sampling and analysis was conducted by Ross Wilson, a certified Agrologist who was retained by HCA to undertake a soils investigation of the Study Area. The unique characteristics of the Study Area soils were presented and contrasted to soils in the surrounding area and a general discussion followed on what the analysis meant in terms of the agricultural potential of the Study Area.

The full soil analysis is presented in a separate report, "*Soils Investigation – Sarnia's Blackwell Marsh*", and a brief summary of the findings are presented in Section 5 of this report.

3. The third BMAC meeting was conducted on June 15 at City Hall. This meeting was used to present some of the key features of agricultural production in the City of Sarnia and Lambton County as context for the type of agricultural activity occurring in the Blackwell Marsh area. An overview of the farmland in the Study Area was also presented in terms of the number, size and location of farmland parcels and some general observations were provided on the type of agricultural production occurring on the farmland. The group discussion that followed helped to validate and confirm the type of production that is occurring in the Study Area and also raised issues and challenges in relation to the area reaching its agricultural potential.

4. The fourth and final BMAC meeting was conducted on July 8 at City Hall. This meeting served as a continuation of the previous meeting in exploring the issues and challenges related to the Study Area reaching its agricultural potential.

Over the course of all four BMAC meetings attempts were made to draw out issues and challenges and opportunities which could help to inform the development of recommendations for supporting agriculture in the Study Area. The input and feedback provided during these meetings was reviewed alongside the additional findings from the other background research methods and used to draft the summary findings presented in Section 6 and 7 of this report. The findings served to inform the development of the preliminary recommendations presented in Section 8 of this report.

Conduct Soil Sampling and Analysis

As noted above an investigation of the characteristics of the Blackwell Marsh area soils was carried out in March/April 2010. The soil investigation was initially focused on the location and description of the organic soils in the study area. However, a preliminary site investigation, followed by a second, more thorough investigation determined that no organic soils remain in the Study Area.

As a result of no organic soils being located, the soils investigation was shifted to focus on an investigation to characterize the Blackwell Marsh's mineral soils which are distinct from the majority of the mineral soils in the surrounding vicinity.

The full soil analysis is presented in a separate report, "*Soils Investigation – Sarnia's Blackwell Marsh*", and a brief summary of the findings are presented in Section 5 of this report.

Prepare Composite Report on Findings and Preliminary Recommendations

The collective findings from the agriculture sector overview, soils investigation, and community consultation were reviewed and used as the basis for developing a draft set of recommended principles and actions that are intended to assist the City of Sarnia in ensuring the long term success of the Blackwell Marsh area agricultural resource (Section 8).

This report was reviewed by City of Sarnia staff and was shared with the County of Lambton, MMAH and OMAFRA for review and comment.

2.0 Description of Current Land Uses in the Blackwell Marsh Study Area

Map 1: Blackwell Marsh Study Area

Source: City of Sarnia, 2009.

An overview of the current land uses in the Study Area is presented below.

Urban Area

The urban area represents approximately 34% of the total Study Area. Within the Study Area, the area generally west of Modeland Road, south of Highway 402 and north of Lakeshore Road is designated for settlement uses. While the area north of Lakeshore Road is an established settlement area, the area west of Modeland Road is developing as a residential community. The area south of Highway 402 is primarily used for commercial purposes. Several undeveloped parcels in the urban area remain in active agriculture production.

Rural / Agricultural Area

Agriculture is the predominant land use in the Study Area and the primary focus of this report. Outside of the designated urban area, 76.6% of the land base is used for agricultural purposes, of which 90% is in active agricultural production (Table 1).

Table 1: Rural / Agricultural Area Land Use by Type

Land Use	Area (hectares)	Area (acres)	Percentage of Total Area
Agriculture	1,487.6	3,676.0	76.6%
Transportation (Chris Hadfield Airport)	156.6	387.0	8.1%
Natural Areas	126.3	312.1	6.5%
Roads	64.3	159.0	3.3%
Non-Farm Residential	58.8	145.4	3.0%
Drainage Infrastructure	30.8	76.1	1.6%
Recreational	8.0	19.7	0.4%
Other (Commercial, Institutional, Energy, etc.)	9.5	23.5	0.5%
Total	1,942.0	4,798.7	100%

Source: Municipal Property Assessment Corporation, 2009; City of Sarnia, 2009.

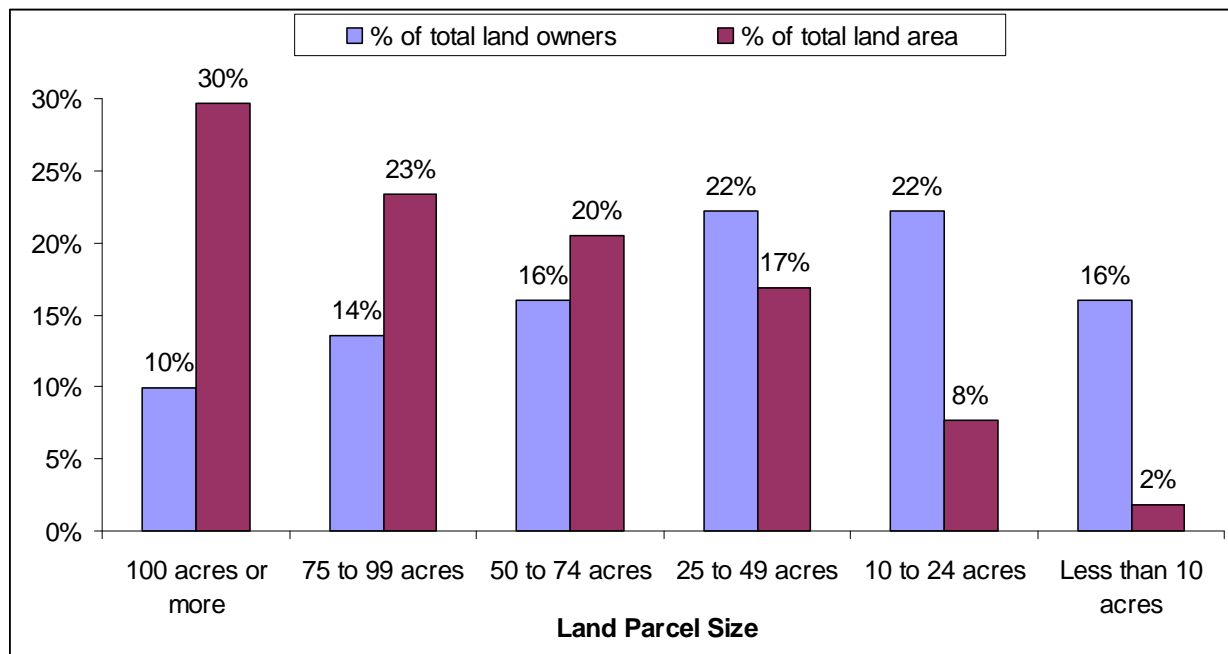
There are a total of 117 agricultural parcels in the Rural / Agricultural area of the Study Area. The 117 parcels are held by 81 different land owners.⁵ A total of 102 dwellings are located on agricultural parcels in the Rural / Agricultural portion of the Study Area, of which 32 maintain associated agricultural buildings of various capabilities, size and condition. While some buildings are not in current agricultural use, they do maintain the capability and potential to be adaptively reused.

The agricultural land parcels in the Study Area reflect a wide variety of parcel sizes from less than an acre to just over 200 acres. As shown in Figure 1, approximately 10% of the agricultural land owners in the Study Area have land parcels that amount to 100 acres or more in size and collectively these land parcels account for about 30% of the total agricultural land in the Study Area. When we combine land parcels in the 100 acre plus category and the 75 to 99 acre category we find that 24% of the land owners in the

⁵ Source: Municipal Property Assessment Corporation, 2009; City of Sarnia, 2009; Statistics Canada, 2006. Appendix A provides a map of the agricultural parcels in the Study Area.

Study Area account for about 53% of the total land area in the Study Area. At the other end of the scale, approximately 16% of the land owners in the Study Area have land parcels with fewer than 10 acres and collectively these parcels account for about 2% of the total agricultural land in the Study Area.

Figure 1: Distribution of Property Owners and Land Area in the Study Area by Land Parcel Size



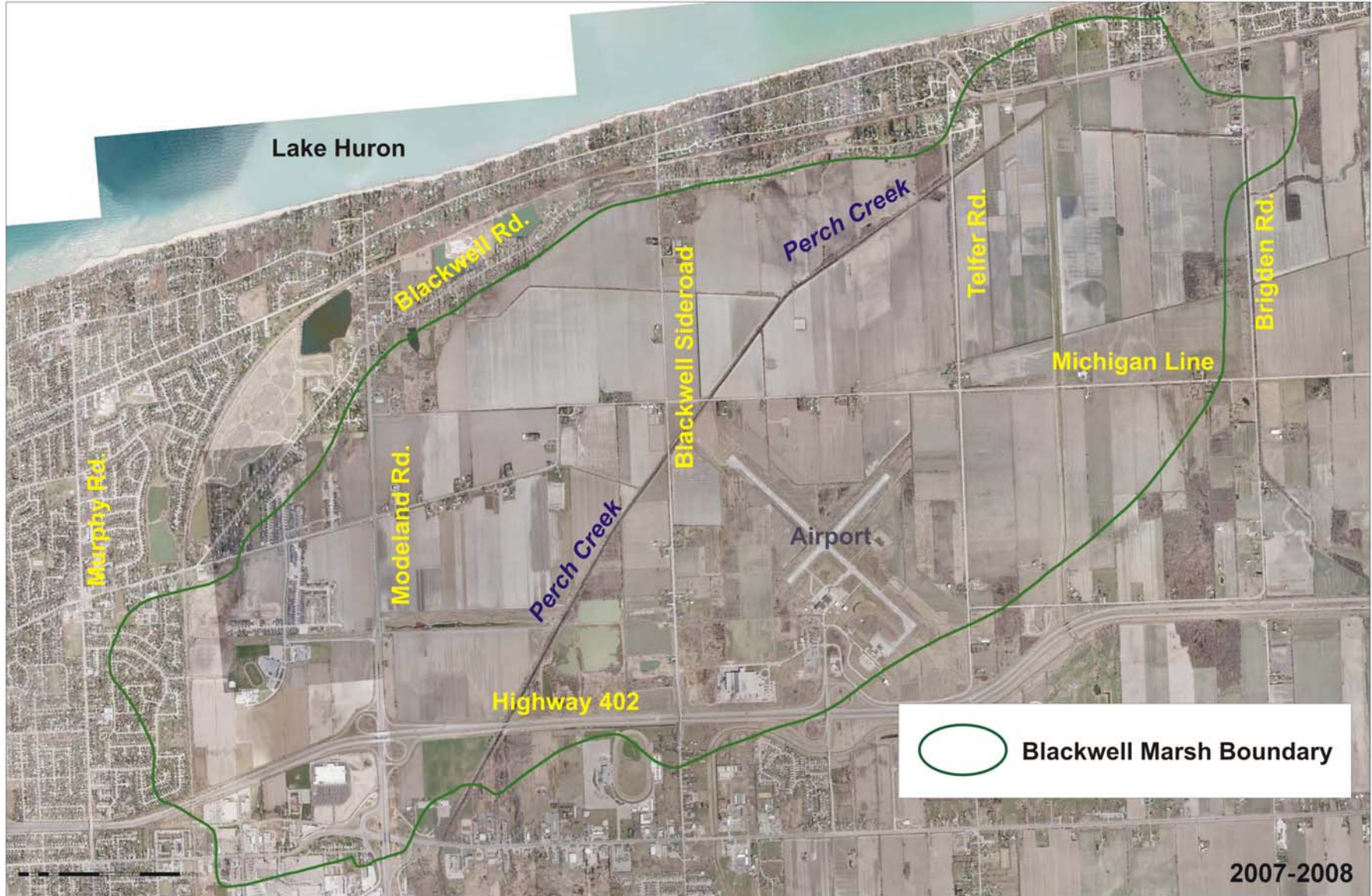
Source: Municipal Property Assessment Corporation, 2009; City of Sarnia, 2009.

The City of Sarnia Official Plan supports the provision of agricultural land parcels of sufficient size for long term agricultural use recognizing the need to maintain maximum flexibility for farm operators to engage in differing types and sizes of agricultural operations. The Study Area maintains a good mix of lot sizes that support the capability of farming of all types, sizes and intensities. This includes a substantial number of farms that are below the 35 hectare (85 acre) minimum lot size for agricultural uses⁶. Along Michigan Road between Modeland Road and Blackwell Sideroad, a grouping of smaller farm parcels exist that reflects the historic agricultural land use patterns of the area. These parcels remain in active agricultural production.

An aerial photo of the Blackwell Marsh area is presented in Map 2 and a graphic representation of the land uses in the Rural / Agricultural Area is presented in Map 3.

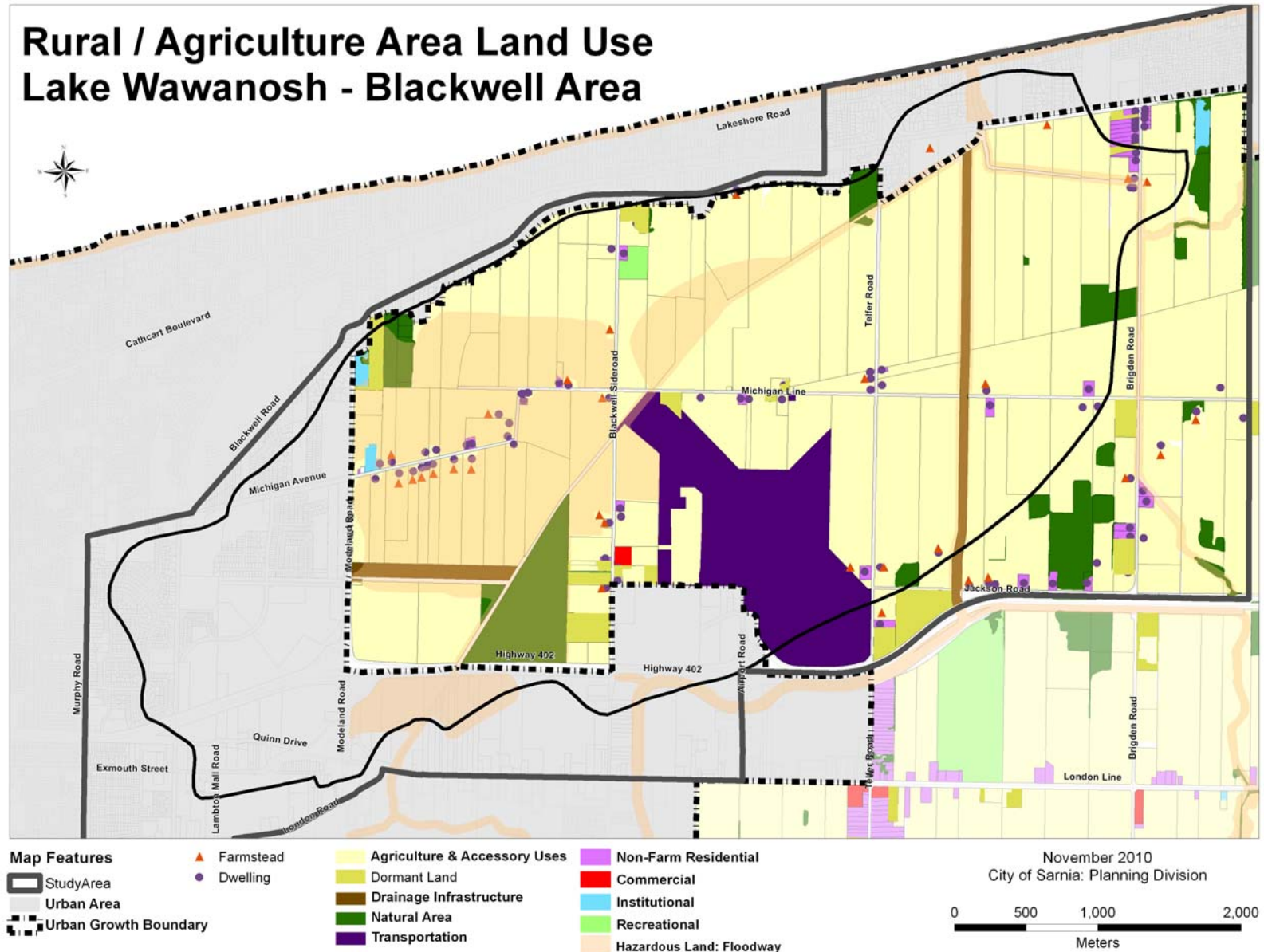
⁶ Additional details on agriculture related goals and policies from the City of Sarnia Official Plan are presented in Section 5.4 of this report.

Map 2: Aerial Photo of the Blackwell Marsh Study Area, 2007-2008



Source: City of Sarnia, 2009.

Map 3: Rural / Agricultural Land Use in the Study Area, 2010



Source: City of Sarnia, 2010.

Natural Heritage

While the area was once a lake and marsh system, artificial drainage systems developed from the 1860s resulted in the area being cleared and put into intensive agricultural production. At present, 6.5% of the study area's land base consists of natural features and areas such as wetlands, woodlots and tall grass prairies. Two natural features in the Study Area are worth noting.

The Wawonash Wetlands is a protected natural area owned by the St. Clair Region Conservation Authority. It supports an artificial wetland that is recognized as a Provincially Significant Wetland that was created from a closed gravel pit in the 1980s, and a series of tree plantings and habitat restorations. The Conservation Area is accessed from Blackwell Road and to the Rapids Parkway area by off-road trail through a stormwater management facility.

The Dennis Rupert Prairie is an 8 hectare (19 acre) parcel located on Brigden Road between Michigan Line and Lakeshore Road. The site is owned by the City of Sarnia and supports a wet prairie ecosystem including two threatened species; Riddel's Goldenrod and Sullivan's Milkweed. It is managed by Sarnia Urban Wildlife.

The study area's natural areas are linked by two identified Natural Heritage Corridors that form part of the regional natural heritage system. Perch Creek (Wawonash Drain) and Pulse Creek (Pulse Creek Drain) are delineated in the County of Lambton and City of Sarnia Official Plans as Primary Corridors.

Primary Corridors generally follow watercourses and the lakeshore with their associated flood and erosion susceptible areas, unstable lands, steep slopes and other physical conditions that create hazards. While landowners are encouraged to restore the County's Natural Heritage Corridors, nothing limits the continuation of any existing agricultural uses (Lambton County Official Plan, Chapter 8). Appendix F presents a graphic representation of the natural heritage area.

Drainage System

The study area is wholly within the Perch Creek watershed and is predominated by the Perch Creek tributary which is also referred to as the Wawonash Drain. Originally designated the 'Cull Drain', the Wawonash Drain is a man-made watercourse that was first constructed in 1859 and later widened in the 1890s. It was constructed in order to drain the then existing Lake Wawonash, with a new outlet to Lake Huron created at Lot 24/25, Front Concession.

The natural outlet of old Lake Wawonash was the Riviere Aux Perches which left the lake at the southeasterly side and flowed in a northeasterly direction to connect with Cow Creek at Bright's Grove. With the construction of the Cull Drain, a portion of the former Riviere Aux Perches over to at least Lot 13, Front Concession was also drained.

It was not until 1877 that Michigan Line was extended through the former bed of Lake Wawonash.

In 1905, the West Drain was constructed from Lot 41 directly east to the Wawonash Drain at Lot 33. In 1912, the Wawonash Drain was deepened and widened along much of its length.

Following flooding experienced in 1968, a breach in the Wawonash Drain dyke was repaired north of London Road, numerous farm bridges were removed or repaired, the channel of the Wawonash Drain was cleaned of vegetation and sediment and the Clark Drain was realigned to flow directly across Lot 13, Concession 8 to discharge into the Wawonash Drain. As part of these works, electric pumps were installed at the outlets of the Marks-Smith and the Clark Drains.

Between 1976 and 1981, the Telfer Diversion drain was constructed between London Road and Perch Creek, just south of Lake Huron. It was designed to divert the upper reaches of Perch Creek away from the Wawonash Drain. A stormwater management facility was completed north of Highway 402 and east of Modeland Road in 2002 to drain the designated urban area to the west.

Lake Wawonash was formed behind sand dunes similar to the former lakes in the Thedford Bog and maintains an elevation similar to Lake Huron. While several drainage improvements have made the study area a viable agricultural resource over the past 150 years, the land depression remains highly susceptible to flooding given the negligible slope of the Wawonash Drain and its inability to convey large flood water flows.

Flooding Hazards

A significant portion of the study area is defined by hazardous lands. Hazardous lands are property or lands that are susceptible to damage and could be unsafe for development due to naturally occurring processes. Development is to be generally directed away from these areas.

Flooding hazards are identified based on the risk of flooding. Floodways reflect the 100 year storm event. The 100 year flood is the minimum design flood standard established for the Perch Creek watershed, and the minimum standard permitted in the Province of Ontario. It is the peak or flood flow with one chance in one hundred of occurring in any given year. Development is not permitted within these hazards as there is an unacceptable risk to public health or safety or of property damage.

In 1990, the former Town of Clearwater expanded the urban boundary to include the lands west of Modeland Road. To implement this, the amalgamated City of Sarnia retained Totten Sims Hubicki Associates in 1992 to undertake a review of the Perch Creek watershed. The study delineated the 100 year flood (floodway) and Hurricane Hazel events (flood fringe) and undertook a review of options to facilitate the identified development area also known as the Rapids Parkway area.

In an effort to address the identified significant flooding hazard, the 1990 study included a scenario that assumed removal of all structures between Perch Creek to Highway 402 and widening Perch Creek (or Wawonash Drain) to over 55m (180'). Given a lack of difference in elevation between the Lake Wawonash area and Lake Huron, it was determined that this would only have the effect of reducing flood levels by approximately 0.77m (2.52'). The drainage and bridge works were anticipated to cost at least \$10 million (approximately \$14 million in current dollars) and would not result in any significantly reduced flooding hazard.

