Burk's Fall & Area Agricultural Profile 2017

Prepared by:

McSWEENEY

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Burk's Falls & Area
Agricultural Profile

Burk's Falls & Area Community Economic Development

Prepared by:

McSweeney & Associates
201 - 900 Greenbank Road
Ottawa, Ontario
CANADA K2J 1S8
Phone: 1-855-300-8548
Fax: 1-866-299-4313
Email: consult@mcsweeney.ca
Website: www.mcsweeney.ca

Table of Contents

List of Tables and Figures

1 Trends in Agriculture

Agriculture Trends in Ontario

The following two tables illustrate the changes in employment in the agricultural sector for Ontario. These tables show agriculture as an economic development challenge for Ontario but also a potential opportunity, as the province grows its food processing and manufacturing industries. Over the past two census periods (10 years), Ontario has experience a decline in total farmland, number of farms and total number of employees with agricultural work (Table 1). However, this industry is not shrinking in every way, rather it is shifting in the way it operates. Total farm receipts increased by 27% and value of capital increased by 54% in Ontario between 2011 and 2016.

The total value of capital has increased, driven by an increase in the value of land and buildings; rising cost of farming equipment (i.e. seeders, combines, harvesters, tractors, etc.); and an increase in the value of livestock and poultry. As agriculture has becomes machinery and technology intensive, labour has shifted to manufacturing, processing and wholesaling of agricultural products (Table 2).

Table 1: Changes in Primary Agriculture Employment, Ontario, 2010-2015

Employment Trends (% Change) - Primary Agriculture	
Primary Agriculture (Crop, Animal & Support Industries)	-8%
Crop Production	-9%
Animal Production	-14%

Source: OMAFRA Agriculture as an Economic Development Opportunity, November 2016

Table 2: Changes in Employment Beyond Primary Agriculture, 2010-2015

Employment Trends (% Change) - Beyond Primary Agriculture	
Ontario Food and Beverage Stores (Retail Food)	6%
Ontario Food and Beverage Processing (Processors)	0.5%
Ontario Food Services	21%
Ontario Food, Beverage Wholesaling	22%
Total Agri-Food Sector	11%