Totten Sims Hubicki Associates identified 'Area 1' as unique in the watershed in that Modeland Road, a historic road dating from the 1860s, effectively separates the area from the floodway during the 100 year storm event. To accommodate development in the growth area, the consultants proposed the construction of a storage facility that would be artificially drained through mechanical pumping into Perch Creek (Wawonash Drain).

The area east of Modeland Road outside of the urban area is primarily identified as a floodway. While the existing agricultural drainage system removes regular storm events, any significant storm on the Perch Creek watershed results in a very large runoff that produce a significant backwater effect in the low lying northern portion of the watershed. Development and site alteration are prohibited within Floodways under Section 3.1.2 d) of the Provincial Policy Statement. The City of Sarnia Official Plan delineates this area on "*Schedule B*" *Natural Heritage and Natural Hazard Areas* (Appendix F). The Study Area's drainage system and flooding hazards are presented in Appendix E.

Non-Farm Residential

There are 41 non-farm residential parcels within the Study Area. Non-farm parcels are defined as being 2.0 hectares (4.9 acres) or smaller. These are generally characterized as rural residential dwellings with associated accessory buildings. However, several support agricultural uses and have portions that are farmed in conjunction with surrounding agricultural parcels. A limited number support agricultural buildings and small-scale uses. A rural residential cluster exists at the intersection of Lakeshore Road and Brigden Sideroad.

Other Uses

Sarnia Chris Hadfield Airport is situated entirely within the Study Area and covers an area of approximately 156 acres. The east side of Blackwell Road is designated as Transportation in the City of Sarnia Official Plan and Light Industrial in the Zoning By-law. Underground caverns facilitate gas storage in the vicinity of Chris Hadfield Airport. Related above ground infrastructure is located south of Michigan Line, east of Blackwell Road. Other limited non-farm uses identified in the Study Area include two commercial landscaping operations (one located on Michigan Line west of Blackwell and the other along the east side of Blackwell Road) and two Places of Worship (located immediately west of Modeland Road).

3.0 Agricultural Activity in the Study Area, the City of Sarnia and Lambton County

Historically, the Blackwell Marsh area featured organic soils which supported a substantial amount of vegetable production in the area. The Blackwell Marsh area was originally drained in the 1860s and was initially used to supply agricultural products to lumber camps in Algoma District. This included the production of potatoes, onions, sugar beets and fruit trees.

Photo 2: Lake Wawanosh Drainage, 1880 circa.
Source: Lambton County Libraries, Museums, and Cultural Services Department

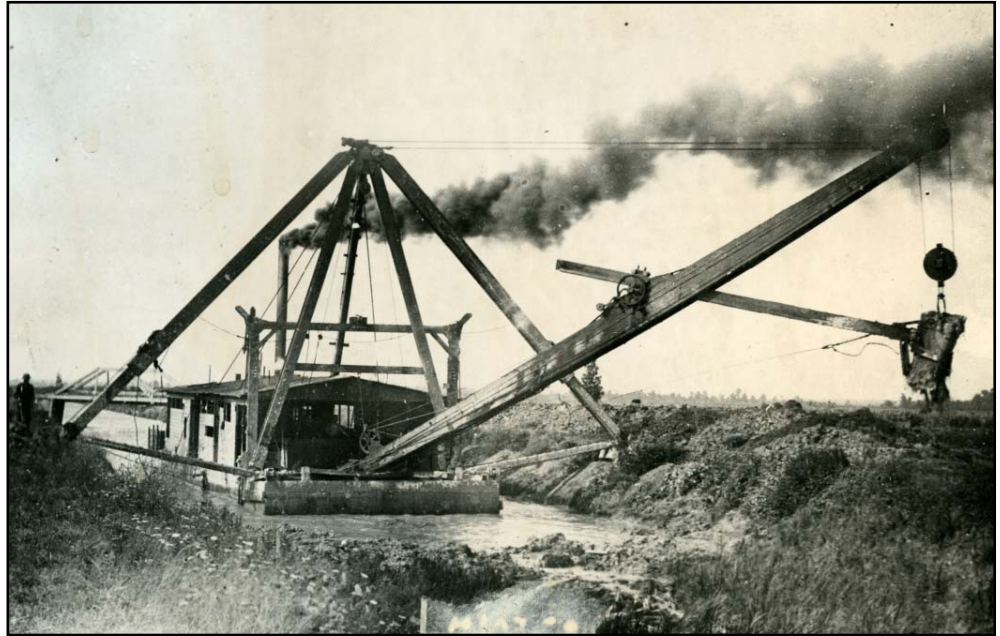


Photo 3: Vegetable Shipping Display for Sarnia Independent Vegetable Growers Assoc., 1914.
Source: Clover Leaf Women's Institute Tweedsmuir

Although the Blackwell Marsh area no longer contains organic soils, the soil has a higher organic content than the surrounding soils and it continues to support a variety of crops including common field crops such as wheat, soybeans and corn as well as market garden crops (e.g. vegetables, fruit, berries, etc.).

Discussions with local stakeholders and direct observation techniques reveal that the majority of the identified farmland in the area is currently being used for field crop production (e.g. wheat, soybeans, corn). Compared to the surrounding soils, the soils in the Blackwell Marsh area have greater potential to support less common crops, especially those vegetable crops with a limited root system (see Section 4 of this report for additional details on the soils investigation).

Photo 4: Blackwell Marsh area, 2010.
Source: Ross Wilson



The Blackwell Marsh area is rather unique in that it sits adjacent to a major urban centre with a population of 71,000 (Sarnia, 2006) and is situated in one of the most agriculturally productive regions of Ontario (Lambton County) which supports a diverse agri-economy.

There are approximately 2,280 farms in Lambton County which collectively reported 589,000 acres of farmland and \$376 million in gross farm receipts in 2006.⁷

The City of Sarnia has approximately 24,000 acres of farmland within its boundary including the Blackwell Marsh area. In 2006, the 88 farms in the City generated just over

⁷ The agricultural data presented for Lambton County and the City of Sarnia in this section of the report is derived from the Census of Agriculture which is conducted every 5 years by Statistics Canada. A more detailed review and analysis of the agriculture sector in the City of Sarnia and Lambton County is presented in a separate report, "Overview of the Agriculture Sector in Sarnia and Lambton County, 1986 to 2006".

\$14 million in gross farm receipts. Although the number of farms in the City declined by about 50% over the last 20 years, the area of farmland declined by only about 5%.

Compared to other areas of Lambton County, a substantial proportion of the farmland in the City of Sarnia is rented. In 2006, 46% of the farmland in Sarnia was reported as rented compared to 23% for Lambton County as a whole.

Crop production is the largest agricultural activity in the City of Sarnia with almost 60% of the farms deriving the majority of their income from oilseed and grain production in 2006. Indeed, approximately 93% of the farmland area in the City is in crop production with the five largest crops being soybeans (9,518 acres), wheat (5,536 acres), grain corn (4,553 acres), sugar beets (973 acres), and hay (820 acres).

In 2006, the City had at least 12 different farms involved in producing a variety of field vegetables including tomatoes, cucumbers, green beans, cabbage, carrots, peppers, asparagus, broccoli, cauliflower, green peas, dry onions, pumpkins/squash/zucchini, and sweet corn. In 2006, a small number of farms in the City collectively produced a variety of fruits and berries including apples, pears, plums, peaches, sweet cherries, strawberries, and raspberries. The City also featured at least 6 greenhouses in 2006 with a combined production area of almost 3 acres.

The City of Sarnia continues to have a substantial livestock sector. In 2006, 10 farms in the City reported having beef cows, 6 farms reported dairy cows, 6 farms reported chickens, 5 farms reported sheep/lambs, 3 farms reported goats, 2 farms reported pigs, and 9 farms reported horses.

At least 7 farms in the City were engaged in organic production in 2006 including organic hay/field crops, organic fruits/vegetables or greenhouse products, and organically raised animals.

One of the more notable and concerning trends in the agriculture sector is the aging population of farm operators. The average farm operator age in the City of Sarnia is 57 years (2006) which is about 4 years older than the average for Lambton County and the province of Ontario (53 years).

Another major trend is the growing proportion of farmers who are working off the farm. This trend is linked to rising production costs and stagnant or declining farm commodity prices and the need for farmers to supplement their farm income. Between 1995 and 2005 the proportion of farm operators in the City of Sarnia working off the farm increased from 29% to 48%.

However, changing demographics and consumer preferences are providing new farm production opportunities for existing and new farmers and stimulating interest in farm lifestyle living.

Food Production Opportunities in Relation to Changing Demographics and Consumer Preferences

The changing demographics of the local and regional population suggest that there are considerable opportunities to expand some food production activities in Sarnia and Lambton County in response to a population that is becoming more knowledgeable and more demanding about healthy and nutritious food options and changing their eating habits to include fruits and vegetables.

Consumers and producers in Ontario are generally becoming more interested in environmentally sustainable agriculture programs and practices including organic production and local food production. Concerns about food security and energy availability are likely to increase interest and demand in locally produced foods. Initiatives such as farmers' markets and community supported agriculture as well as farm direct sales (e.g. on-farm retail stores) are helping to connect consumers with producers.⁸ Producers are also becoming more active in developing and promoting agri-tourism and agri-education opportunities as part of their business operation.

Additionally, the population of Ontario is becoming more culturally diverse which presents opportunities for exploring more niche products in response to consumer interest in exotic fruit and vegetable varieties. Ontario farmers have started to shift more production toward oriental vegetables, herbs and other exotic vegetables but the full potential of the growing ethnic market remains to be explored.

The next section of the report outlines the summary findings from the soils investigation of the Study Area which indicate that the area continues to have significant agricultural potential.

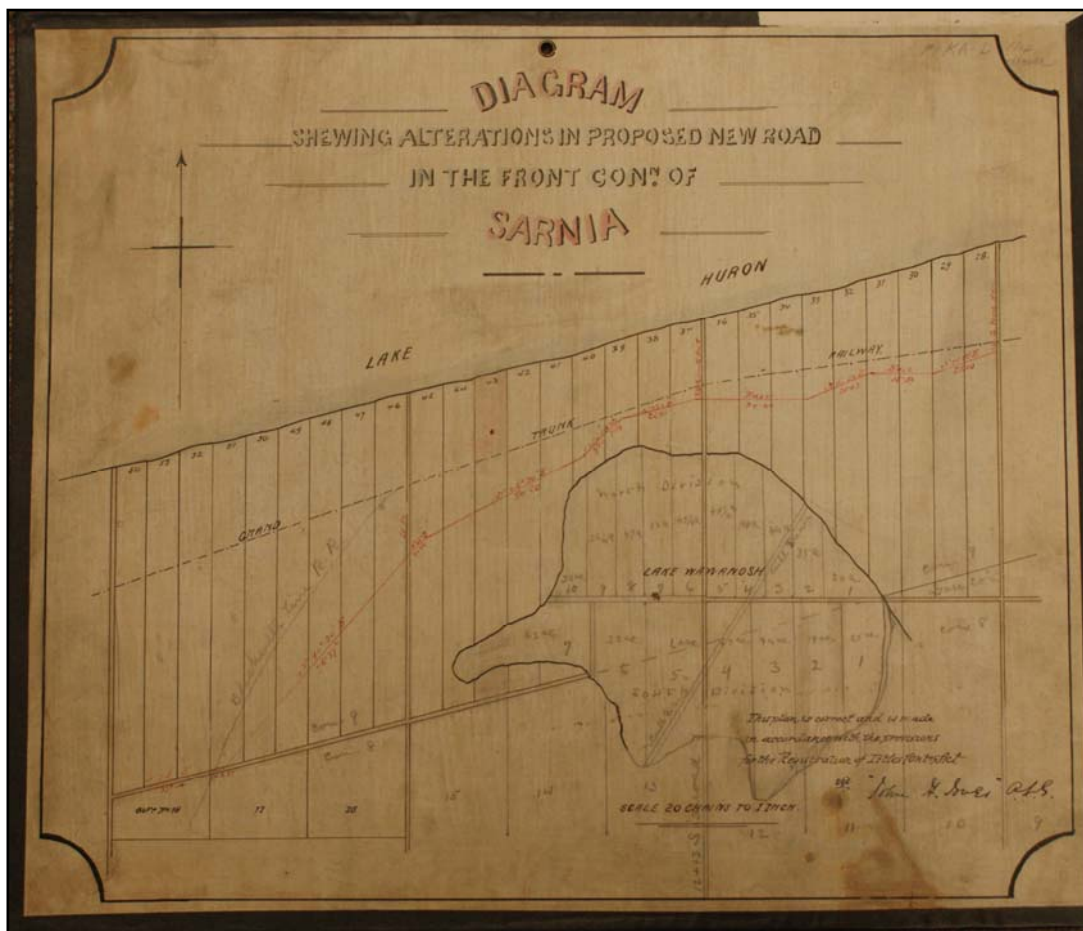
⁸ Community Supported Agriculture (CSA) is an alternative food distribution system that engages consumers as partners in the growing of food. Consumers take on some of the risk of the farm by paying up front for a share of the season's produce grown by a local farmer or a group of farmers. The food is delivered direct to consumers or to nearby drop off points on a weekly basis throughout the growing season. Most CSAs have between 35 and 200 members and most are based close to large urban centres.

4.0 Agricultural Capability in the Study Area – Soil Analysis

In light of the historical record which shows significant specialty crop activity in the area, a key focus of the soil investigation was to identify and describe the extent of the current soil characteristics which are important agronomic factors and can heavily influence the success of field crop production activities including specialty crops. The most important soil characteristic for the purpose of producing specialty crops is the presence of organic soils.⁹

The organic soils were reasoned to be most likely located in the lakebed of the post-glacial Lake Wawanosh and the surrounding marshlands.

Map 4: Historical Outline of Lake Wawanosh



Source: Lambton County Libraries, Museums, and Cultural Services Department

⁹ Organic soils are defined as having a minimum of 17% organic content. Organic soils are formed in wetland areas where anaerobic (absence of oxygen) processes dominate. These anaerobic processes limit plant material decomposition and can result in the accumulation of significant depths of organic matter.

Soils were sampled in a preliminary site investigation and followed by a more thorough investigation. Both of these investigations failed to locate any organic soils. Given that no organic soils were located after two thorough searches in the most likely locations, the obvious conclusion is that there were simply no organic soils remaining in the study area. Anecdotal evidence, including discussions with long term residents of the Blackwell Marsh area, revealed that the organic soils had been burnt off purposely, prior to 1950. Additional evidence included the soil profiles described in the 1957 soil survey as being typical of mineral soils, not organic soils.¹⁰



Photo 5: Blackwell Marsh area soil, 2010.
Source: Ross Wilson

As a result of no organic soils being located, the focus of the investigation shifted to characterize the Blackwell Marsh's mineral soils and their characteristics which are distinct from the majority of the mineral soils in the surrounding vicinity.

The Brookston soil series is the dominant soil series in Lambton County and borders the Study Area on the east, south and southwest border.¹¹ The Brookston soil series is the dominant soil series by far and includes about half of all the soils in Lambton County. The Brookston soil series are characterized as being developed from fine textured calcareous glacial till and has been submerged by the glacial great lakes and hence, it may contain fine material deposited from water. As a result of a nearly level relief and fine texture, poor drainage is an inherent characteristic.

¹⁰ Mineral soils are comprised dominantly of various minerals and only a very minor amount (<17%) of organic matter. Mineral soils are formed in dry upland areas where aerobic (presence of oxygen) processes almost completely decompose plant material.

¹¹ The Brookston soils in the region have a Class 2 Agricultural Capability rating under the Canada Land Inventory (CLI). These soils have moderate limitations and can be managed and cropped with little difficulty. Under good management these soils are fair to moderately high in productivity for a wide range of field crops.

This analysis revealed that the Blackwell soils sampled had slightly coarser texture than the Brookston soils. Compared to the Brookston soils, this coarser texture would result in improved soil physical conditions including but not limited to hydraulic conductivity. Improved soil physical conditions allow for an improved rhizosphere which ultimately results in improved agricultural potential.

The Blackwell soils sampled also had significantly greater organic matter content when compared to the Brookston soils. The organic matter content is a very important agronomic factor heavily influencing not only the physical soil conditions but also the biological and chemical conditions of the soil.

The combination of these two agronomic factors indicates that the agricultural potential of the Blackwell soils sampled is greater than the Brookston soils sampled. The extent to which this greater agricultural potential can be recognized is dependant upon many other important factors, including the skill of the crop manager and other important but unpredictable agronomic factors such as the weather.

The following conclusions were drawn from the results of the soils investigation:

1. There are no organic soils located in the Study Area. The locating of organic soils would have substantially differentiated the soils within the Study Area from the Brookston mineral soils adjacent to the Study Area.
2. The Blackwell soils within the Study Area have slightly better (coarser) texture than the adjacent Brookston soils.
3. The Blackwell soils within the Study Area have slightly better (higher) estimated hydraulic conductivity than the adjacent Brookston soils.
4. The Blackwell soils within the Study Area have significantly better (higher) cation exchange capacity values than the adjacent Brookston soils.
5. The Blackwell soils within the Study Area have significantly better (higher) organic matter levels than the adjacent Brookston soils.
6. The combination of slightly better texture and significantly better organic matter levels would have a synergistic beneficial effect resulting in greater agricultural potential due to better soil physical, biological and chemical properties.
7. The organic matter content is the key agronomic factor responsible for the difference in agricultural potential between these soils. A loss in organic matter content of the Blackwell soils, due to poor agricultural practices, would significantly reduce the difference in agricultural potential between the soils.
8. The Blackwell soils have moderate inherent variability in physical properties at a farm scale level, particularly along the north and east perimeter of the Study Area.

9. The Blackwell soils in the Study Area successfully support a variety of crops including the common field crops such as wheat, soybeans and corn. Although the Canada Land Inventory (CLI) rating for the Blackwell soils which comprise most of the Study Area is 5W, the agricultural capability of the soils in the Study Area are comparable if not better than the surrounding Brookston soils which have a CLI rating of 2.¹²
10. Due to the better soil physical, biological and chemical properties than the Brookston soils, these Blackwell soils currently have a greater potential to support less common crops, especially those vegetable crops with a limited root system.

A more detailed review of the results of the soil investigation is presented in a separate report, *"Soils Investigation: Sarnia's Blackwell Marsh"*.

¹² From 1965 to 1980 land capabilities for agriculture, forestry, recreation, and wildlife were assessed through the Canada Land Inventory (CLI) program. Most of the Canada Land Inventory mapping was completed by 1975 (90%, except certain parts of western Canada). The CLI rating describes a class 5 soil with the major limitation being excess water. However, a number of drainage improvements have been made in the Blackwell Marsh area since the time of the CLI program, and the constraint of poor drainage has been largely overcome. The soil sampling methodology used in this study and the associated findings from the soil analysis were discussed with staff at OMAFRA. The investigation focused on providing an assessment of the soil characteristics in the Blackwell Marsh area and was not intended to examine the full scope of requirements for a CLI re-classification.

5.0 Agriculture Land Use Policy Context

5.1 Background

Lambton County has a two-tier planning system in which planning responsibilities are divided between the County and local municipalities. Under this system, the **Lambton County Official Plan** provides an overall County planning policy framework for the development of detailed local planning policies. The Lambton County Official Plan is a long range management plan which outlines County policy on a number of broad settlement and resource management issues of County or inter-municipal concern. The Plan provides strategies, goals and policies to guide public and private decision-making on economic, environmental, and social issues, as well as generally guiding the use of land in the County (Lambton County Official Plan. Chapter 1, Section 1.3).

The County Plan sets out County and inter-municipal interests, having regard for the **Provincial Policy Statement**. As noted in the County Plan “it is expected that detailed land use policies and designations will be enunciated through local municipal official plans” (Lambton County Official Plan. Chapter 1, Section 1.4). As a requirement of the Ontario Planning Act the official plans of the local municipalities must be in conformity with the County Plan (Lambton County Official Plan. Chapter 10, Section 10.4).

The **City of Sarnia Official Plan** recognizes that both the Province of Ontario and the County of Lambton have planning policies establishing the general planning policy context for growth and development at a Provincial and County scale and that more detailed policies are permitted to reflect local circumstances, and long term goals and aspirations of the City of Sarnia (Part 1, Section 1.3).

Additional details on the agricultural related content for the three planning documents are presented below.

5.2 Agriculture and the Provincial Policy Statement

The Provincial Policy Statement (PPS) provides policy direction and guidance on matters of provincial interest related to land use planning and development. This includes policies for protecting prime agricultural areas. These policies may be complemented by other provincial plans or by locally-generated policies regarding matters of municipal interest. All decisions affecting planning matters must be consistent with PPS policies (Part 1 and 2). The current PPS applies to all applications, matters and proceedings that began on or after March 1, 2005.¹³

The PPS links Ontario's long-term prosperity, environmental health, and social well-being to the protection of natural heritage, water, agricultural, mineral and cultural heritage and archaeological resources for their economic, environmental and social benefits (Part 5, Section 2).

¹³ Provincial Policy Statement website: www.mah.gov.on.ca/Page1485.aspx

With respect to agricultural resources, the PPS stipulates that prime agricultural areas shall be protected for long-term use for agriculture.¹⁴ Prime agricultural areas are areas where prime agricultural lands predominate.¹⁵ Within the prime agricultural areas specialty crop areas are given the highest priority for protection, followed by Classes 1, 2 and 3 soils, in this order of priority (Part 5, Section 2.3).¹⁶

The PPS allows for a wide range of agricultural uses in prime agricultural areas including the growing of crops, including nursery and horticultural crops; raising of livestock; raising of other animals for food, fur or fibre, including poultry and fish; aquaculture; apiaries; agro-forestry; maple syrup production; and associated on-farm buildings and structures, including accommodation for full-time farm labour when the size and nature of the operation requires additional employment. The PPS supports all types, sizes and intensities of agricultural uses and also allows for agriculture-related uses and related secondary uses (Part 5, Section 2.3.3).¹⁷

The PPS generally discourages the creation of lots in prime agricultural areas. The current PPS no longer allows severances that create new residential lots in prime agricultural areas. This includes farm retirement lots and lots for residential infilling. The one exception is lot creation for a residence surplus to a farming operation as a result of farm consolidation. In these cases, the planning authority must prohibit the creation of a new residence on any vacant remnant parcel of farmland created by the severance (Part 5, Section 2.3.4). The PPS sets minimum standards and planning authorities can create stricter standards unless they conflict with another PPS policy.

The removal of land from prime agricultural areas is only permitted for certain situations including expansions of settlement areas and limited non-residential uses with the

¹⁴ As defined in the PPS, prime agricultural area means areas where prime agricultural lands predominate. This includes: areas of prime agricultural lands and associated Canada Land Inventory Class 4-7 soils; and additional areas where there is a local concentration of farms which exhibit characteristics of ongoing agriculture. Prime agricultural areas may be identified by the Ontario Ministry of Agriculture and Food using evaluation procedures established by the Province as amended from time to time, or may also be identified through an alternative agricultural land evaluation system approved by the Province.

¹⁵ As defined in the PPS, prime agricultural land means land that includes specialty crop areas and/or Canada Land Inventory Classes 1, 2, and 3 soils.

¹⁶ As defined in the PPS, specialty crop area means 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.

¹⁷ As defined in the PPS, agriculture-related uses means those farm-related commercial and farm-related industrial uses that are small scale and directly related to the farm operation and are required in close proximity to the farm operation. As defined in the PPS, secondary uses: means uses secondary to the principal use of the property, including but not limited to, home occupations, home industries, and uses that produce value-added agricultural products from the farm operation on the property.

provision that the land does not comprise a specialty crop area, there are no reasonable alternatives which avoid prime agricultural areas; there are no reasonable alternatives on lower priority agricultural lands in prime agricultural areas; and there is demonstrated need (Part 5, Section 2.3.5).

5.3 Agriculture Related Goals and Policies in the Lambton County Official Plan

The current Lambton County Official Plan recognizes that the agriculture land base is important to the quality of life of the County and identifies the goal of providing for the wise use of this resource over the long term (Chapter 2, Section 2.1).¹⁸ The policies identified in support of this goal include the following actions:

- supporting existing senior government programs that provide an adequate and stable income for farmers and improve economic viability of the farming industry;
- promoting value added and food processing facilities on farm operations, and where it is not feasible to locate on the farm, facilitate location in a nearby settlement or centre;
- encouraging local municipalities to include provisions in their official plans to facilitate the establishment of farmers' markets and to promote fairs; and
- encouraging the creation of new farm units when both severed and retained parcels are viable farms, having regard for Provincial Policy (Chapter 2, Section 2.1).

The 'Rural Area' designation in the Official Plan includes all lands outside Urban Centres and Settlements and is characterized primarily by agriculture, natural areas, and clusters of development insufficient in size and variety of uses to warrant designation as a settlement area.¹⁹ The Plan directs local municipalities (e.g. City of Sarnia) to establish land use designations and development policies that will reflect the growth and settlement policies of the Lambton County Official Plan (Chapter 3, Section 3.2).

As outlined in the Lambton County Official Plan, the role of agriculture figures prominently in the development and growth of the County. One of the development strategies in the Official Plan is to ensure the preservation of agricultural lands by directing the majority of growth to urban areas of the County (Chapter 3). The Official Plan further specifies that development in Urban Centres, Settlements and the Rural Area will promote an efficient and compact land use pattern to minimize land consumption, control infrastructure costs, and limit non-farm growth pressure in Rural Areas (Chapter 3, Section 3.2). With respect to the extension of Urban Centre and Settlement boundaries, the Official Plan specifies that local municipalities must have regard to minimizing the loss of prime agricultural land and mineral aggregate extraction opportunities (Chapter 3, Section 3.6).

The Lambton County Official Plan recognizes that the agricultural industry makes an important contribution to the local economy and notes that most of the rural land in the

¹⁸ Lambton County Official Plan website: www.lambtononline.com/official_plan2

¹⁹ Appendix B provides a map of the Growth Strategy for Lambton County and identifies the rural areas.

County is comprised of prime farmland (Class 1, 2 and 3 soils as defined by the Canada Land Inventory).

The County Plan recognizes and distinguishes 'Provincially' significant specialty crop areas for their suitability, while locally significant resources are recognized for capability. The County features the Thedford Marsh in Bosanquet, a 'Provincially' significant specialty crop area with organic soils that are suitable for the production of fruits and vegetables (Chapter 4, Section 4.1).

The County Plan protects prime agricultural areas for the long-term future of agriculture. Within these areas, the Plan prioritizes agricultural land through the identification and designation of 'locally' significant agricultural resources and encourages the establishment of further policies for their protection, improvement and maintenance. Old glacial shorelines and sand deposits are identified for their ability to support the production of orchard crops. The Blackwell Marsh area reflects the former Lake Wawonash and its associated marsh system and is recognized as a 'locally significant specialty crop area' with organic soils capable of producing vegetable crops.

Given the relative scarcity of prime farmland in Ontario, the Official Plan emphasizes that policies should protect the land base from incompatible uses that tend to limit the flexibility and viability of farm operations over time (Chapter 4).

The Lambton County Official Plan contains several goals that support the continued viability of the local agricultural industry which includes farms, secondary farm uses, farm related businesses, and the rural communities (Chapter 4, Section 4.1). The policies identified in support of these goals are intended to protect, maintain and improve prime agricultural areas for the long-term future of agriculture and include the following actions:

- Ensuring that Rural/Agricultural Areas are designated in local municipal Official Plans and ensuring that primary land use activity in these areas will be agricultural uses.²⁰
- Encouraging local municipalities to designate locally significant speciality crop areas and establish policies for their protection, maintenance and improvement.²¹
- Supporting the 'Right to Farm' concept and giving priority to agricultural uses over other uses in the Rural/Agricultural Area.²²
- Encouraging on-farm diversification to provide farmers greater opportunity to obtain additional sources of income.²³

²⁰ Agricultural uses as defined in the Lambton County Official Plan include the growing of crops, including nursery and horticultural crops; raising of livestock and other animals; aquaculture; agro-forestry; maple syrup production; and associated on-farm buildings and structures including accessory farm dwellings.

²¹ The Lambton County Official Plan identifies the Blackwell Marsh area in the City of Sarnia as a locally significant specialty crop area with organic soils that are capable of supporting vegetable crops. However, as shown in the results from the recent soil investigation, organic soils no longer exist in the Blackwell Marsh area and the description of the area needs to be updated.

²² The County recognizes that normal farm practices create noise, dust and odours that are associated with livestock and heavy machinery and farm practices can be carried out at all times of day.

- Permitting commercial and industrial uses in the Rural/Agricultural Area which provide essential services to agriculture and require a location in proximity to farm operations.
- Encouraging farm practices that are sensitive to the natural heritage system (Chapter 4, Section 4.1).

The creation of residential lots in rural areas of Lambton County is generally discouraged and is only permitted in certain situations.²⁴ The Lambton County Official Plan specifies that a local municipality's official plan must have regard for Provincial Policy in connection with agricultural severances, and may be more restrictive in the types of consents permitted for the creation of residential lots in rural areas. The Official Plan also requires that all new non-farm lots be limited in size so that a minimum of land is taken out of agricultural production and be located on the least productive land where possible (Chapter 4, Section 4.2).

The Lambton County Official Plan also specifies that consents in Rural Areas may be permitted for certain purposes including the creation of rights-of-way or easements; to enlarge existing farm lots or to bring an existing non-farm lot up to a municipality's development standards; to consolidate farm holdings; to allow minor boundary adjustments; and to create farm holdings that are not less than 40 hectares (100 acres).

The Lambton County Official Plan also specifies that municipal Official Plans may provide for a smaller minimum farm size than 40 hectares (100 acres) provided that a study is carried out by the local municipality to demonstrate that such smaller farm lot size is prevalent among the farm lots within the local municipality. The smaller lot size must represent a viable farm lot, given the characteristics and trends in farming in the municipality or in that part of the municipality. The local municipality must be able to show evidence of support from the agricultural community for the smaller minimum farm lot size. Leasing of land should also be considered as an alternative to creating small farm parcels (Chapter 4, Section 4.2).

The Lambton County Official Plan identifies agriculture and value-added agriculture based products as one of the components of future economic growth that will contribute to the diversity of the County's economic base and enhance the County as a place to work, live, and visit (Chapter 5, Section 5.1). The Official Plan also identifies tourism including agri-tourism as an area to expand the local economy and supports the development of agri-tourism in rural areas that does not interfere with agricultural operations (Chapter 6, Section 6.1).

23 The County of Lambton identifies the following on-farm diversification uses: home occupations, home-industries and industrial and commercial uses that produce value-added agricultural products from the farm operation. Such uses are to be addressed in local official plans and zoning by-laws.

²⁴ Severances are permitted in the following situations: an existing farm dwelling is rendered surplus as a result of farm consolidation; residential infilling (Chapter 4, Section 4.2).

5.4 Agriculture Related Goals and Policies in the City of Sarnia Official Plan

The current City of Sarnia Official Plan recognizes that the City of Sarnia has significant agricultural areas within its municipal boundaries and it supports the development of a strong and diversified agricultural land base as one of its economic goals (Part 1, Section 1.5.4.2).²⁵ The Official Plan also specifically identifies agriculture and value-added agriculture based products as one of the economic activities it is supporting in the further development of its economic base (Part 5, Section 5.1).

With the exception of the area west of Modeland Road, the majority of the farmland parcels within the Study Area are currently designated as Rural Area under the City of Sarnia Official Plan. A large portion of the Study Area features a flood plain which is designated a One-Zone Policy Area and development in the area (e.g. buildings and structures) is largely prohibited (Part 5, Section 4.1). In the area west of Modeland Road the area is generally proposed as Urban Residential with some limited institutional and commercial development. The Study Area also features an Environmental Protection Area (Provincially Significant Wetland) and lands associated with the Sarnia Chris Hadfield Airport and some Light Industrial land.²⁶

The City of Sarnia Official Plan specifies that agricultural uses are the main permitted uses in areas designated as Rural Area and will be given the highest priority (Part 2, Section 2.2.1).²⁷ Non-agricultural uses are generally to be discouraged in the Rural Area and directed to appropriate urban areas to preserve agricultural land and to avoid conflicts between farm and non-farm land uses (Part 2, Section 2.2.1).

In general, the City of Sarnia Official Plan supports the provision of agricultural land parcels of sufficient size for long term agricultural use recognizing the need to maintain maximum flexibility for farm operators to engage in differing types and sizes of agricultural operations. The Official Plan specifies that the minimum lot size for agricultural uses will generally be 35 hectares (86 acres) in order to discourage the unwarranted fragmentation of farmland. However, the Official Plan also allows for the creation of a limited number of smaller farm parcels required for the type of agriculture proposed, such as specialty crop production.²⁸ The leasing of land is also encouraged as an alternative to creating small farm parcels (Part 2, Section 2.2.3).

²⁵ City of Sarnia Official Plan website: www.city.sarnia.on.ca/visit.asp?sectionid=364

²⁶ Sarnia Chris Hadfield Airport is situated entirely within the Study Area. Development in the area surrounding the airport is generally restricted (e.g. new residential development and other sensitive land uses are not permitted in areas near airports above the 30 Noise Exposure Forecast contour) (Part 5, Section 15). Appendix C, D and E present maps of the City Structure, Proposed Land Use, and Natural Heritage and Natural Hazard Areas.

²⁷ Agricultural uses as defined in the City of Sarnia Official Plan include the growing of crops, including nursery and horticultural crops; raising of animals for food, recreation, or fur, including poultry and fish; aquaculture; agro-forestry; maple syrup production; apiaries; and associated on-farm buildings and structures including accessory farm dwellings.

²⁸ Conditions for the creation of new agricultural lots include ensuring the severed and retained lots are of sufficient size for agricultural use; support an efficient farm unit and provide meaningful on-site farm employment; conform to the Zoning By-law (Part 2, Section 2.2.8).

As is the case with the Lambton County Official Plan, the City of Sarnia Official Plan supports the 'Right to Farm' concept (Part 2, Section 2.2.4), gives priority to agriculture as the primary long term land use in the Rural Area, and encourages farm practices that are sensitive to the natural heritage system (Part 2, Section 2.2.7).

The City of Sarnia Official Plan also encourages on-farm economic diversification as a means of contributing to the economy of the Rural Area. Uses that are secondary to the principal agricultural use of the property are permitted including home occupations, bed and breakfast establishments, and uses that produce value-added agricultural products from the farm operation on the property (Part 2, Section 2.2.2 and 2.2.9). Small scale farm related commercial and industrial uses that are required in close proximity to the farm operation are also permitted in the Rural Area (Part 2, Section 2.2.2 and 2.2.10).²⁹

The creation of residential lots in the Rural Area of the City of Sarnia is generally prohibited and is only permitted in certain situations (Part 6, Section 6.12.7).³⁰ The City of Sarnia Official Plan specifies that consents in the Rural Area may be permitted to create rights-of-way; to enlarge lots; to consolidate farm holdings; to allow minor lot line adjustments; to create lots for agri-related commercial and industrial uses; and to create Conservation and Environmental Protection Areas (Part 2, Section 2.2.17). The Official Plan also requires that all new non-farm lots be limited in size so that a minimum of land is taken out of agricultural uses and be located on the least productive land where possible (Part 2, Section 2.2.12).

The Blackwell Marsh area is identified in the County of Lambton Official Plan as a 'locally significant specialty crop area' with organic soils. While it is not designated as such in the City of Sarnia Official Plan, the resource east of Modeland Road is included in the existing Prime Agricultural Area. The soils investigation has shown that the organic soils have been depleted. The remaining high quality mineral soils contain higher levels of organic matter and a capability of supporting a broader range of field and vegetable crops than surrounding agricultural lands. The area's drainage network mitigates any production limitations and active agriculture is the predominant use.

Although the current Official Plans for the City of Sarnia and Lambton County do not include policies directed at renewable and alternative energy systems in rural areas, other Ontario municipalities are increasingly adopting energy policies such as the policies in Waterloo Region and the Municipality of Huron East (Appendix J).

²⁹ Examples of agricultural related commercial and industrial uses include, but are not limited to, grain dryers, feed mills, grain and seed storage facilities, agricultural products and produce processing facilities, bulk farm supply dealers, farm machinery sales and service, and livestock assembly points.

³⁰ Severances are permitted in the following situations: an existing farm dwelling is rendered surplus as a result of farm consolidation; residential infilling (Part 2, Section 2.2.11). NOTE: the Lambton County Official Plan and the City of Sarnia Official Plan policies are not fully consistent with the Provincial Policy Statement. For example, residential infilling is referred to in both documents, but as noted above the PPS no longer permits this. There are also some inconsistencies between Lambton County Official Plan and the City of Sarnia Official Plan policies such as policies for the Major Transportation. All types of Light Industrial land uses are permitted in the Major Transportation Designation/Zones, but some types should not be permitted (e.g. bingo halls, night clubs, restaurants, etc.).

6.0 Issues and Challenges for Agriculture in the Study Area

The community consultation process outlined in Section 1.1 of this report was used to identify the issues and challenges impacting agriculture in the Study Area and the wider city. While some of the challenges are beyond the control of the City of Sarnia, they collectively impact on farm operators and need to be considering when forming policies and strategies.

The consultation process revealed the following issues and challenges:

- Farm operations continue to face challenges in obtaining a sufficient price for their products to cover rising costs of production. Farmers are increasingly working more hours off the farm to supplement their farm income.
- The farm population in general is aging but the trend is more pronounced in the City of Sarnia where the average farm operator age is 57 years compared to 53 years for the province.
- A number of factors are turning youth away from considering a career in agriculture including high start-up costs (e.g. land, equipment, etc.), limited land tenancy options, and land use constraints. The land in the area is known for being very productive and the availability of farmland for rent is very limited.
- Uncertainty about the future development goal for the area is serving to drive speculation about land values in the area and may be influencing landowners to put off decisions about selling the land and enabling the transition to the next generation of farmers. This has been reinforced by recent development decisions by the City of Sarnia which have seen agricultural lands converted to non agricultural uses. Landowners tend to prefer to rent their land from year to year in the City of Sarnia rather than entering long term lease agreements. Again, this is partly linked to the uncertainty of the development goals/plans of the City of Sarnia which could be influencing farm operators to commit to short term production activities (e.g. cash crops) with minimal or no capital investment put towards more permanent facilities (e.g. livestock buildings, produce packing/storage facilities, etc.).
- The 'Specialty Crop Area' designation that the County of Lambton has applied to the Blackwell Marsh area appears to be no longer appropriate given that the area no longer possesses organic soils. The continued use of the specialty crop area designation could result in planners applying policies (e.g. agricultural uses and secondary uses) to the area that are too restrictive given the actual production potential of the area.
- Market garden farm operations in the rural areas of the City are declining despite being in close proximity to a major urban marketplace. Market garden type operations also face challenges in finding and retaining reliable local employees.

- Consumer preferences are changing and producers need to be more responsive in understanding and meeting consumer interests and expectations for food options such as the growing interest in fresh/local foods and non-traditional fruits and vegetables.
- Farmers face challenges in driving and transporting their farm equipment along increasingly congested roads in the area. The width of the shoulder on roads, overpasses, etc. in the area is generally insufficient to handle larger pieces of farm equipment and present safety issues when trying to share the road with others. The urban population and commuters need to be better informed about the safety issues when sharing the road with farm equipment.³¹
- Maintenance of the rural drainage system is crucial to farm viability in the area as the area has a high water table and limited natural drainage which necessitates a well maintained network of municipal drains and ditches. There are also different drainage needs for different agricultural land uses which the City needs to be aware of.
- Rural areas (roadsides, woodlots, etc.) are being used for dumping waste. Beyond their visual irritation these illegal dumps represent a potential health threat as the trash can affect stream water quality via rain water runoff. Even when dumps are not located near flowing water, the ground water can become contaminated by leachates from an uncontrolled waste heap. Additionally, the appearance of a pile of trash on the roadside can encourage people to add to it rather than use proper disposal methods.
- Agricultural related issues and concerns are not well understood by urban dwellers and there is a need for greater education and acceptance of normal farm practices that some residents view as nuisance (e.g. odour, dust, noise, etc.).
- There is a need for greater education on the role of the working countryside and its economic, social and environmental value. This goes hand in hand with initiating effective/tougher law enforcement (e.g. controlling unsightly and unhealthy illegal dumps; controlling trespassing on farm property).
- There are concerns that the rural voice is not well represented in local government and that rural issues are not being given the attention they deserve.
- Farmers and landowners are concerned about the potential effect of farmland preservation policies on land values and possible limitations on the continuation

³¹ As a safety issue, this also presents opportunities for farm equipment manufacturers to design more compact equipment and for farm operators to become better informed about hazards on rural roadways and how to make road travel safer for themselves and others. Safe driving tips for farm equipment operators are presented in the Farm Safety Association brochure "The Safe Movement of Agricultural Equipment on the Roadway". Website: www.farmsafety.ca/manuals/manual_safemovement.pdf

of existing agricultural uses. Many farm operators hold the view that agriculture is already a highly regulated sector and government officials need to be sensitive about introducing additional regulations that could potentially drive farmers out of the area or dissuade prospective farmers from coming to the area.

- Policies and regulations need to be sensitive to the different needs of the urban and farming communities. For example, urban based pest control regulations and restrictions are not adequate for the farming community which has to deal with crop damage issues resulting from geese and deer. Additionally, garbage pick-up regulations and restrictions used in the urban setting are not adequate for rural residents. Farm operators in the area also have concerns about the application of taxes in rural areas for services that are used minimally or not at all such as public transit while in other instances the tax represents a significant cost as in the case of water utilities.
- Agricultural related businesses are crucial for supporting a viable agricultural sector (e.g. crop supplies; fuel; farm equipment and repairs; accounting, financial, and legal services, etc.). The number and type of agri-related businesses in the City of Sarnia is limited and farmers in the area are increasingly relying on farm inputs purchased from outside the area.
- Although the City Planning Department refers to the Study Area as the Blackwell Marsh area the area is also known to area residents as the Lake Wawanosh area. Without the benefit of knowing the historical context, both of these names are potentially confusing and they are misleading in terms of conveying the current and potential agricultural activity in the area.

7.0 Agricultural Opportunities for the Study Area and the City of Sarnia

The community consultation process outlined in Section 1.1 of this report along with the results from the soils investigation was used to identify strengths and opportunities for long term agriculture in the Study Area and the wider city. In some cases an opportunity may also represent a challenge and in some cases the response may or may not involve the local government as a leader or partner.

The consultation process revealed the following opportunities:

- The Blackwell soils successfully support a variety of crops including common field crops such as wheat, soybeans and corn.
- The Blackwell Marsh area is nestled in one of the most agriculturally productive regions of Ontario and farms in the area have easy access to the business and service sector in the City of Sarnia and agri-related businesses in the surrounding rural communities.
- The City of Sarnia and the County of Lambton have a combined population of almost 130,000 which represents a substantial market for local agricultural products. Local producers are currently using direct farm retailing and farmers' markets as approaches to link with local consumers. A number of local organizations are working to enhance local food links between producers and consumers (e.g. the County of Lambton Community Health Services Department has identified potential key partners in establishing a Local Food Network / Strategy for Lambton County which includes the Lambton County Federation of Agriculture, the City of Sarnia Planning Department, the County of Lambton Community Health Services Department, the Inn of the Good Shepherd (food bank/shelter), and others.³²
- The Sarnia Farmers' Market was established in 1953 and it remains a vital component of the City's south end. The Sarnia Farmers' Market is a co-operative of local food producers and features more than 25 vendors (some of whom have had a stall at the market for more than 30 years) selling fruits and vegetables, meats, beverages, fish, arts and crafts, fresh flowers, honey, cheeses and baked goods. Recent studies on farmers' markets indicate that they are experiencing a resurgence of popularity in Ontario and are playing an important role in the

³² The County of Lambton Community Health Services Department led the way in establishing the Sarnia-Lambton Food Coalition which began in March 2010 as a small working group that recognized that connections among all sectors of the local food system are needed to effectively address local food issues. The working group held an open community meeting in June 2010 to recruit additional members. The inaugural meeting of the coalition was held in July 2010. The coalition promotes a sustainable food system that boosts the nutritional, environmental, economic, and social health of Sarnia-Lambton. The coalition hosted a Food Summit for the general public in November 2010 to identify the food issues that matter to residents across Sarnia-Lambton.

marketing of local agricultural products and generating farm income and supporting farm jobs.³³

- The Blackwell Marsh area sits adjacent Highway 402 which is a major transportation corridor that features a border crossing to the U.S.A. The City of Sarnia also features port facilities and an airport which facilitate the movement of goods/services.
- The City of Sarnia has a growing bioeconomy. The University of Western Ontario's Sarnia-Lambton Research Park is a joint venture which includes the City of Sarnia and the County of Lambton. The Research Park focuses on the development of alternative energy technologies and industrial bio-products (e.g. bioplastics, biocomposites). The biofuel sector is also growing in the area. The recent expansion at the Suncor ethanol plant in St. Clair Township is providing local farmers with greater opportunities to grow feedstock for the local industry and for farmers to utilize the by-products that are produced in the process (e.g. high energy feed for livestock).
- Small scale farming is increasingly being recognized as a viable option when combined with proper business and production management. The Blackwell Marsh area features a wide variety of farmland parcel sizes including many parcels with less than 20 acres which could potentially be used in intensive small scale farming activities with direct marketing linkages to consumers (e.g. market gardening and Community Supported Agriculture).
- Small scale farming in the Blackwell Marsh area could be promoted and further developed as a research and development initiative in partnership with other levels of government, established research institutions, and local organizations to

³³ A 2008 study completed by Farmers' Markets Ontario (FMO) demonstrates the significant economic and social benefits that markets provide to communities. In 2008, the total estimated economic impact of Ontario farmers markets was at least \$641 million with sales at Ontario farmers' markets growing by just over 7% on an annual basis. Average in-market spending by customers at Ontario farmers' markets in 2008 amounted to \$27.67 per visit; ranging from \$21.99 at small markets to \$33.94 at large markets (small markets were defined in the study as markets with fewer than 20 vendors while large markets have 40 or more vendors). Farmers' markets also play an important role in supporting and generating local employment. The 2008 FMO study determined that 55% of vendors reported the creation of up to 5 jobs as a result of their participation at the market (e.g. jobs linked to preparing products for the market, assisting the farmer/vendor at the market). Much of the recent growth of farmers' markets can be attributed to consumer interest in fresh, in-season, locally produced foods. As found in the 2008 FMO study, close to 60% of Ontario market customers reported that fresh produce was their primary reason for visiting the market while almost 70% of customers reported that buying directly from a local farmer was extremely important to them. The 2008 FMO study also involved a survey of shoppers not using farmers' markets and determined that the key factors limiting their use of markets is convenience (e.g. location and/or time of operation) and lack of awareness issues. The FMO study concludes that "future growth (of the farmers' market) sector will require engaging nonusers through increased awareness of benefits, locations, and product selection. Trial usage among non-users will be dependent on making local market hours and locations more accessible to time challenged, health conscious consumers." (Experience Renewal Solutions Inc., January 2009).

explore and share best practices including energy generation and conservation practices.

- Food consumption and agricultural production patterns in general are changing in response to a variety of factors including an ethnically diverse population, an aging population, rising incomes, and greater consumer awareness of the health benefits of vegetables and fruit. Consumer interest in organic agriculture and local food production is also increasing as a result of growing concerns about human and ecosystem health, food security and challenges related to energy availability.³⁴ Farm operators in the Blackwell Marsh area could become a key source of locally produced crops that respond to the interests and needs of local consumers.
- The Sarnia-Lambton Economic Partnership (SLEP) recognizes agriculture as a major business activity and the importance of preserving agricultural land and envisions an agricultural sector featuring a mix of small and large farms operated by a growing number of young farmers.³⁵ SLEP is currently overseeing the development of a Food Business Incubator Program as part of a long term strategy to promote economic development through the food sector. The City of Sarnia and the County of Lambton have a number of potential food processing sites and existing facilities that could be retrofitted for food processing. The Blackwell Marsh area could be a source of specialized crops that are used as ingredients by food businesses.

The above issues, challenges and opportunities were taken into consideration in developing the principles and supporting strategy recommendations presented in Section 8 of this report with the aim of maintaining and improving the agricultural area.

³⁴ At the 2010 Community Summit (April 17) sponsored by the City Sarnia, County of Lambton and Community Round Table, participants from across the Sarnia-Lambton area were asked to identify desired future directions for the community. Agriculture was identified as an important economic sector for the area and local agricultural production was recognized for contributing to food security and its potential contribution to sustainability through linkages to bio-fuel and the production and consumption of local food.

³⁵ The Sarnia-Lambton Economic Partnership (SLEP) is a private and public sector partnership formed as a community based effort to ensure the vitality of Sarnia-Lambton's economy. Website: www.sarnialambton.on.ca

8.0 Key Conditions and Factors Necessary to Support Sustainable and Productive Agricultural Activities in the Study Area and the Near Urban Environment

The City of Sarnia can assist in supporting sustainable agricultural activity in the Blackwell Marsh area by adopting a comprehensive approach for protecting the agricultural resource and promoting agricultural uses. The draft principles and actions outlined below are presented to the City of Sarnia for consideration. They are intended to assist the City of Sarnia ensuring the long term success of the agricultural community.

8.1 Principles

It is recommended that the following principles be adopted by the City of Sarnia to encourage and optimize agriculture in the Blackwell Marsh area:

1. Achieving a sustainable food system requires the integration of environmental, economic, social and cultural objectives and genuine community engagement.³⁶
2. Although the Blackwell Marsh area no longer contains organic soils it remains a priority agricultural area in the City of Sarnia given its close proximity to the City and the presence of soils that have greater agricultural potential due to better soil physical, biological and chemical properties. The primary land use activity in the Blackwell Marsh area will be agricultural uses as defined in the City of Sarnia Official Plan.
3. Agricultural productivity in the Blackwell Marsh area depends on the continued maintenance of the established system of drains and ditches and the use of best farm management practices.
4. The Blackwell Marsh area currently features a variety of farm parcel sizes (e.g. <10 acres up to 100 acres +) and small and large farms will continue to be supported in the area. Planning for and supporting small and large farms is necessary given the variation in agricultural production types, commodity types, and farmer and consumer interests.
5. Agricultural sustainability in the Blackwell Marsh area is dependent on maintaining infrastructure linkages that allow for the efficient movement of farm vehicles and products within the area and to/from the wider working countryside, rural communities, and urban centres.
6. On-farm diversification in the Blackwell Marsh area will be supported as a means to provide farmers greater opportunity to obtain additional sources of income.

³⁶ "Sustainability" or "Sustainable Development" has been defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland Commission, 1987).

7. The 'Right to Farm' concept will be supported in the Blackwell Marsh area and farmers will be provided with the necessary support, services and infrastructure that are required for agricultural viability.
8. The City of Sarnia will consider the food production, distribution, consumption and recycling system holistically with the aim of becoming a leader in environmentally sustainable, economically viable local food systems. The City will develop and support policies and programs that support local food production and processing and increase food security and provide a healthy local food supply.
9. Decision-making will be coordinated in a consultative manner with local agricultural interests and will consider all potential impacts on agricultural viability.
10. Residents of the City of Sarnia will be encouraged to learn more about agriculture in the region and to support locally grown agricultural products.
11. The City of Sarnia will lead by example by ensuring that it maintains strong support for any agricultural related policies and strategies it adopts and abides by the conditions it establishes to maintain the trust of the farming community.

8.2 Recommended Actions

Municipal policies and strategies in conjunction with other supports are needed in order to achieve a sustainable and successful agricultural sector in the Blackwell Marsh area and the City of Sarnia in general. The City of Sarnia can play a direct role in some initiatives and an indirect/ supporting role in others. The following recommended actions are directed at enhancing existing official plan policies.

Farm Viability and Economic Development

- Permit a full range of primary agricultural uses, farm-related uses and secondary uses to support the economic viability of local farms.³⁷
- When considering lot creation for agricultural purposes, particularly the creation of small lots, the City of Sarnia must be assured that the proposed lot are to be used primarily for agricultural purposes and not developed for residential uses.
- Implement policies and supports to help reclaim dormant land in the area for agricultural production.
- Support the ability of local farmers to develop agricultural value added activities in agricultural areas and to facilitate the further development of a diversified, profitable and sustainable agricultural industry in the City of Sarnia.
- Support food production and research activities for local consumption including direct marketing by local farmers (e.g. farmers' markets, farm-gate sales, local food outlets). Designate direct marketing and food processing as a strategic industry.
- Support the maintenance of farmers' markets which have become important community institutions enabling urban residents to socialize with farmers and learn about what goes into producing our food supply.

³⁷ The current Official Plan for the City of Sarnia identifies the following permitted uses in areas designated as Rural Area:

- Agricultural uses include the growing of crops, including nursery and horticultural crops; raising of animals for food, recreation, or fur, including poultry and fish; aquaculture; agro-forestry; maple syrup production; apiaries; and associated on-farm buildings and structures including accessory farm dwellings.
- Farm-related uses include but are not limited to, grain dryers, feed mills, grain and seed storage facilities, agricultural products and produce processing facilities, bulk farm supply dealers, farm machinery sales and service, and livestock assembly points.
- Secondary uses may include home occupations, bed and breakfast, and uses that produce value-added agricultural products from the farm operation on the property.

- Support the establishment of year-round food storage facilities to facilitate fresh distribution of food and reduce reliance on external food suppliers (e.g. Toronto food terminal).
- Explore options for supporting small scale farming on Rural Residential lots.³⁸
- Establish a name for the Blackwell Marsh area for marketing and education purposes that conveys its actual agricultural potential.
- Develop and implement incentives/supports to help public institutions (e.g. schools, hospitals, government departments) and private food outlets (e.g. grocery stores and restaurants) source locally produced foods.
- Support agri-tourism activities that thrive in near urban environments.
- Assist efforts to help local farmers diversify their products and produce and market the products desired by consumers (e.g. organic, non-traditional fruits and vegetables, speciality products, etc.).
- Assist efforts to help young and beginning farmers transition into farming.³⁹

³⁸ The definition of what constitutes a 'small farm' varies but in Canada a small farm is generally defined as having annual sales of up to \$50,000. The Ministry of Agriculture, Food and Fisheries in British Columbia defines small scale farming as annual sales under \$50,000 with a lot size under 10 acres (2000). Most small farms in Canada are located within a one hour commute of urban centres as the land closer to cities is often divided into smaller parcels and the urban economic hub offers off-farm employment opportunities (Farm Credit Canada, March/April 2010). Small farms possess the unique potential to produce not only food stuffs, but a variety of economic, social and environmental goods:

- Small farms are highly adaptable and can respond to consumer interests in specialty products.
- Small farms often optimize their small landholdings with a variety of crops farmed in rotation which promotes biological diversity and ecological resilience.
- Small farms usually market their products direct to the consumer which helps in building social connections between rural and urban people and also encourages accountability at the community level.

The Blackwell Marsh area features a number of small residential lots that have sufficient area to support small scale agriculture (e.g. market garden, greenhouse). Some municipalities in Ontario also identify 'limited livestock use' as an accessory use. See Appendix G for an example of an Agricultural Small Holding Zone By-Law from the Municipality of Huron East with conditions for limited scale livestock uses for lot sizes up to 4 hectares (approx. 9.9 acres).

³⁹ Young and beginning farmers are key to the revitalization of the agricultural sector but face a range of challenges including access to capital and access to information about tools, programs and services available to beginning farmers. The City of Sarnia can help to enable beginning farmers by informing them about federal funding programs that provide low interest loans for new/young farmers (including immigrant farmers); by informing landowners about different land tenure options and organizations that match landowners with young/beginning farmers; and by supporting farm mentoring programs by which soon to retire farmers train beginning farmers.

- Assist efforts to help existing farmers find workers.⁴⁰
- Collaborate/partner with provincial/federal government agencies, agricultural organizations and educational institutions to ensure that relevant training, technical assistance, and capital for farms and food processing and distribution operations is made available.
- Support the development of agri-business incubator facilities (e.g. food business test kitchens and processing facilities).
- Support biotechnology research initiatives in the area.
- Apply reduced taxes for land with long term lease arrangements as means of persuading property owners to offer longer term leases which in turn will provide greater certainty to producers farming the land and an incentive for producers to use best practices to maintain the productivity of the land.
- In keeping with the broader goal of promoting agricultural uses as the primary long-term use of land in the Rural Area and recognizing the importance of on-farm diversification as a means of contributing to the economy of the Rural Area, farm related commercial uses should be permitted with the following qualifications: the use is small scale; the use is directly related to the farm operation and is required in close proximity to farms, the amount of land devoted to the use/activity includes only the minimum necessary to support the activity and its servicing requirements. The farm-related commercial use would be subject to site plan control. Non-agricultural development should be directed to locate in settlement areas
- Provide relevant and timely information and resources on the City of Sarnia website.

⁴⁰ For example, the City of Sarnia could work in partnership with farm stakeholder groups and education and employment service groups to develop a summer program for youth that focuses specifically on the workforce needs of the agricultural sector. The program could be designed to complement the OMAFRA Rural Summer Job Service Program which provides financial assistance to employers creating jobs for students between the ages of 14 and 30 (Website: www.omafra.gov.on.ca/english/rural/rsj/index.htm).

- Strengthen and diversify the local agricultural sector through local and regional food system planning.⁴¹
 - Support the development of a comprehensive food planning process at the City and County level. Collaborate with diverse stakeholder groups (e.g. agriculture, health/nutrition, environmental, social justice, government, etc.) to identify and achieve community food objectives.
 - Seek opportunities to work collaboratively with Aamjiwnaang First Nation as part of a comprehensive food planning process.⁴²
 - Establish a Food Policy Council to oversee the development and implementation of a Local Food Charter.⁴³
 - Establish municipal requirements and targets for supporting local farmers (e.g. mandating the purchase of local foods for department events at which food is served; encouraging local organizations/institutions to procure foods from local producers).

⁴¹ The full value of food production to community health and well being is often overlooked in local planning and policy development. However, municipalities and community organizations are increasingly supporting food system planning as a means of enhancing economic vitality, public health, ecological sustainability, and social equity. Local food system planning is also becoming more relevant to municipalities as a food security issue due to a combination of factors including climate changes, increasing fuel costs and water scarcity. The food system consists of all the interconnected activities that get food from the farm to the consumer including production, processing, distribution, consumption and the management of wastes and associated processes.

⁴² This could potentially include a variety of activities such as supporting locally based efforts to identify challenges and needs of members of Aamjiwnaang First Nation in consuming healthful diets; supporting efforts to identify and document Aboriginal food systems that have been degraded or are threatened; supporting efforts to restore and/or protect Aboriginal food systems; supporting efforts to develop a 'First Foods' sector. First Foods are generally defined as food products that are produced by First Nations people; are naturally grown; are prepared with methods consistent with First Nations cultural, medicinal, and spiritual knowledge; are produced by practicing traditional ecological principles of sustainable harvest; are produced with traditional botanicals and promote traditional benefits and uses; and are targeted for local markets (for additional details on First Food opportunities see the report, "Carving a Niche for Aboriginal Foods in 2010" commissioned by the First Nations Agricultural Association. Website: www.fnala.com/docs/REPORT-FNAA-PRODUCTS.pdf).

⁴³ Local Food Charters represent a mechanism that some municipalities are using to support the development of a sustainable local food system. A Food Charter defines and summarizes important community food values and can be used to guide a community's food policy. A Food Charter is developed in consultation with community and food sector stakeholders and touches on all components of the food system, from producers to consumers, and emphasizes the health of both the environment and local economies. Once adopted by municipal council the food charter becomes a public document to guide decision making. A Local Food Charter could be developed and adopted by the City of Sarnia to address a variety of issues including food production, distribution, food retail access, population health, waste management, environmental integrity, and economic development. The City of Sarnia could also work with the County of Lambton to determine if a joint Food Charter would work or if a separate Food Charter would be more appropriate. Examples of Food Charters for Thunder Bay, Sudbury and Saskatoon are presented in Appendix H, I and J.

- Support the creation of marketing networks to bring together farmers, processors and purchasers of locally grown and produced foods.
- Support the establishment of a Local Food Coordinator that can provide research support for city staff and connect to local research institutions. The Coordinator could support the establishment of marketing networks, organize local food promotion campaigns, and investigate and promote local food partnerships with neighbouring municipalities and counties.
- Support studies that examine the economic and social impact of agriculture and local food production as well as food distribution and marketing activities to gain a better understanding of the economic impact and future potential of local and regional agriculture, food processing, food wholesaling and retailing, and food waste management activities.⁴⁴
- Undertake routine assessments of City/County food issues incorporating broad public consultation in the process. Integrate recommendations resulting from community consultation and City planning into economic development plans, transportation plans, health service plans, environmental plans, etc.
- The City of Sarnia should establish an Agricultural Advisory Committee (AAC) to advise City Council on matters affecting agriculture in the City. Some of the common purposes of AACs in other municipalities include providing advice on proposed or pursued agricultural and rural policies (including advice on proposed bylaw and official plan amendments), mediating complaints related to agricultural practices, and recommending studies necessary to help resolve agricultural problems and/or improve agricultural conditions. AACs can also serve to provide advice on raising agricultural awareness and assist with the development of agricultural/rural development strategies (e.g. agricultural economic strategies, local food system planning).⁴⁵

⁴⁴ For example, an agricultural economic impact study can determine the economic contribution of agriculture to the local economy (e.g. on-farm related sales and jobs) and its multiplier effect (e.g. sales and jobs generated beyond the farm gate). A food flow study can assess the degree to which locally produced foods make their way to local consumers.

⁴⁵ The farming and rural voice is increasingly missing in urban-dominated municipal councils and a number of municipalities in Ontario (e.g. Niagara Region, Halton Region, Hamilton, Ottawa) have established agricultural advisory committees to receive input and advice on agricultural and rural matters. It is important to note that the County of Lambton has an existing Agricultural Advisory Committee (CLAAC) and the scope and purpose of the Lambton AAC should be reviewed to assess how a Sarnia focused AAC could complement the activities of the Lambton AAC and respond to the specific needs and interests of the City of Sarnia. For example, the membership of the Sarnia AAC might be expanded to include representatives from the health, education and social services sectors; the food retail and wholesale sectors: the food processing sector, the City of Sarnia planning department, and other organizations. Appendix L provides a number of relevant documents/resources that can serve as a template for developing a Sarnia AAC.

Services and Infrastructure

- Review and designate farm vehicle travel routes in consultation with local farm operators. Use recognizable signage to endorse these routes for farm vehicles.
- Ensure that municipal roads and shoulders are sufficiently wide enough to accommodate farm vehicles and equipment.
- Establish a regular drainage and ditch cleaning schedule (e.g. 4 year cycle) to ensure that the drains and ditches are properly maintained to facilitate agricultural productivity in the area. Ensure that drainage improvements are made based on consultation with local farm operators.
- Assess the potential for serving the irrigation infrastructure needs of the agricultural sector through the same infrastructure it uses for general drainage.
- Ensure that servicing and infrastructure projects are delivered according to specified performance standards and do not interfere with normal farm practices.
- Ensure that drainage, servicing and infrastructure changes are considered in a comprehensive manner so that the quality of air, land and water is maintained for agricultural viability.
- Enhance policies to better enforce policing and fines to address trespassing and illegal dumping in agricultural areas.
- Support the development of plans for establishing local food supplies and related activities to prepare for emergencies.⁴⁶ This could include assessing the potential food needs of the City and surrounding area during different types of emergencies and the capacity of local and regional food sources and distribution systems. Once the current food needs and capacity is determined, the City could collaborate with relevant government department/agencies, private stakeholder groups and community organizations to develop plans to establish adequate local and regional food reserves for emergencies (as well as related communications and distribution logistics) and to restore food system integrity following the emergency.

⁴⁶ The City of Sarnia Emergency Management Response Plan (November 2004) identifies 25 'likely' risks in the City of Sarnia for which a coordinated emergency response might be required. This includes natural hazards (e.g. extreme heat/cold, floods, ice/sleet storms, snowstorms / blizzards, tornadoes, windstorms), technological events (e.g. hydro failures, fuel failures, petroleum/chemical plant emergencies), and human events (e.g. civil disorder, terrorism) (pg. 10-11). The term 'likely' means that the hazard has occurred in recent memory and is likely to occur again. City of Sarnia Emergency Management Response Plan website: www.city.sarnia.on.ca/pdf/CityEmergencyPlan.pdf

Environment

- Support food system activities that minimize energy use and waste and encourage the use of local and renewable / alternative energy resources.⁴⁷
- Support activities to divert food waste from landfills (e.g. recycling food wastes through composting and bio-fuel development).
- Support strategies and relevant organizations that promote the increased adoption of water and soil conservation practices in agriculture.⁴⁸

Community Health and Social Equity

- Support strategies to help facilitate increased household demand and access to better quality and more nutritious foods.⁴⁹ The City of Sarnia should also seek opportunities to work collaboratively with Aamjiwnaang First Nation to share ideas.

⁴⁷ Municipalities are increasingly recognizing the economic and environmental benefits of local renewable and alternative energy sources as well as energy conservation. Some of the policies being adopted by Ontario municipalities include encouraging innovative farm building designs which offer energy efficiency, supporting energy conservation research projects, and permitting on-farm alternative and/or renewable energy systems with conditions on the scale of the energy systems (see Appendix K for examples renewable / alternative energy policies for Waterloo Region and the Municipality of Huron East in Huron County). The following publication also provides details specific wind energy zoning: Small Wind Siting and Zoning Study – Development of Siting Guidelines and a Model Zoning By-Law for Small Wind Turbines (Website: www.smallwindenergy.ca/downloads/Small_Wind_Siting_Guidelines.pdf).

⁴⁸ For example, in the Sarnia area the St. Clair Conservation Authority provides information on best farm management practices and grant programs that help support the implementation of these practices. The Lambton County affiliate of the Ontario Soil and Crop Improvement Association provides information and facilitates training opportunities on best farm management practices as well as information on grant programs supported by provincial and federal governments. St. Clair Conservation Authority website: www.scrca.on.ca/HW_BMPs.htm

⁴⁹ Recent results released by the County of Lambton Community Health Services Department indicate that low-income residents in Lambton County have trouble paying for food after housing and other fixed costs are paid. In 2008-09, 8% of Sarnia-Lambton residents experienced some degree of food insecurity - worrying about having enough food, running short on food, or sacrificing the quality of food (Lambton Community Health Services Department, Media Release – June 10, 2010). Furthermore, Sarnia-Lambton residents in general are not eating enough fruits and vegetables to maintain good health (County of Lambton Community Health Services Department, August 2009). According to the 2008 Canadian Community Health Survey, Lambton residents fall well below the provincial baseline in terms of fruit and vegetable consumption, with only 35.7% of Lambton residents eating fruits or vegetables 5 times or more per day, compared with 40.5% for the province as a whole. The County of Lambton Community Health Services Department is involved in a number of food related community health initiatives including the Good Food Box Program, Student Nutrition Programs, and the Peer Nutrition Program. County of Lambton Community Health Services Department website: www.lambtonhealth.on.ca/resources/index.asp

Public Awareness, Education and Communication

- Develop and implement an information program to increase public awareness and commitment for agriculture in consultation with local agricultural organizations.
- Use different communication and education techniques to increase public awareness about the importance and benefits of agriculture in the City and surrounding area. Incorporate announcements about local /regional agricultural related activities and events in City advertisements and publications and on the City website and become an active sponsor of agricultural related events.
- Encourage residents and tourists to buy fresh and value added farm products from local producers.⁵⁰ Support the development and distribution of food resource guides that identify organizations and businesses that are involved in local and regional food production, processing, and retailing to better educate the public and build links between local producers and local consumers.
- Support the maintenance of farmers' markets which have become important community institutions enabling urban residents to socialize with farmers and learn about what goes into producing our food supply.
- Develop and implement an information/education program for rural motorists on sharing the road with farm equipment.⁵¹

⁵⁰ Municipalities are increasingly taking an active role in promoting local food and farm product options along with local agri-tourism/entertainment and agri-education opportunities. Information and resources on local food and agri-tourism opportunities are available through various websites but this makes it challenging when trying to look for specific information, especially when the information is given limited exposure and/or directed at tourists rather than the local population. For example, the Lambton Federation of Agriculture in partnership with other organizations and municipal governments has produced a website and map (Locally Lambton website: <http://locallylambton.com/index.htm>) featuring local farm food/product and agri-tourism options in the County of Lambton including the City of Sarnia. At present there is no promotion of local food options on the City of Sarnia website (i.e. there is no direct promotion of local food opportunities and there is no link to relevant local food organizations such as the Locally Lambton site or local farmers' markets). Information on specialty farms located in Lambton County is also available on the Tourism Sarnia-Lambton website (www.tourismsarnialambton.com/main/ns/5/doc/279). In order to facilitate greater and easier access to this information the City of Sarnia should develop and promote a centralized electronic information portal where all of the information can be brought together along with linkages to relevant resources and organizations.

⁵¹ Driving tips for rural motorists are presented in the Farm Safety Association brochure "The Safe Movement of Agricultural Equipment on the Roadway". Website: www.farmsafety.ca/manuals/manual_safemovement.pdf

9.0 Next Steps in the Study

In the next phase of this study the preliminary recommendations will serve as the background material to be used in a community forum to refine and finalize a set of principles and strategies that will be recommended for incorporation into the Official Plan by formal amendment under the Planning Act and economic development strategies with the aim of protecting, maintaining and improving the agricultural resource area.

References

British Columbia Ministry of Agriculture, Food and Fisheries. 2000. Small Scale Farming in the South Cowichan Valley.

Brundtland Commission, 1987, Our Common Future: World Commission on Environment and Development. New York, Oxford University Press.

Corporation of the City of Sarnia. January 2001. Official Plan of the City of Sarnia.

Corporation of the City of Sarnia. November 2004. Emergency Management Response Plan.

Corporation of the City of Sarnia. 2008. City of Sarnia Corporate Strategic Plan.

County of Lambton. January 1998. County of Lambton Official Plan. January 1998. Planning & Development Services Department.

Edginton, Simone. August 2009. Community Nutrition in Action – How Does Lambton Measure Up? County of Lambton - Community Health Services Department.

Edginton, Simone. June 10, 2010. Low Income Families Cannot Afford Basic Healthy Food. Media Release. County of Lambton - Community Health Services Department.

eFormative Options & Entegrity Wind Systems Inc. September 2006. Small Wind Siting and Zoning Study – Development of Siting Guidelines and a Model Zoning By-Law for Small Wind Turbines. Canadian Wind Energy Association.

Experience Renewal Solutions Inc. January 2009. Farmers' Markets Ontario Impact Study 2009 Report.

Feenstra, G.W. 1997. Local food systems and sustainable communities. American Journal of Alternative Agriculture. Volume 12, No. 1, pp.28-36.

Harry Cummings and Associates. July 2010. Overview of the Agriculture Sector in the City of Sarnia and Lambton County, 1986 to 2006.

Matthews, B.C., Richards, N.R. and Wicklund, R.E. January 1957. Soil Survey of Lambton County. Ontario Agricultural College. Guelph Ontario.

McClinton, Lorne. March/April 2010. Your money - Full-time or part-time farming? Farm Credit Canada – AgriSuccess.

Municipality of Huron East. Municipality of Huron East Zoning By-law 52-2006 September 19, 2006 - Consolidated version with recent updates as of December 2009. County of Huron Planning and Development Department and Municipality of Huron East.

O'Neil Marketing and Consulting. 2009. Carving a Niche for Aboriginal Food in 2010.

Ontario Ministry of Municipal Affairs and Housing. March 2005. Provincial Policy Statement.

Regional Municipality of Waterloo. June 16, 2009. Regional Official Plan

Rowland, Michael. April 17, 2010. Our Vision... Our Community - Community Summit 2010. Developing Future Directions for Sarnia-Lambton - Summary Notes. The Randolph Group.

Sarnia-Lambton Economic Partnership. Powering a Sustainable World. Strategic Goals and How We'll Reach Them: A Plan to 2010.

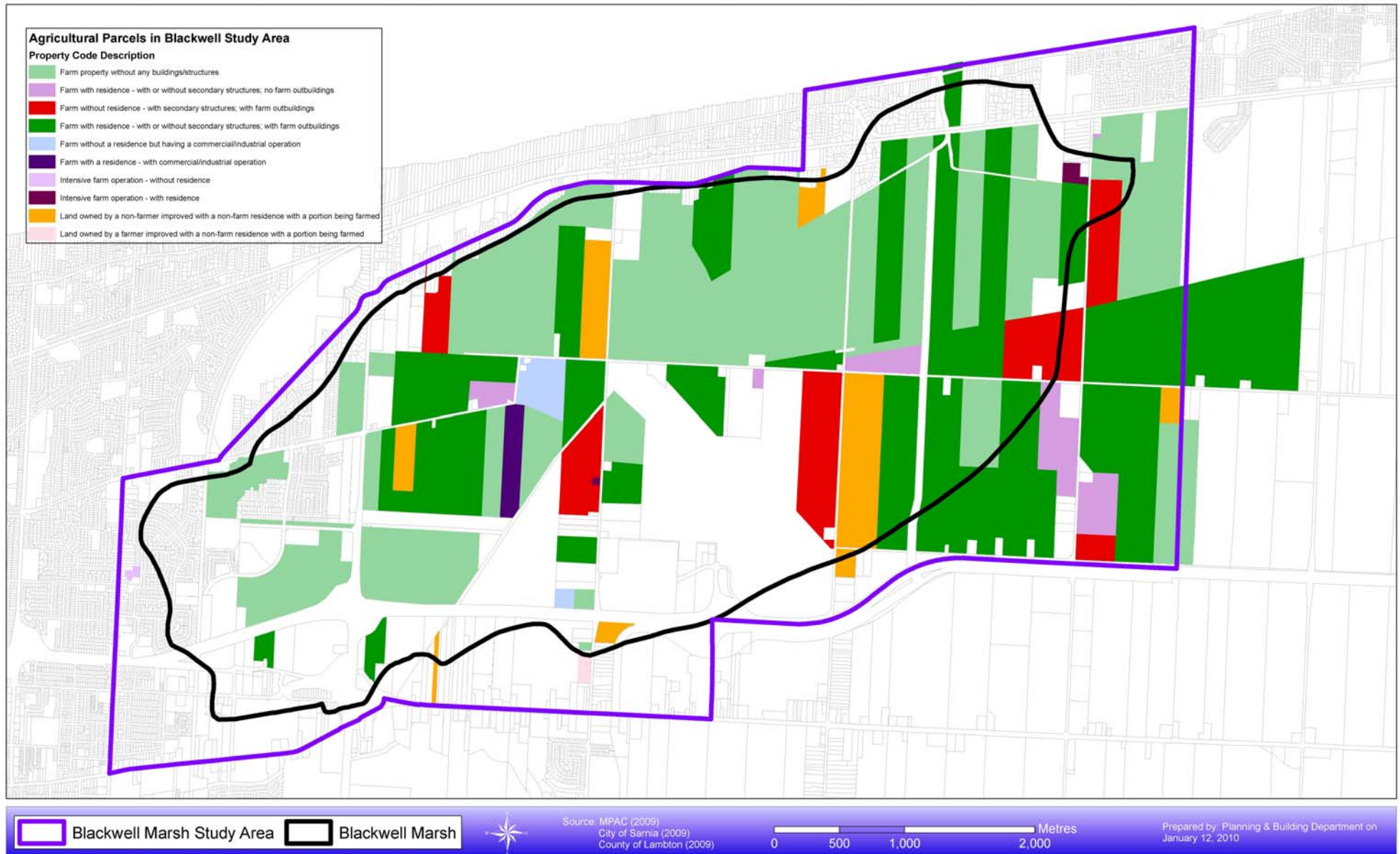
Sarnia-Lambton Economic Partnership. August 2009. Food Processing in Sarnia-Lambton.

Wilson, Ross. August 2010. Soils Investigation – Sarnia's Blackwell Marsh. Acre Assessments Inc.

Appendices

Appendix A: Agricultural Parcels in the Blackwell Marsh Study Area

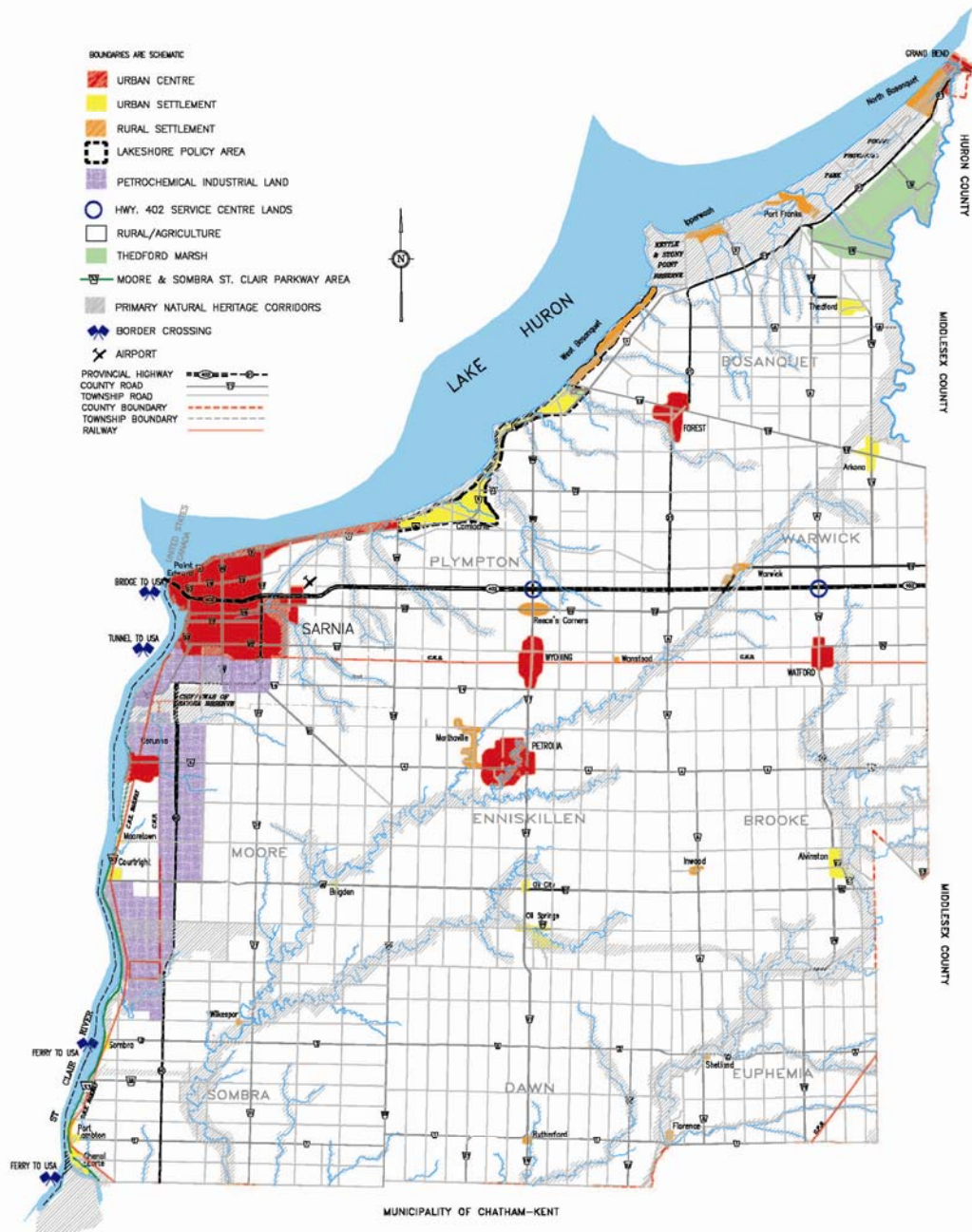
Farm Property Codes: Blackwell Marsh



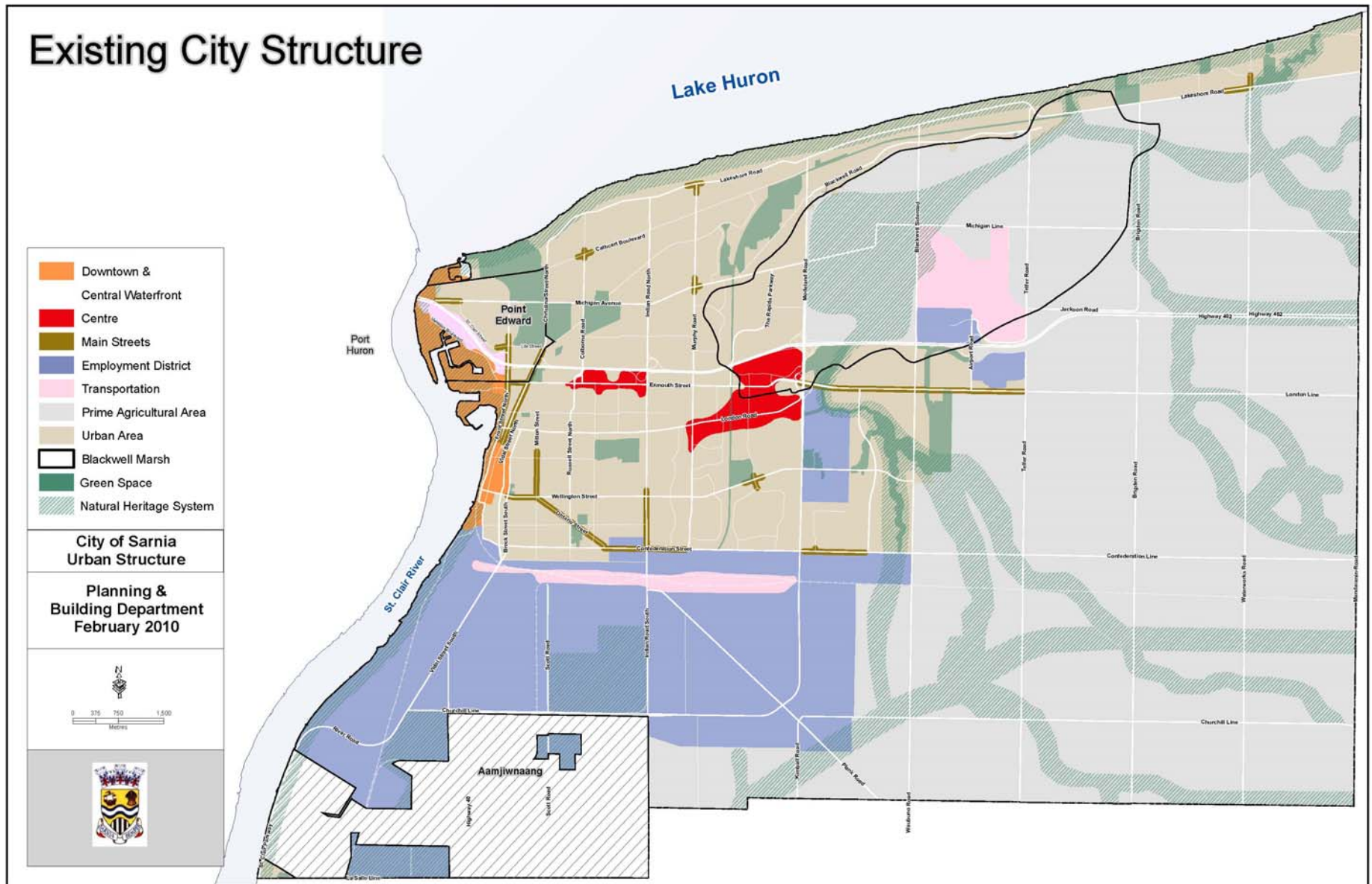
Appendix B: County of Lambton Official Plan Growth Strategy

COUNTY OF LAMBTON OFFICIAL PLAN GROWTH STRATEGY

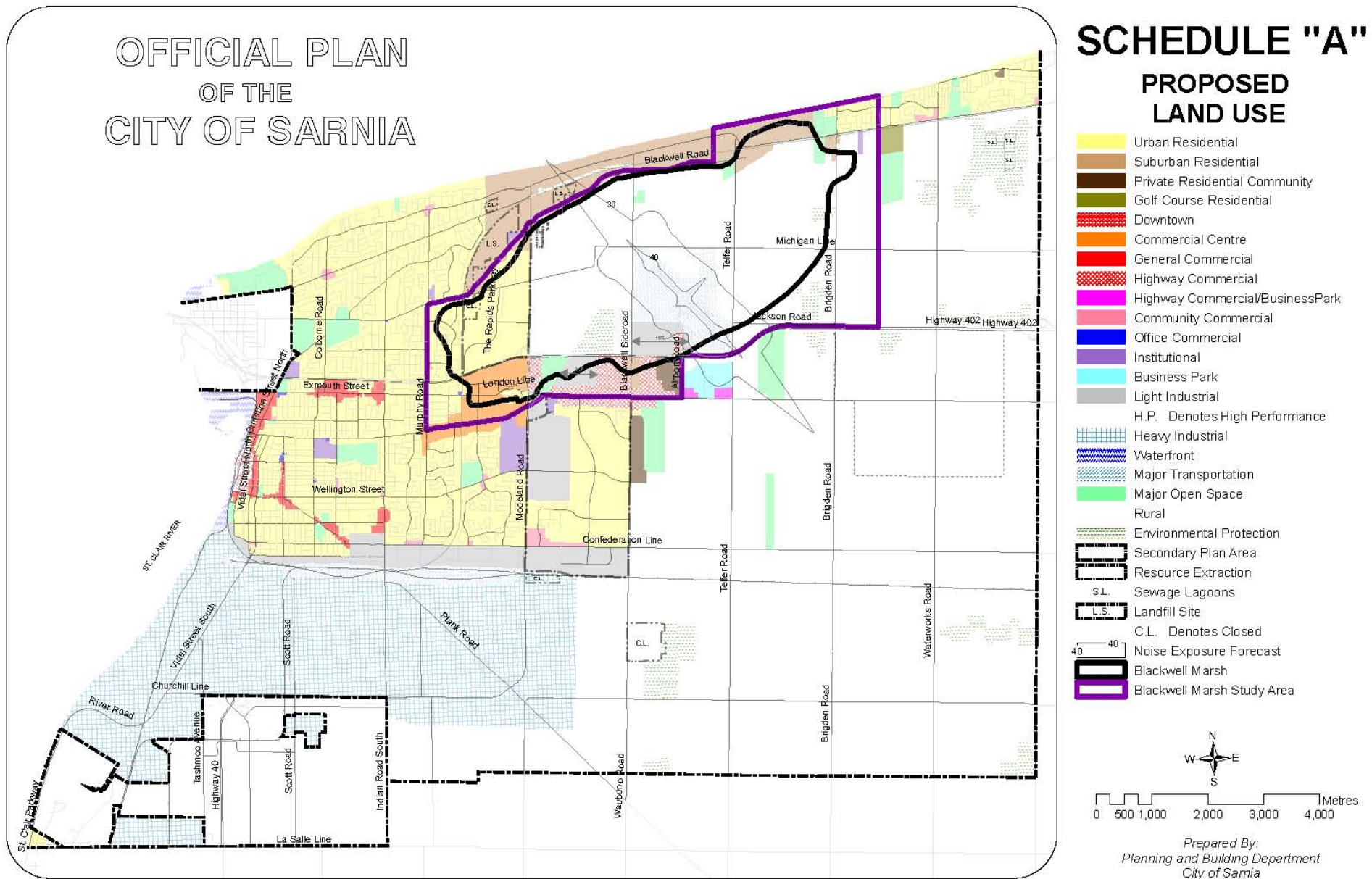
MAP 1



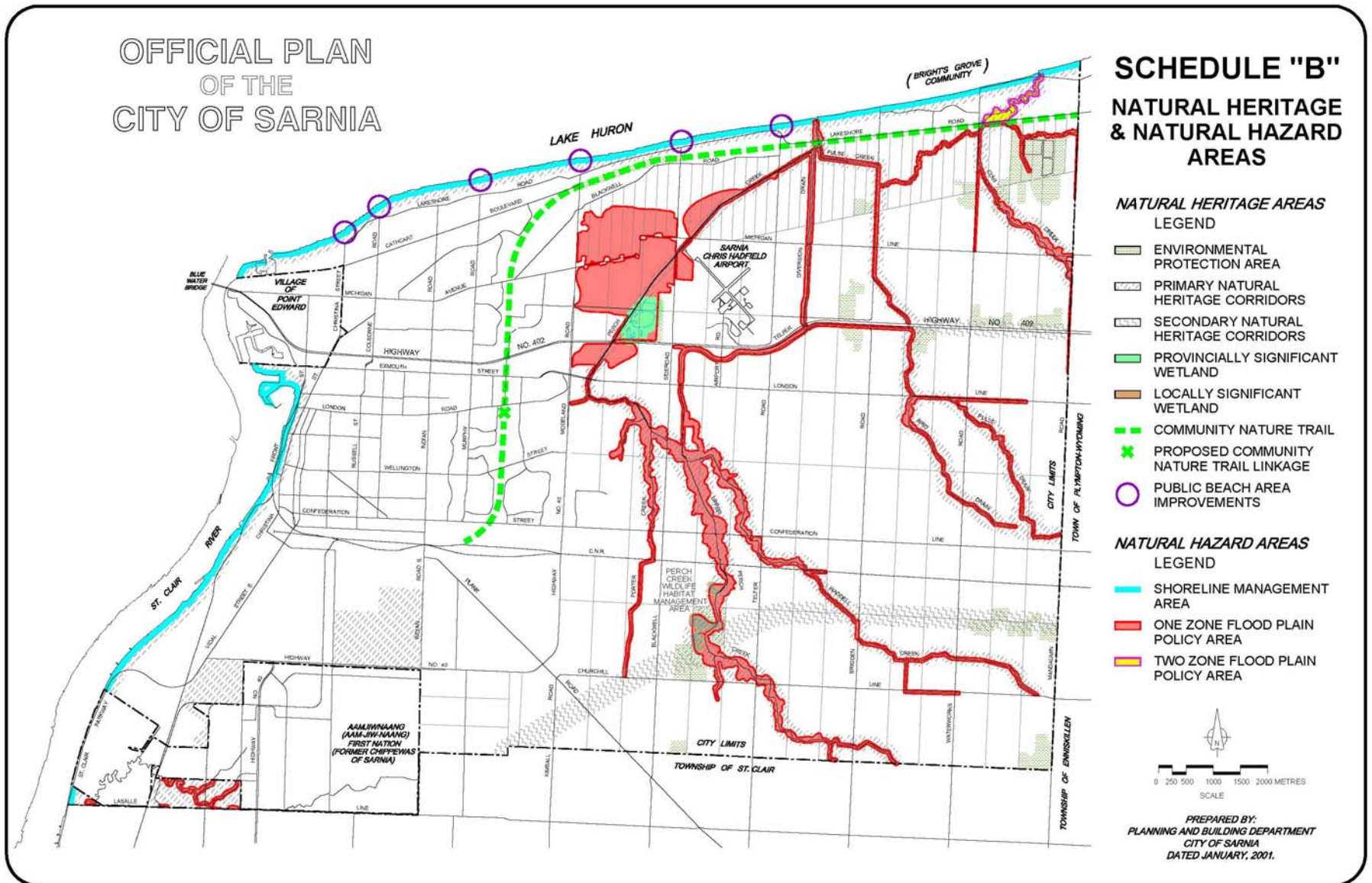
Appendix C: City of Sarnia Existing City Structure



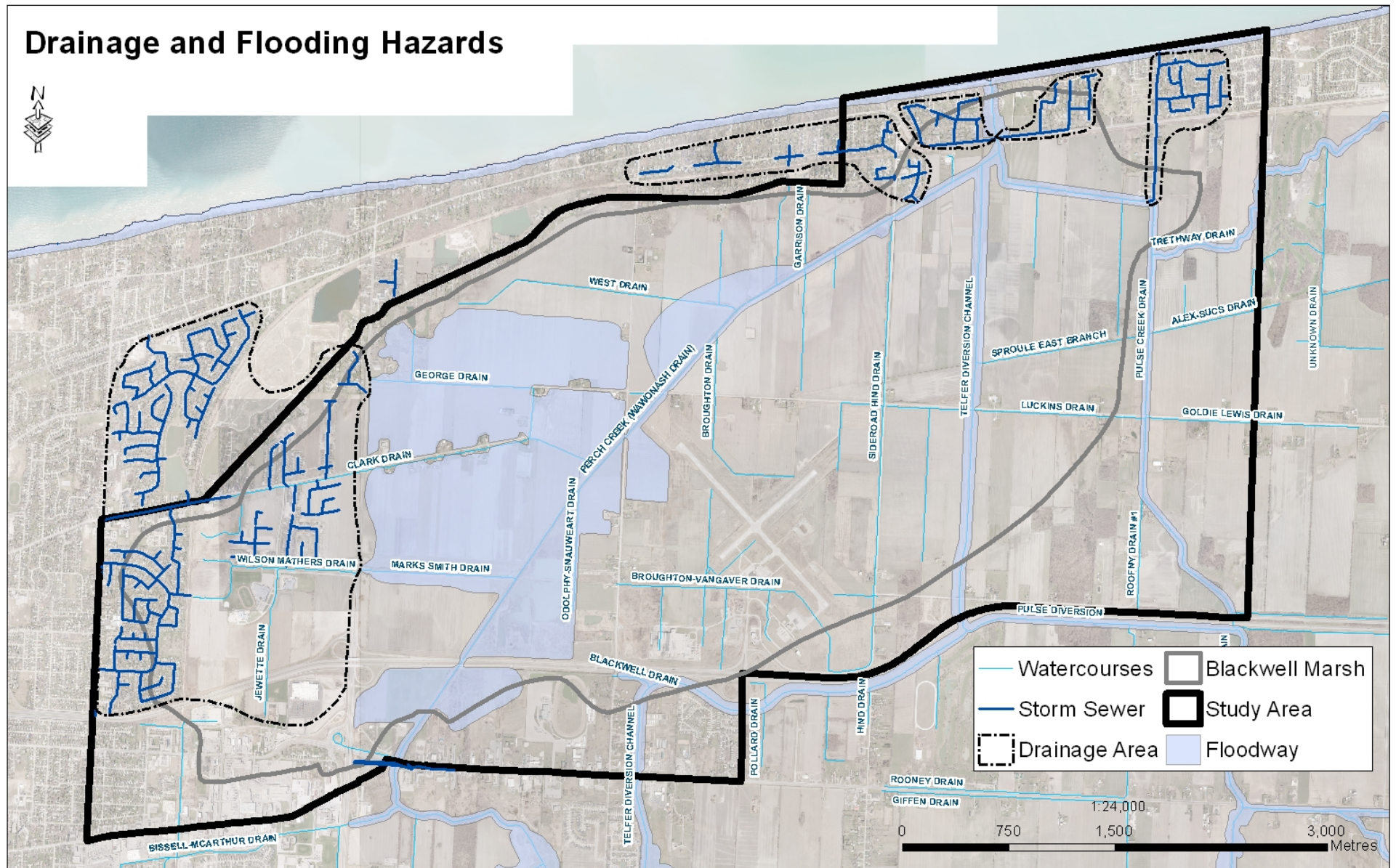
Appendix D: City of Sarnia Proposed Land Use



Appendix E: City of Sarnia Natural Heritage and Natural Hazard Areas



Appendix F: Drainage System and Hazardous Lands in the Study Area, 2010



Appendix G: Municipality of East Huron Zoning By-Law 52-2006

SECTION 7 AGRICULTURAL SMALL HOLDING ZONE (AG 4)

Within this ZONE, no person shall establish any use of land or building, or erect or alter any building or structure for any purpose except in accordance with the following provisions:

7.1 PERMITTED USES

- one residential dwelling
- uses accessory to the permitted uses

7.2 ACCESSORY USES

- home industrial use
- home occupation use
- agricultural use, limited
- limited-scale livestock use in accordance with Section 7.7
- uses accessory to the permitted uses
- bed and breakfast establishment
- dwelling, converted
- farm produce sales outlet

7.3 PERMITTED STRUCTURES

- one single detached dwelling or a double wide mobile home on a solid masonry foundation wall
- buildings and structures for the permitted uses
- buildings and structures accessory to the permitted uses, in accordance with the general provisions sections relating to accessory buildings
- barns in accordance with Section 7.7

7.4 ZONE REGULATIONS

LOT AREA (minimum)	4,000 square metres
LOT AREA (maximum)	4 hectares
LOT FRONTAGE (minimum)	23 metres
FRONT YARD (minimum)	17 metres from a municipal road or 25 metres from a County or Provincial Highway
INTERIOR SIDE YARD (minimum)	5 metres
EXTERIOR SIDE YARD (minimum)	17 metres from a municipal road or 25 metres from a County or Provincial Highway
REAR YARD (minimum)	7.5 metres
LOT COVERAGE (maximum)	30 %

7.5 BUILDING REGULATIONS

BUILDING HEIGHT (maximum)	12 metres
Existing Agricultural buildings	30 metres
DWELLING UNIT FLOOR AREA (minimum)	84 square metres

7.6 SEPARATION DISTANCE (RESIDENTIAL)

Notwithstanding any other provision of this by-law to the contrary, no residential, community facility, commercial, industrial or recreational building or structure, located on a separate lot shall be established unless it complies with the Minimum Distance Separation (MDS) Formulae. (ZBLA 85-2009)

7.7 SPECIAL PROVISIONS

ESTABLISHMENT OF NEW BARNs

- Notwithstanding the provisions of Section 7.1 and 7.2 to the contrary, an accessory barn may be established or an existing barn may be used subject to the following table:

Lot Size (hectares)	Maximum number of Livestock Units	Minimum separation distance from the barn to the nearest residential, commercial , institutional building or structure excluding uses within the same property
.4	1	40 metres
.8	2	60 metres
1.2	3	80 metres
1.6	4	100 metres
2 and more	5 maximum	120 metres

- Any newly established structure to house animals must maintain the setbacks from an open municipal drain, sinkhole, municipal wells or natural watercourse as set out in the 'setback of buildings from municipal drains or natural watercourses' Section in the general provisions of this By-law.
- and provided that all other provisions of this By-law are complied with.

Source:

Municipality of Huron East. Municipality of Huron East Zoning By-law 52-2006. September 19, 2006 - Consolidated version with recent updates as of December 2009. County of Huron Planning and Development Department and Municipality of Huron East.

Appendix H: Thunder Bay Local Food Charter

Thunder Bay Food Charter

Given that the Government of Canada has formally endorsed the right of every individual to have food security, which means that everyone has access to enough safe and nutritious food to stay healthy and have energy for daily life;

And that governments at all levels have recognized the need for food systems planning, and the need to establish principles to govern decisions regarding food production, distribution, access, consumption and waste management;

And that Community Food Security is a comprehensive approach that integrates all components of the food system, from producers to consumers, which emphasizes the health of both the environment and local economies and promotes regional food self-reliance;

And that a sustainable local food system promotes social justice, population health, and reflects and sustains local culture and environment;

Therefore, the City of Thunder Bay endorses the following principles as the foundation of a comprehensive food security framework for research, planning and policy and program development:

Build Community Economic Development

- Prioritize production, preparation, storage, distribution and consumption of local food as an integral part of the Thunder Bay economy.
- Develop collaborative urban and rural food security initiatives to sustain local agriculture and rural communities.
- Support a regionally-based food system to enhance food security and self-reliance.

Ensure Social Justice

- Recognize that food is a basic right, not a commodity.
- Design or amend income, education, employment, housing and transportation policies to facilitate access to nutritious, affordable and safe food in a healthy and dignified way.

Foster Population Health

- Recognize in public policy that a healthy diet contributes to the physical, mental, spiritual and emotional well-being of all residents.
- Provide access to information and skills development regarding nutrition in order to improve individual food security.
- Incorporate basic elements of food security into strategies to reduce and treat chronic diseases such as diabetes, heart disease and cancer.
- Incorporate food security, the provision and the distribution of food, into local emergency planning.

Celebrate Culture and Collaboration

- Acknowledge that food represents our diverse cultures and sharing traditions is a key strategy for community connection and collaboration.
- Protect and encourage access to wild foods obtained by fishing, hunting and gathering as they are an important part of northern culture.
- Support efforts to raise awareness and promote respect for traditional and cultural food history and diversity.

Preserve Environmental Integrity

- Encourage regional and local food self-reliance in order to reduce the use of fossil fuels and build sustainable communities.
- Encourage food production methods that sustain or enhance natural environments and biological diversity, and that make effective and sustainable use of local resources.
- Preserve and maintain local waters and agricultural lands and designate land and support for urban and community-based agriculture.
- Preserve and sustain Boreal forests and watersheds in order to maintain local traditions of hunting, fishing and gathering.
- Introduce environmentally sound methods of food waste management such as composting and reclamation programs.
- Recognize that access to a safe and sustainable water supply is an integral part of the food system.



Lynn Peterson
Mayor Lynn Peterson
City of Thunder Bay
In accordance with City Council Resolution

CITY OF
Thunder Bay
Superior by Nature

Appendix I: City of Greater Sudbury Local Food Charter

Given that access to safe, affordable, nutritious food is a basic human right of individuals and communities, and connects us to our families, our cultures, and our traditions;

And that community food security is a comprehensive approach that includes all components of the food system, from producers to consumers, and promotes regional food self-reliance;

And that having a food secure community is the foundation of population health, social justice, community-based economic development, and a sustainable environment;

Therefore, the Food Security Network of the Sudbury and Manitoulin Districts, including The City of Greater Sudbury, the Social Planning Council of Sudbury, and the Sudbury & District Health Unit, will work towards the development and implementation of a community food security mandate that supports research, policies, and programs that will endorse:

1) Population Health and Wellness:

- Individual and household food security as a determinant of health;
- Adequate income, employment, housing, and transportation policies that ensure food accessibility and availability to all citizens; and
- Nutritional education and healthy food choices in schools, businesses and public places.

2) Community Development:

- An annual community food security report card;
- Food self-reliance through community-based food programs, such as community gardens, fresh food box programs and collective kitchens;
- Multi-cultural food festivals and cultural events;
- An emergency food preparedness plan; and
- The involvement of the community in developing food security solutions.

3) Investment in the Regional Food System:

- A regionally-based and community-driven food system;
- The viability of agricultural and rural communities;
- The development of regional value-added agricultural production, food processing and distribution systems; and
- The promotion of regional food products at farmer's markets, farm-gate sales and local food outlets.

4) The Development of a Sustainable Food System:

- Public and institutional education on the interdependence between the food system and a sustainable environment;
- Scientifically proven best management agricultural practices and regional crop varieties;
- The development and implementation of renewable technologies in the expansion of the regional food system;
- The reduction of persistent toxic chemicals that can accumulate within the food chain;
- Sustainable waste management practices; and
- Support for initiatives that minimize the loss of bio-diversity, resource depletion, and climate change, and that raise the awareness of global environmental issues.

Appendix J: Saskatoon Food Charter

Saskatoon Food Charter

Adopted in Principle

Canada stands committed to the United Nations Covenant on Social, Economic and Cultural Rights specifying the right of everyone to adequate food, and endorses a food security action plan stating "the fundamental right of everyone to be free from hunger" and "food security exists when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (Canada's Action Plan for Food Security – 1998).

To meet this national commitment, and to make food security work in our community, the City of Saskatoon and other local organizations support the following elements as the basis for a Saskatoon Food Charter.

Food Security and Production

- Food is an integral part of the economy of Saskatoon and the surrounding area. A commitment to building bridges between urban and rural communities on food security will strengthen the food sector's self reliance, growth and development.
- Local agriculture is important to producers and consumers alike. Urban and rural food security initiatives will preserve local agricultural production, and build on the mutual interdependence of producers and consumers. The Farmers' Market and the Good Food Box serve as viable models of this interaction with local farmers being able to market their products directly, and consumers being able to access nutritious, wholesome food.
- Urban agriculture can be advanced through the establishment of community gardens that contribute directly to the economic, environment and social life of city residents.
- Food must be produced in a manner that is environmentally sustainable, safe for consumption and socially just.

Food Security and Justice

- Food is more than a commodity. It is a basic right. Every Saskatoon resident should have access to an adequate supply of nutritious, affordable and safe food without social and economic barriers. In Saskatoon, we must work with those communities most affected by lack of access to nutritious, affordable and safe food.

Food Security and Health

- Food security contributes to the physical, mental, spiritual and emotional well-being of residents.
- Nutrition education and consumption of wholesome, healthy foods are important factors in determining the overall positive health of the city's population, and this begins with the promotion of healthy eating practices — as early as birth — with breast feeding.

Food Security and Culture

- Food brings people together in the celebration of family and community, strengthening links between diverse cultures and urban and rural communities. The preparing, eating and sharing of food engages individuals and families in a social and community fellowship that balances physical and spiritual needs.
- Food is a social good that sustains and supports us and our communities.

Food Security and Globalization

- Any international agreements entered into by our governments must respect the full realization of people's right to adequate, nutritious, accessible, affordable, safe food at home and internationally. National, provincial and local governments must guarantee the right of communities and individuals to food security through supporting viable, sustainable, agricultural production and an equitable income distribution.

The fulfillment of a Saskatoon Food Charter relies on citizens participating directly in and promoting food security measures in their homes, their work places, their community, and in this process strengthening citizen involvement and concern.

Therefore, to develop and promote food security on our city, Saskatoon City Council will:

- Champion the right of all residents to adequate amounts of nutritious, safe, accessible, culturally acceptable food.
- Advocate for income, employment, housing, and transportation policies that support secure and dignified access to food.
- Ensure the safety of food and drinking water.
- Ensure convenient access to an affordable range of nutritious foods in city facilities.
- Adopt and promote food-purchasing practices that serve as a model of health, social and environmental responsibility and that support the local rural economy
- Promote partnerships and programs that support rural-urban food links and the availability of locally grown, healthy foods through the Farmers' Market, Good Food Box and other rural-urban initiatives.
- Protect local agricultural lands.
- Encourage community gardens, urban agriculture and the recycling of organic materials that nurture soil fertility.
- Support training and income generating programs that promote food security within a community economic development model.
- Support nutrition education through promotion of skills-based programs for the community and in schools
- Promote a yearly civic report card on how Saskatoon is achieving food security.
- Foster a civic culture that inspires support for healthy food for all.

These objectives will be achieved by working in partnership with community based organizations, community associations, Aboriginal peoples, resident groups, business organizations, trade unions, educational and health institutions and other levels of government.

This proposal for a Saskatoon Food Charter was developed through the Saskatoon Food Coalition with the involvement of the following groups: Saskatoon Farmers' Market, Oxfam, CHEP, Good Food Box, Community First, Saskatoon Friendship Inn, United Way, Core Neighborhood Youth Co-op, National Farmers Union, Quint Development Corporation, Saskatchewan Child Nutrition Network, Saskatchewan Food Security Network, Saskatoon Food Bank, Inner City Ministry, Organic Farmers Network and Saskatoon District Health.

Appendix K: Alternative/Renewable Energy Policies

Region of Waterloo Official Plan

6.A.6 On-farm alternative and/or renewable energy systems will be permitted in the Prime Agricultural Area and Rural Areas designations in accordance with the policies in this Plan.⁵²

Small-Scale Alternative/Renewable Energy Systems

6.C.10

Small-scale alternative and/or renewable energy systems refer to smaller, typically non-commercial energy systems that are intended to off-set or replace domestic energy consumption.

6.C.11

Area Municipalities will establish policies in their official plans to permit small scale alternative and/or renewable energy systems within the Prime Agricultural Area and Rural Areas designations, subject to the following:

- (a) the system will occupy one hectare of land or less;
- (b) the system will be secondary to the principal use of the property and will be in conformity with the provisions of Policy 6.C.8⁵³; and
- (c) the system will be in accordance with Federal and Provincial requirements.

Large-Scale Alternative/Renewable Energy Systems

6.C.12

Large-scale alternative and/or renewable energy systems refer to larger, commercial or centralized energy systems that are primarily intended to supply electricity to the electrical transmission grid.

⁵² Alternative energy systems means sources of energy or energy conversion processes that significantly reduce the amount of harmful emissions to the environment (air, earth and water) when compared to conventional energy systems. Renewable energy systems means the production of electrical power from an energy source that is renewed by natural processes, including, but not limited to, wind, water, biomass resources or products, or solar and geothermal energy.

⁵³ 6.C.8 Area Municipalities will establish policies in their official plans to permit secondary uses within the Prime Agricultural Area and Rural Areas designations, subject to the following:

- (a) the secondary use will be clearly accessory to the principal use of the property;
- (b) the secondary use will be small in scale and compatible with surrounding agricultural operations;
- (c) for secondary uses located on a farm, any buildings, structures or facilities associated with the secondary use, except roadside produce stands, will be integrated with the main farm buildings and be constructed in a manner that will allow for ease of conversion to an agricultural use should the secondary use cease to exist. Minor retailing of products will be permitted directly from the farm provided that sales are limited to those goods produced or manufactured primarily on the farm; and
- (d) the severance of a lot for a secondary use created in accordance with this policy will not be permitted.

6.C.13

Area Municipalities may permit the establishment of large-scale alternative and/or renewable energy systems within the Prime Agricultural Area or Rural Areas designations through an amendment to their official plan and zoning bylaw, subject to the following:

- (a) within the Prime Agricultural Area designation:
 - i) the system will not comprise a specialty crop area;
 - ii) there are no reasonable alternative locations for the system which avoid lands designated as Prime Agricultural Area;
 - iii) there are no reasonable alternative locations for the system within the Prime Agricultural Area designation with lower priority agricultural lands;
- (b) the system will minimize impacts on surrounding agricultural operations, and be designed and constructed so as to maximize the opportunity to convert the site back to an agricultural use should the system cease to exist;
- (c) the system will not be located within a Core Environmental Feature designated;
- (d) the system will be in accordance with Federal and Provincial requirements; and
- (e) the severance of a new lot for the system will not be permitted.

6.C.14

Development applications submitted in accordance with Policy 6.C.13 will only be approved where the owner/applicant submits the following studies, where applicable, to the satisfaction of the Region and/or other agency having jurisdiction over the issue addressed by the study:

- (a) noise, vibration and air quality studies demonstrating that the proposed system is appropriately designed, buffered and/or separated from any surrounding sensitive land uses to prevent any adverse effects;
- (b) a hydrogeological study prepared in accordance with the provisions of the Regional Implementation Guideline for Source Water Protection Studies, demonstrating that the proposed system will have no negative impacts on the quality and quantity of any surface water or groundwater resources in accordance with the policies in Chapter 8;
- (c) an Environmental Impact Statement in accordance with the policies in Chapter 7, where the proposed system is contiguous to a Core Environmental Feature;
- (d) an archaeological assessment and/or a Cultural Heritage Impact Assessment in accordance with the policies in Chapter 3; and
- (e) for large-scale wind energy generation systems proposed within ten kilometres of the Region of Waterloo International Airport, confirmation that the proposed facility complies with any applicable Transport Canada and/or NAV Canada regulations.

Source:

Regional Municipality of Waterloo. June 16, 2009. Regional Official Plan.

Municipality of Huron East Zoning By-Law 52-2006

Section 4 and 5 of the the Huron East Zoning By-Law identifies wind turbine generator (small scale), solar energy production and anaerobic digesters as accessory uses in its Agriculture Zone.

- A small scale wind turbine generator is defined as any combination of turbines with a combined nameplate capacity of less than 500 kW of energy.
- A solar energy system is defined as a system designed for the collection, storage and distribution of solar energy. A solar collector is defined as a device or combination of devices and/or structures that transform solar energy into thermal, chemical or electrical energy.
- Anaerobic digestion is defined as a renewable energy source that produces a methane and carbon dioxide rich biogas suitable for energy production helping replace fossil fuels. Also, the nutrient-rich solids left after digestion can be used as fertilizer.

Source:

Municipality of Huron East. Municipality of Huron East Zoning By-law 52-2006

September 19, 2006 - Consolidated version with recent updates as of December 2009. County of Huron Planning and Development Department and Municipality of Huron East.

Appendix L: Agricultural Advisory Committee Resources

1. Terms of Reference for the County of Lambton Agricultural Advisory Committee
2. Terms of Reference for the Halton Region Agricultural Advisory Committee
3. Terms of Reference of the Ottawa Rural Issues Advisory Committee
4. Squamish-Lillooet Regional District By-Law No. 848-2003: A by-law to establish and set out the appointment and procedure to be followed by the Agricultural Advisory Committee.
5. Agricultural Advisory Committees – British Columbia Ministry of Agriculture and Food
 - Getting Started
 - Model Terms of Reference
 - Some Ideas

1. Terms of Reference for the County of Lambton Agricultural Advisory Committee

TERMS OF REFERENCE FOR THE COUNTY OF LAMBTON AGRICULTURAL ADVISORY COMMITTEE

Goal

To provide advice to The Corporation of the County of Lambton on agricultural and rural matters.

Mandate

The County of Lambton Agricultural Advisory Committee (CLAAC) is a voluntary, non-political Advisory Committee established by County Council in accordance with these Terms of Reference. Committee members are guided by these Terms of Reference.

The Terms of Reference provide for a balance between activities referred from the Planning and Development Services Department, Infrastructure and Development Committee and County Council and the ability for the CLAAC to be proactive and advise on matters identified on its own initiative as authorized by the Chair of the Committee. The CLAAC will generally report through the County Planning and Development Services Department.

Scope of Activities

The scope of the CLAAC may include activities such as:

- Providing advice on issues and concerns of the agricultural community;
- Providing advice on the implementation of Provincial and Federal legislation, policies, and guidelines related to the agricultural industry;
- Providing advice on agricultural and rural policy directions proposed or pursued by the County. This may include providing advice on County-initiated official plan amendments related to agricultural matters; on County agricultural matters through a comprehensive official plan review; or, other policy directions pursued by the County;
- Providing advice on the identification and implementation of programs which encourage public awareness and education of agricultural and related rural issues;
- Mediating complaints related to agricultural practices; and
- Providing advice on matters as they arise, at the request of the County.

Composition

The CLAAC will be composed of 14 voting members and 2 ex-officio staff members.

The voting membership will include one individual from each of the following:

- Lambton Cattlemen's Association
- Lambton Dairy Producers
- Lambton Pork Producers
- The "Feathers" Livestock Industry
- A Specialty Livestock Operation
- Grain Farmers of Lambton
- Lambton Soil and Crop Improvement Association
- The Vegetable Grower's Association
- A Specialty Crop Producer
- Lambton Federation of Agriculture
- Lambton 328 Farmer's Union
- A Producer with Conservation Interests
- Non-Farm Rural Resident
- County Council

The Regional Information Coordinator for the Ontario Ministry of Agriculture and Food and the Manager of Planning and Development Services (or designate) will be ex-officio, non-voting advisory members of the CLAAC. The Manager of Planning & Development Services (or designate) shall serve as secretary.

Selection of Voting Members

The County will request each of the respective organizations to nominate one of their members as a member on the CLAAC, subject to the following exceptions:

- The "Feathers" industry member shall be agreed upon and nominated jointly by the recognized local chicken and turkey producer organizations.
- The "Producer with Conservation Interests" member shall be agreed upon and nominated jointly by the Rural Lambton Stewardship Network, Woodlot Owner's Association, and Lambton Wildlife.
- The County will solicit letters of interest from individuals wishing to fill the positions of "Non-Farm Rural Resident", "Specialty Crop Producer", and "Specialty Livestock Producer", and County staff will recommend members to County Council from those letters received.

The Specialty Livestock and Specialty Crop members may be from any type of operation not specifically represented on the CLAAC (e.g. sheep, horses, goats, sugar beets, horticulture, greenhouses, etc). The County will, as a minimum, solicit the organizations representing the larger "specialty" industries in the County for letters of interest from their members, but will consider letters of interest from any "specialty" industry. The type of "specialty" industries represented should vary from term to term.

All voting members must be residents of the County and have knowledge of agricultural and rural issues.

All voting members with the exception of the County Council member and the Non-Farm Rural Resident member must have a farm business registration number.

All members nominated by the respective organizations or recommended by staff shall be approved by Council before becoming members of the CLAAC.

In their capacity as CLAAC members, all members are intended to sit primarily as private individuals with a variety of knowledge and perspectives and not as advocates for any particular operation or organization.

Officers

A Chair and a Vice-Chair will be elected annually by the membership of the CLAAC. The appointments must be approved by County Council.

Length of Terms

The County Councilor position terms shall last one year at a time without limit on the number of consecutive terms.

Membership terms for all other voting members shall be a maximum of three years with a maximum of two consecutive terms permitted. Terms shall be staggered such that approximately one third of the members are replaced each year.

Support

The Planning and Development Services Department of the County of Lambton will provide administrative, procedural and technical support to the CLAAC.

Meetings

The CLAAC will generally meet at the County Administration Building. The CLAAC will generally meet on a set schedule, although special meetings may be held at the call of the Chair. Meetings may also be cancelled at the discretion of the Chair.

Unless otherwise determined, all meetings will be open to the public. As a formal advisory committee to the County, the CLAAC is subject to the County Procedural By-law, unless otherwise specified in the Terms of Reference.

Delegations

Any person wishing to appear before the CLAAC as a delegation must submit a request to the staff liaison in the Planning and Development Services Department, advising of the topic or item to which they wish to speak. All requests for delegations must be received at least one week prior to the meeting to ensure that the delegation is included on the agenda. Any person wishing to address the CLAAC as a delegate, who has not previously arranged to do so, may be granted permission to do so only by Committee resolution.

Minutes and Agendas

The minutes of each CLAAC meeting will be amended as necessary and approved at the following meeting. The unapproved minutes will be forwarded to the next regularly scheduled Infrastructure and Development Services Committee meeting. When approved, any amendments will be forwarded to the Infrastructure and Development Services Committee. The CLAAC agendas will be prepared by the staff liaison and the CLAAC chair or vice chair with input from other CLAAC members.

Committee Resolutions

The CLAAC will seek to achieve consensus on decisions. Recommendations are "carried" if supported by a majority. Only resolutions as they appear in the adopted Minutes may be considered to officially represent the position of the CLAAC.

Complaint Resolution Function

If a complaint is forwarded to the CLAAC for mediation, the complaint resolution process set out in "Appendix A" to this Terms of Reference shall be followed.

Annual Review

An annual review of the CLAAC by Infrastructure and Development Committee will be completed, including a report on and review of the year's activities to examine the effectiveness of the Committee and to ensure continued improvements.

Appendix "A"

To the Terms of Reference for the County of Lambton Agricultural Advisory Committee

COMPLAINT RESOLUTION FUNCTION

A. BACKGROUND

The complaint resolution function is anticipated to be an infrequent role of the committee. This Appendix is necessary however, to outline a complaint resolution process.

It should be noted that the CLAAC is not formed in accordance with the requirements of a "Local Advisory Committee" under the Nutrient Management Act and its regulations. As such, the CLAAC is not formed for the purpose of dealing with complaints delegated from the Province.

The CLAAC shall deal with complaints against farming practices as a group of peers from the agricultural community and in accordance with the processes outlined in this Appendix. This procedure is intended to be a basic framework for dealing with complaints and may be modified where appropriate.

B. RECEIVING COMPLAINTS

Complaints received by the County or through the local municipalities will generally be directed to the Manager of the Planning and Development Services Department (or designate), who will in turn inform the Chair or Vice-Chair of the CLAAC. The County will only respond to valid complaints against farming practices that are lodged in writing.

In investigating a complaint, the Chair or Vice-Chair will strike a subcommittee consisting of three members of the CLAAC. No member of the CLAAC with a pecuniary interest in a mediation matter shall participate in the mediation without fully disclosing the matter and obtaining the agreement of all parties.

C. CONTRAVENTIONS OF PROVINCIAL LEGISLATION

If at any time during the process, it is determined or suspected that a complaint involves or may involve a spill or a violation of the Nutrient Management Act, 2002, the Environmental Protection Act, the Ontario Water Resources Act, the Safe Drinking Water Act or other provincial legislation, the mediation process shall be terminated. The parties will be advised they must report the issue to the MOE and/or OMAFRA. There will be no further discussion with the parties and the CLAAC and/or subcommittee will refer the matter along with the original written complaint to the MOE and/or OMAFRA.

D. MEDIATION

The subcommittee will investigate the matter including meeting with the complainant and the farm operator (although not necessarily at the same time) and make recommendations regarding the remediation of the complaint. This may require on-site investigation. Recommendations are to be based on agricultural Best Management Practices, good farm management and proper land stewardship. The subcommittee will prepare a brief report within a week of the investigation on its findings, any recommendations, whether any follow-up action is required and who will be responsible for such follow-up. The subcommittee will provide copies to the farm operator, the complainant and the local municipality.

CLAAC members shall conduct mediation matters on a confidential basis. Subject to the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c.M.56 as amended, CLAAC mediations and any reports generated from such mediations are confidential.

As part of the process or follow-up, the subcommittee, at its discretion, may wish to encourage a meeting between the complainant, the farm operator and either the subcommittee or the complete CLAAC. Any recommended remedial actions related to a complaint will be provided in writing and a specified time period will be provided for the farmer to correct any problem(s). Once the CLAAC is satisfied that the complaint is resolved, the complainant, farmer and local municipality will be notified in writing.

E. FURTHER MEDIATION STEPS

If either party is not satisfied with the outcome of the mediation process, they may request a hearing by the Normal Farm Practices Protection Board or request the matter be referred to the full CLAAC or the local municipal Council for further consideration.

In the event that the farmer does not comply with recommendations of the CLAAC, the CLAAC may recommend the local municipality enter the Farming and Food Production Protection Act (FFPPA) process. This process would be used if the complaint relates to the following areas of nuisance dealt with by this legislation: noise, odour, dust, flies, light, vibration and smoke. Should this avenue be appropriate, an attempt will be made by the affected Ministries to resolve the complaint without a hearing, however, the option of a hearing with the Normal Farm Practices Protection Board is also available if required.

If the complaint does not pertain to the FFPPA, the CLAAC may recommend that the local municipality lay charges. If this avenue is followed, the issue is forwarded to the Provincial Court system for resolution. It is anticipated that this avenue will never be necessary. In all cases, it is the policy of this Strategy to notify the complainant in writing of the outcome of a complaint.

CLAAC will annually review the types of complaints being received.

2. Terms of Reference for the Halton Region Agricultural Advisory Committee

Council Mandate

The Halton Agricultural Advisory Committee is an Advisory Committee authorized by Regional Council. The Committee has been established by Regional Council in accordance with these adopted Terms of Reference. The Committee shall report to Regional Council through the Planning and Public Works Standing Committee.

Goal

The goal of the Halton Agricultural Advisory Committee is to advise and assist the Region in its effort to develop and maintain a permanently secure, economically viable agricultural industry as an important component of Halton's economic base, and as a source of employment for Halton's rural community.

Scope and Purpose

The purposes of the Halton Agricultural Advisory Committee are:

1. To advise Regional Council, through the Planning and Public Works Standing Committee, on matters affecting agriculture in Halton.
2. To represent Halton's agricultural industry, its farmers, farm organizations and agricultural farm support industries before Regional Council.
3. To solicit and co-ordinate the interests and concerns of Halton's agricultural industry, its farmers, farm organizations and agricultural farm support industries and communicate those interests and concerns to Halton Regional Council.
4. To inform individuals, groups and businesses of Regional agricultural goals, objectives and policies.
5. To recommend to Regional Council studies necessary to help resolve agricultural problems and/or improve agricultural conditions.
6. To review studies, plans, and proposals as may be referred to the Committee by Regional Council and comment on their agricultural impact.
7. To recommend to Regional Council alternative solutions, approaches and plans for the development and maintenance of agriculture in Halton that are within the scope of the mandate, responsibilities and financial capabilities of the Region.
8. To advise and assist the Region in the implementation of Halton's agricultural goals, objectives and policies.
9. To create a work plan for the upcoming year and submit it, through Staff, to Regional Council.

Composition

The Committee shall be comprised of between 11 and 19 members, representing agricultural organizations, consisting of the following:

1. 1 member of Regional Council and one alternate member of Regional Council both of whom are appointed from Public Works ;
2. Between 1 and 4 members who are representatives from the Halton Federation of Agriculture;
3. 1 member from the Halton Soil and Crop Improvement Association, selected by the Association;
4. 1 member from Halton Wentworth Fruit and Vegetable Growers Association, selected by the Association;
5. 1 member from the Halton Milk Committee, selected by the Committee;

6. 1 member from the Halton Peel Cattlemen's Association, selected by the Association;
7. 1 member from the Ontario Ministry of Agriculture and Food – Agriculture Representative for Halton (or alternate) in an advisory non-voting capacity, selected by the Ministry;
8. 1 member from the Halton Pork Producers, as selected by the Producers;
9. 1 member from the Halton Junior Farmers, as selected by the Halton Junior Farmers;
10. 1 member from the Women's Institute, as selected by the Institute; and
11. Between 1 and 5 citizen members of the agricultural community, appointed by the Regional Council.

Frequency of Meetings

Committee meetings shall generally be scheduled on a monthly basis and at any other time at the call of the Chair.

3. Terms of Reference of the Ottawa Rural Issues Advisory Committee

Mandate

The mandate of the Rural Issues Advisory Committee (“the Committee”) is to provide advice and input to the Agriculture and Rural Affairs Committee and Ottawa City Council on issues affecting the rural and farming community, including agricultural organizations. The Committee will assist City Council, through the Agriculture and Rural Affairs Committee, in its efforts to: protect and preserve the rural area; promote healthy rural communities that contain living, working and recreational opportunities; and respect the natural environment and resources of rural areas. For the purposes of clarity, the Committee’s mandate extends to all those areas identified as ‘rural’ within Schedule “A” of the City’s Official Plan and defined as follows: that ‘part of the City not intended for urban development’, which ‘contains a number of important natural resources and is characterized by the dominance of the natural rather than the built environment’.

Responsibilities

The Rural Issues Advisory Committee shall be responsible for:

- reviewing and recommending appropriate means and methods of dissemination of City information to rural residents and promoting two-way communication between rural residents and businesses, City Council and the City administration;
- where requested by a Standing Committee or City Department, serve as the forum for examining specific issues of interest to the rural community;
- liaising or partnering with public and/or private organizations;
- providing a forum for rural residents to raise issues and concerns with a distinct rural component or impact on rural areas;
- advising on the delivery of emergency services, access to health and social services and service delivery (i.e. water and wastewater) in the rural areas;
- raising awareness and promoting an understanding of the rural community and its issues;
- advising on issues that have implications for the rural population including, but not limited to: snowmobile and ATV use; hunting and firearms; use of private land for public recreational purposes and wildlife management;
- advising on the impacts of park and recreation proposals and transportation and utility corridors on agriculture;
- advising the Agriculture and Rural Affairs Committee, on behalf of Ottawa’s agricultural sector, its farmers and farm organizations, on all aspects of the rural community, including land use, municipal services/infrastructure, environmental issues and socio-economic matters affecting agriculture;
- providing input on how agriculture and rural issues can be incorporated into goals and objectives in the review of Official Plan policies;
- reviewing studies, plans and proposals as required, or as may be referred by Standing Committee, Council or departments and providing comments on their agricultural and/or rural impacts;
- advising the Agriculture and Rural Affairs Committee in the development of policies and programs with respect to agriculture and rural issues;
- advising the Agriculture and Rural Affairs Committee on city-wide economic strategies which may have implications for the rural economy;
- advising the Agriculture and Rural Affairs Committee on the implementation of federal and provincial legislation related to farm practices;
- advising the Agriculture and Rural Affairs Committee on issues relating to agri-business including farm labour, large scale agricultural operations, transportation, marketing and promotion of agri-businesses;

- soliciting issues and concerns from area farming industries, agricultural organizations, community groups and rural communities and making recommendations to the Agriculture and Rural Affairs Committee;
- recommending to the Agriculture and Rural Affairs Committee strategies to improve the delivery of municipal services, programs and information to the rural areas, including the role of the City's rural client service centres; and
- recommending policies to the Agriculture and Rural Affairs Committee that would ensure that municipal services remain accessible to rural residents and to provide guidance on how such services can be tailored to meet the needs of rural residents.

Organization

The representatives of agricultural organizations or agencies should have special rural and agricultural qualifications, interests and experience as well as the ability and willingness to devote the necessary time to the Committee. The citizens-at-large should possess expertise and willingness to liaise with the range of agencies, organizations and interest groups represented on the Committee and represent the interests of the broader community rather than a specific interest group.

All appointments to the Rural Issues Advisory Committee shall be approved by both the Agriculture and Rural Affairs Committee and Ottawa City Council.

The Rural Issues Advisory Committee shall have up to a maximum of fifteen (15) citizen members comprised of:

- A representative from Wards 5, 6, 19, 20 and 21;
- A minimum of two (2) agricultural representatives;
- One (1) rural business representative;
- One (1) representative from the Rural Council of Ottawa-Carleton;
- One (1) representative from the Ottawa Rural Tourism Council;
- One (1) representative from the Ontario Federation of Agriculture;
- One (1) representative from an active agricultural organization in rural Ottawa; and
- Up to a maximum of three (3) members at large from any City ward.

In addition, the Rural Issues Advisory Committee shall also have, in a resource, liaison and/or advisory capacity, the following:

- One (1) representative from a conservation authority (non-voting).

Lead Department/Reporting Relationship

The lead department for the Rural Issues Advisory Committee shall be the City Manager's Office, Rural Affairs Office and the staff liaison will be the Rural Affairs Officer. The Rural Issues Advisory Committee may also be asked to review and comment on policies, programs and initiatives emanating from any of the City's operating departments, which have a distinct rural component or impact on rural areas. The Rural Issues Advisory Committee shall report primarily through the Agriculture and Rural Affairs Committee to Ottawa City Council or through another Standing Committee as appropriate.

Resources

The Rural Issues Advisory Committee must report annually to City Council through the Agriculture and Rural Affairs Committee. The timing shall be determined by the Committee Chair, Advisory Committee Coordinator and City Clerk as part of the Committee's setting its work plan for the following year. The Committee shall also outline its resource requirements for each portion of the work plan.

4. Squamish-Lillooet Regional District By-Law No. 848-2003

By-law 848 – Consolidated for Convenience Only

December 2008

SQUAMISH-LILLOOET REGIONAL DISTRICT

BY-LAW NO. 848-2003

A by-law to establish and set out the appointment and procedure to be followed by the Agricultural Advisory Committee.

The Regional Board of the Squamish-Lillooet Regional District in open meeting assembled, enacts as follows:

Title

1. This by-law may be cited as "Squamish-Lillooet Regional District Electoral Area C Agricultural Advisory Committee By-law No. 848-2003".

Establishment of Agricultural Committee

2. There is hereby established the "Electoral Area C Agricultural Advisory Committee".

Definitions

3. In this Bylaw:
 - a) "**Board**" means the board of the Squamish Lillooet Regional District;
 - b) "**Committee**" means the Electoral Area C Agricultural Advisory Committee;
 - c) "**Member**" means a person appointed to the Committee by the board;
 - d) "**Planning Staff**" means employees of the Board employed in the Planning and Development Department

Purpose of the Committee

4. The purpose of the Committee is to provide comments and recommendations to the board on agricultural issues within the Pemberton Valley and other parts of Electoral Area C referred to the Committee by the board.

Matters that may be Considered

5. The board may refer the following matters to the Committee:
 - a) applications initiated under the *Agricultural Land Commission Act*;
 - b) applications to amend Official Community Plans and Zoning Bylaws that affect agricultural lands, the Agricultural Land Reserve, or that may have implications for the agriculture sector;
 - c) agricultural related components of comprehensive reviews or development of:

- i) Zoning and other Bylaws;
 - ii) Official Community Plans;
 - iii) Agricultural area plans;
 - iv) Pemberton “fringe area” policies;
 - v) Park and recreation plans; and
 - vi) Transportation plans;
- d) subdivision applications for lot line adjustments in the Agricultural Land Reserve which have been submitted to the Approving Officer under Part 5 of the *Agricultural Land Reserve Use, Subdivision and Procedure Regulation*;
 - e) provincial crown land referrals for non-farm uses within, adjacent to, or potentially impacting on agricultural areas;
 - f) variance requests regarding the size, siting, etc. of buildings and structures in agricultural areas;
 - g) building permit applications for additional dwellings for farm help within the Agricultural Land Reserve;
 - h) major development proposals with potential impacts on agriculture in Electoral Area C;
 - i) other matters which the board may consider appropriate.
- 5.1 The Committee may make recommendations to the Board, for the Board’s consideration, on matters that deal with the ongoing viability of commercial farming and farm land usage within the Agricultural Land Reserve lands within Electoral Area C. *(Amendment By-law No. 884-2006)*

Focus of Committee Reviews

6. The Committee shall consider the following in its review of referrals from the board:
- a) the effect of the proposal on the agricultural potential of the subject property;
 - b) the effect of the proposal on adjacent Agricultural Land Reserve properties and surrounding agricultural production;
 - c) the effect of the proposal on water resources and transportation issues;
 - d) possible alternatives to the proposal, where appropriate; and
 - e) the identification of issues relating to the protection of the Agricultural Land Reserve lands specific to the application, including the use of appropriate buffering techniques aimed at enhancing land use compatibility.
- (Amendment By-law No. 884-2006)*

Membership

7. The Committee shall consist of a minimum of 6 and a maximum of 11 members appointed by the Regional Board, one of which members shall be the director for Electoral Area C and one of which members shall be a representative of the Village of Pemberton Council. *(Amendment By-law No. 884-2006)*

The balance of committee members shall primarily be selected from:

- a. the farming and ranching community,
- b. the agricultural product processing and distribution sectors.

Term of Appointment

8. In the first year of the Committee, one half of the members shall be appointed for a term to expire on December 31st of the year in which they were appointed and one half of the members shall be appointed for a term to expire on December 31st of the year following the year of their appointment.
9. All subsequent appointments to the Committee shall be for a one year term. *(Amendment By-law No. 1107, 2008)*
10. If appointments to the Committee have not been reviewed by the Regional Board before the expiration of the term of the members, members appointed to the Committee shall continue to hold office until the annual membership has been determined. *(Amendment By-law No. 1107, 2008)*

Removal of Member

11. The board shall have the power, by an affirmative vote of not less than two-thirds of all the members, to remove any member from the Committee at any time upon the recommendation of the Electoral Area C Director.

Replacement of Member

12. Upon the resignation, death or removal of a member during a term of office, the board shall appoint a new member, who shall hold office during the remainder of the term of the vacating member.

Appointment of Chair

13. A Committee shall elect, from its members at the first meeting of each year a Chair who shall hold office for one year or until their successor has been appointed.
14. The Chair shall preside at meetings of the Committee and in his or her absence those present may appoint an acting Chair for the duration of that meeting.

Quorum

15. A majority of the members appointed to the Committee shall constitute a quorum.

Voting

16. Each Committee member who is present is entitled to vote and has one vote.
17. Recommendations of the Committee must be adopted by a majority affirmative vote of the members present at the meeting.
18. The Electoral Area C Director and the representative from the Village of Pemberton Council are non-voting Committee members. (*Amendment By-law No. 884-2006*)
19. A committee member present at a meeting who abstains from voting is deemed to have voted in the affirmative.

Meetings Open to the Public

20. Committee meetings shall be open to the public.
21. The Committee shall hear all applicants who wish to make representations on applications, bylaws or other matters referred to it by the Board and it shall be the responsibility of such applicants wishing to make representation to contact the Chair of the Committee for the purpose of attending a meeting.
22. The Agricultural Advisory Committee may invite persons to attend meetings in a resource capacity.

Notice of Meeting and Other Matters

23. Notice of meeting and all other procedures of the Committee not specifically provided for shall be in accordance with the provisions of Squamish Lillooet Regional District Procedural Bylaw No. 658, 1998.

Participation by Staff

24. Planning Staff and Ministry of Agriculture and Food and Agricultural Land Commission staff may attend Committee meetings and participate in discussions but shall not be entitled to vote on any matters.

Secretary

25. A recording secretary shall be provided by the board who shall record the proceedings of the Committee.
26. The minutes of the proceedings of all meetings of the Committee shall be legibly recorded and forwarded to the officer assigned responsibility for corporate administration

who shall pass these minutes to the Board for their review. The minutes shall be certified and adopted by the Committee at its next meeting.

Conflict of Interest

27. Where a member, his or her family, employer or business associate has any interest in a matter being considered by the Committee, that member shall absent themselves from any discussion on that matter.

Remuneration and Expenses

28. Committee members shall serve without remuneration.
29. Committee members shall be reimbursed reasonable and necessary expenses that arise directly out of the performance of their duties.

Severability

30. If a section, subsection, paragraph, subparagraph or phrase of this bylaw is for any reason declared invalid by a Court of competent jurisdiction, the decision shall not affect the validity of the remaining portions of this bylaw.

READ A FIRST TIME this 25th day of August, 2003.

READ A SECOND TIME this 25th day of August, 2003.

READ A THIRD TIME this 25th day of August, 2003.

ADOPTED this 25th day of August, 2003.

Raj Kahlon
Chair

Paul R. Edgington
Secretary

I hereby certify the foregoing to be a true and correct copy of By-law No. 848 cited as "Squamish-Lillooet Regional District Electoral Area C Agricultural Advisory Committee By-law No. 848-2003" as adopted by the Regional Board August 25, 2003.

Paul R. Edgington
Secretary

5. Agricultural Advisory Committees – British Columbia Ministry of Agriculture and Food

Getting Started

- Identify and contact local agricultural groups.
- Discuss with MAF and ALC staff.
- Draw upon the experience of other jurisdictions that already have an AAC.
- Seek the advice of farm groups on possible appointments to the Committee.
- Assign a specific staff person to assist the Committee with implementation, as well as providing on-going support to the Committee.

Support

- MAF and ALC staff.
- Planning for Agriculture—Resource Material including a Model Terms of Reference.
- Sample: 'City of Surrey Volunteers' Contract

Things to Consider

- Foster a clear, effective relationship between the Council or Regional Board and the AAC.
- Obtain a strong commitment from the farm community.
- Appoint a Council or Board member to sit on the committee to ensure a solid link between the AAC and Council or Regional Board.
- Assign a staff person to work closely with the Committee.
- Encourage the AAC to consider broader issues as well as day-to-day proposals.
- Clarify the relationship between the AAC and other farm organizations.
- Ensure a strong, committed Chair person is available to lead the AAC.
- Schedule meetings so they are sensitive to demands on farmers' time, particularly to the seasonal changes in workload.
- Provide secretarial assistance during meetings.



Other Ideas to Link With Your Farm Community

- ✓ Appoint farm reps. to Advisory Planning Commissions & other Committees.
- ✓ Seek the advice of farmers' institutes and commodity groups.
- ✓ Maintain contact with staff of the Ministry of Agriculture and Food, Agricultural Land Commission and Agriculture & Agri-Food Canada.
- ✓ Appoint a Council member as a "farm/ranch liaison" person.
- ✓ Designate a specific staff person to focus on farm issues.
- ✓ Get 'down on the farm' through tours, workshops and seeking out your local direct farm marketers.



Ministry of
Agriculture and Food

For more information please contact:
BC Ministry of Agriculture and Food
Resource Management Branch
(604) 556-3100

AGRICULTURAL ADVISORY COMMITTEES



A link to your farm
community

Agriculture Advisory Committee (AAC)

Linking with your Farm Community

BC is a highly urbanized province. Over 82% of British Columbians live in cities and towns. Less than 2% live on farms and ranches, yet farmers and ranchers represent major land owners. Over 70% of privately owned land in BC (excluding private forests) is owned by farm and ranch families. From these lands, locally produced food and agricultural products are generated and satisfy a most basic human need while making an important contribution to the economic well being of local communities and the province.

But agriculture is more than this. It is a defining characteristic for many regions. The orchards and vineyards of the Okanagan, fields of grain in the Peace River are inseparable images of these areas.

Yet, many of us have lost a direct connection with farming and food production. With this reality comes the challenge of maintaining on-going links with our farm communities in order to ensure an understanding of how day-to-day policies, proposals, and long term goals might affect the business of farming. In short, it is important to ensure agriculture has a place in the planning mainstream and that farming continues to be part of the fabric of our communities.

Making the Connection

To meet the challenge of ensuring farm connections, a growing number of municipalities and regional districts have established Agriculture Advisory Committees (AACs). An AAC is appointed and functions similarly to other advisory committees of council or the regional board. The key difference is that the AAC members will be predominantly drawn from the farm / ranching community and the committee will have a focus on agricultural issues. To date about a dozen local governments have appointed AACs to work with councils and regional boards and their staff.

An Important Contribution

With an Agriculture Advisory Committee, council or the board can seek the advice of knowledgeable members of the farm community at any time, on any issue that might affect agriculture. Most AACs advise local governments in two broad areas:

- day-to-day issues
- broader initiatives



Agricultural Advisory Committee meeting

Types of Advice

Day-to-Day Issues:

- proposed bylaw and official plan amendments;
- applications under the *Agricultural Land Commission* and *Soil Conservation Acts*;
- parks & recreation, transportation, and growth management plans and other land use proposals;
- water management issues;
- the effectiveness of programs such as insect and weed control; and
- major reviews of official plans and bylaws.

Broader Initiatives:

- steer to completion agricultural studies and agricultural area plans;
- assist with the development of 'edge' policies to enhance land use compatibility;
- advise on the need and appropriateness of farm bylaws;
- study and report on farm infrastructure needs;
- improve opportunities for joint funding of drainage or irrigation works;
- study long-term impacts of transportation corridors and park and recreation proposals;
- raise agricultural awareness;
- assist with farm tours and on-farm visits; and
- contribute to Agricultural in the Classroom initiatives.

Who Should be Involved?

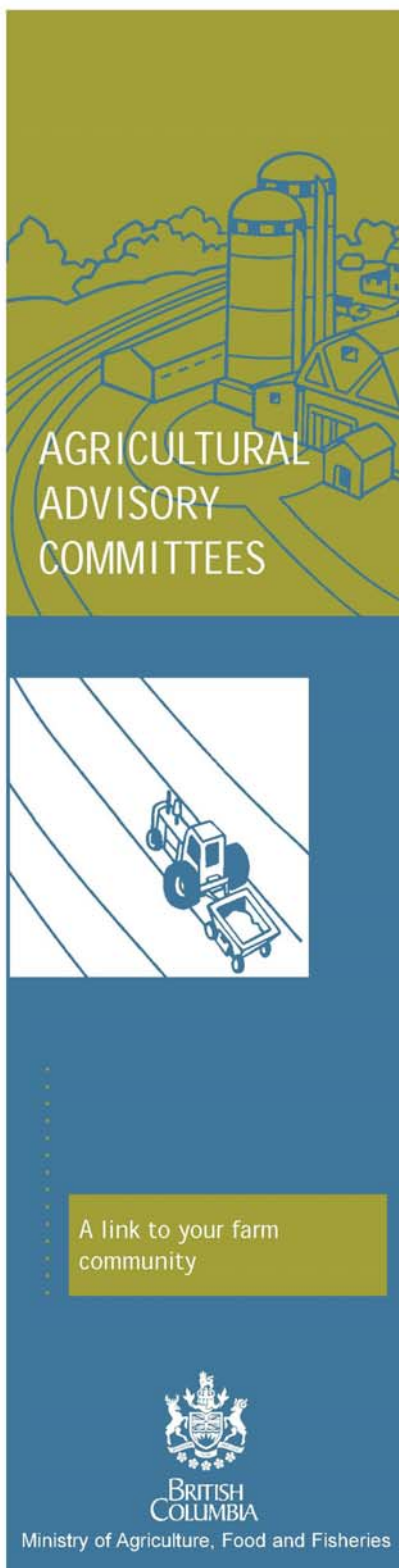
To gain the best advice on agricultural issues, the Committee should draw heavily upon individuals from the farm community. Diversity is a hallmark of BC agriculture. As a result it is important that as many different commodities as possible are represented on the AAC.

While the majority of the AAC members should come from the farm community, other participants may be considered:

- a member of council or the board
- a representative from the processing or distribution sector;
- a 'cross-over' member from another municipal or regional board committee to provide linkage
- university or community college representative involved with agricultural courses or research.

Non-voting participants/resource people:

- municipal or regional district planning staff
- Ministry of Agriculture and Food (MAF) and Agricultural Land Commission (ALC) staff
- secretarial staff services



MODEL TERMS OF REFERENCE

Role or Purpose

- The purpose of the Agricultural Advisory Committee is to advise the (regional district / municipality) on agricultural issues within the (region / community) including:

(Choose and add other items as appropriate)

- ◆ applications initiated under the Agricultural Land Commission Act (ALCA) and Soil Conservation Act (SCA)
- ◆ applications to amend official community plans and bylaws
- ◆ assisting with comprehensive reviews or development of:
 - ◆ bylaws;
 - ◆ official community plans;
 - ◆ agricultural area plans
 - ◆ farm 'edge' policies
 - ◆ park and recreation plans; and
 - ◆ transportation plans;
- ◆ major development proposals with potential impact on agriculture;
- ◆ irrigation, drainage and other water management issues; and
- ◆ effectiveness of noxious insect and weed control regulations and programmes.

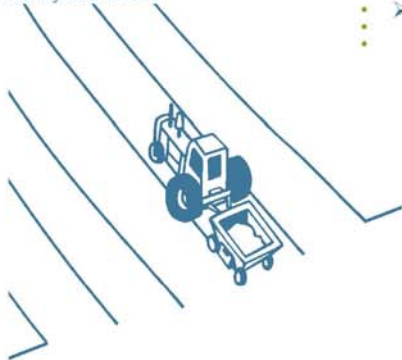
- In the review of ALCA and SCA applications and bylaw amendments, the Committee shall comment on the following:

- ◆ the effect of the proposal on the agricultural potential of the subject property;
- ◆ the effect of the proposal on adjacent ALR properties and surrounding agricultural production;
- ◆ the effect of the proposal on water resources and transportation issues;
- ◆ a rating of the priority or impact of the application on the maintenance of the ALR;
- ◆ where appropriate, possible alternatives to the proposal; and
- ◆ the identification of issues relating to the protection of the ALR lands specific to the application, including the use of appropriate buffering techniques aimed at enhancing land use compatibility.

(Additional suggested roles of the Committee)

- The Agricultural Advisory Committee may also make recommendations on:
 - ◆ raising awareness of agriculture;
 - ◆ enhancing an understanding of agriculture's role in the local and /or regional economy;
 - ◆ addressing competition for the agricultural land base;
 - ◆ examining legislation to identify improvements to support agriculture;
 - ◆ improving opportunities for joint funding of drainage and irrigation works;
 - ◆ reporting on the impacts of park and recreation proposals on agriculture; and
 - ◆ identifying and effecting change regarding the impact of transportation and utility corridors on agriculture.

The Model Terms of Reference have been drawn from the Agricultural Land Commission Document: *Planning for Agriculture - Resource Materials* which developed the Model Terms of Reference from a review of existing Terms of Reference of several operating Agricultural Advisory Committees



A link to your farm
community

Membership

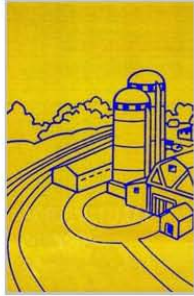
- The Committee shall consist of () members appointed by the (*regional district / municipality*)* representing a diversity of commodity groups, the processing and distribution sectors and a member of (*council or the regional board*).

*Committee members may be recommended by a Farmers' Institute or other local agricultural organizations.

- Appointments to the Committee will be for () years.
- The Chair (and Deputy Chair or provision to appoint an Acting Chair in the Chair's absence) shall be elected from the Committee membership at the first meeting of each year. The Chair shall be entitled to vote at all meetings.

Meeting Procedures

- The Committee shall meet (*...frequency*)
(Optional items may include whether or not meetings are open to the public and where they shall be held.)
- At all meetings () members shall constitute a quorum.
- Executive and secretarial support for the Committee will be provided by
- An agenda for the Committee will be prepared by (*specify*) and mailed to Committee members one week in advance of their meeting.
- The Committee will report to (*specify*)
- Committee members having a priority interest in an application or who are personally affected by an application /applicant must step aside from the discussion and subsequent vote on that particular matter.



Some Ideas!

Agricultural Advisory Committees

Agricultural Advisory Committees (AACs) around the province are proving to be an effective way for local governments to link with their farm and ranch communities. Each AAC, however, functions a bit differently. As more AACs are appointed and their years of experience grow, there are some common factors that can contribute to a well run committee providing useful advice to their council or regional board.

Here are a few basics that can play a role in adding to a committee's effectiveness.

TERMS OF REFERENCE

1. A local government has to make a clear commitment to the AAC ... it is *their* committee.
2. It is important to develop a clear "terms of reference" for the committee, while at the same time providing for a degree of flexibility in the role of the committee to meet local needs. The Ministry of Agriculture and Lands has developed a model terms of reference that may be of assistance.

AAC APPOINTMENTS

3. The AAC should establish guidelines concerning conflict of interest. If established at the outset, new members will clearly understand situations, where they should absence themselves from discussion. Where applicable, the guidelines listed under the Community Charter should be followed.
4. Appointments to the committee should represent committed and progressive members of the farm or ranch community.
5. An effort should be made to draw from a cross-section of commodity types and industry associations that are important within the municipality or regional district in which the AAC serves.
6. When forming an AAC, a local government may wish to draw upon a local Ministry staff person, a local farmers' institute or other agricultural group for advice on the membership of the AAC. This can be a helpful way to 'get in touch' with the agriculture community.
7. Having a municipal councillor or regional board director appointed to sit on the AAC as a council / board liaison person can contribute to building strong relationships between the AAC and council or the regional board.
8. Consider designating a member of the agricultural community as Chair of the committee as this can help lead to fruitful discussion and effective decision making amongst the committee members.

INTER-RELATED ISSUES

9. If the agricultural area includes other major land uses such as rural residential, forestry or recreation, consider including other representatives on the committee from these interests.
10. Where there are inter-related issues and a local government has several committees, consider having joint meetings or "cross-over" committee members. For example, if a strong relationship exists between environmental and agricultural issues, a person may be appointed to sit on both the Agricultural and Environmental Committees. Other examples where joint meetings or cross-over members may be considered include planning advisory, parks and recreation, transportation, healthy community or economic development committees or commissions.

LOCAL
GOVERNMENT
STAFF
ASSISTANCE

11. Dedicating a local government staff person to assist the committee can help ensure the committee functions smoothly. The staff person could help distribute agendas and other information in a timely fashion, book meeting rooms, provide background information, record minutes or notes of decisions by the committee and forward them to council or the board in an appropriate manner.

MINISTRY & ALC
ASSISTANCE

12. The role of the Ministry and Agricultural Land Commission staff should be considered. Some committees have invited local Ministry and Commission staff to sit on the AAC as non-voting staff resource persons. Others call upon them to attend meetings periodically, depending upon the topic under consideration, or to sit on an agricultural area plan steering committee. The Ministry and the Commission will make every effort to assist the Committee in any way considered appropriate by the AAC and the local government they represent.

MEETING
SCHEDULES

13. Farming and ranching are time sensitive both from a daily and seasonal perspective. The AAC, when determining its meeting schedule, should carefully consider the most appropriate meeting times. There may be certain times of the year (e.g. planting/harvesting) when meetings are intentionally less frequent.

ROLE OF
THE AAC

14. In some cases, the role of the AAC largely consists of providing advice on official community plan or zoning bylaw amendments and applications involving the ALR that are forwarded by council or the board. Other committees may also assist with a variety of other tasks such as: supporting agricultural awareness efforts; functioning as a steering committee to aid in developing an agricultural area plan; reporting on drainage or irrigation issues; commenting on local agriculture-recreation relationships or assisting with the development of other policy initiatives associated with agriculture.
15. An AAC is appointed to provide clear, timely and well thought out advice on agriculture and related topics to their council or regional board. It must be clearly understood that the AAC is an advisory committee of their local government. Councils and Regional Boards, however, are often faced with difficult and complex decisions involving a number of community interests. As a result, there will be times when an AAC's advice is only partially followed or not acted upon at all.
16. In the case of new AACs, it may take time for the committee to "find its feet" and for council or the board to feel comfortable with its new committee. It is important for all concerned to show a high degree of patience.