Source: OMAFRA Agriculture as an Economic Development Opportunity, November 2016

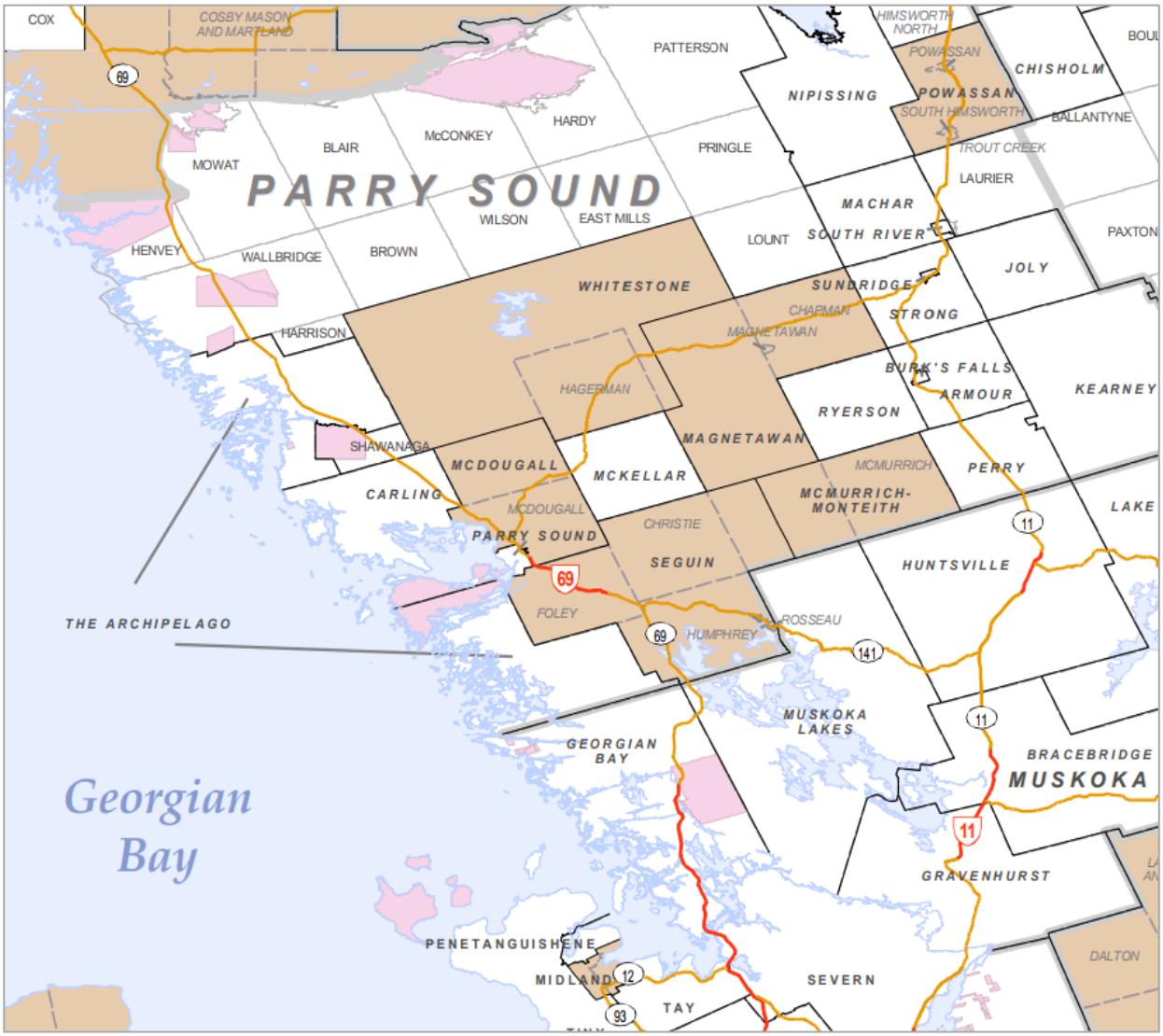
Agriculture in the Burk's Falls & Area*

This section presents a profile of the agriculture sector in the Burks Falls Area, which includes The Townships of Armour and Ryerson. This area will be compared and contrasted with statistics of Parry Sound District, and Ontario. Based on the 2016 Census, there were 43 farms in the Burk's Falls & Area with nearly 13,500 acres of farmland, 22% of which is land in crop production, and 30% of which is wet lands and woodlands.

With respect to agriculture, the Burk's Fall Area has experienced similar patterns as Ontario; decreases in the number of farms, farm land and employees in agriculture; and growth in farm receipts and market value of total farm capital. The following detailed statistical analysis of the Census of Agriculture data will depict a clearer picture of the current trends and opportunities in agriculture in the region.

Figure 1 depicts the region of interests; the Burk's Falls & Area, which includes Burk's Falls Village, Township of Armour and Township of Ryerson, contained within the District of Parry Sound.

Figure 1: Reference Map for the Cochrane/Unincorporated Designation



Source: The Ministry of Municipal Affairs 2009 online at: http://www.mah.gov.on.ca/Page1595.aspx

Number and Size of Farms

The number of farms in Ontario, The Burk's Falls & Area as well as in Parry sound decreased over the past census periods. This is a common trend, as the number of farms in Ontario has steadily declined over the last twenty years—from 67,520 farms in 1996 to 49,600 in 2016, that is a loss of 36% of farms.

Table 3: Number of Farms, 2016

Region	2011	2016	% Change 1996-2011
Ontario	51,950	49,600	-5%
Burk's Falls & Area*	**55**	**43**	**-22%**
Parry Sound	326	252	-23%

Source: Statistics Canada Agriculture Census, 2011, 2016. http://bit.ly/2dbolPA

The amount of total farm land in the Burks Falls & Area can be approximated to 10,834 acres in the 2016 census of agriculture. As shown in Table 4, total farm area decreased by 18% between 2011 and 2016 in the Burk's Falls & Area, whereas it only decreased by 3% in Ontario, and 14% Parry Sound

Table 4: Total Farm Area (approximate acreage), 2016

Region	2011	2016	% Change 2011-2016
Ontario	14,265,966	13,880,090	-3%
Burk's Falls & Area*	**16,064**	**13,234**	**-18%**
Parry Sound	108,676	93,482	-14%

Source: Statistics Canada Agriculture Census 2011-2016. http://bit.ly/2dbolPA

In 2016, the most common farm size in the Burk's Falls & Area is between 70 to 129 acres. The same is true for Ontario and Parry Sound, however, Burk's Falls & Area has a larger percentage or farms between 130-240 acres, compared to Parry Sound and Ontario.

Table 5: Farms by Area in Crops and Summerfallow (excluding Christmas trees), 2016

Acre Range	Ontario	Parry Sound	Burk's Falls & Area*
Total number of farms	49600	252	43
Farms under 10 acres	6%	4%	7%
Farms 10 to 69 acres	25%	14%	12%
Farms 70 to 129 acres	22%	19%	23%
Farms 130 to 179 acres	9%	12%	14%
Farms 180 to 239 acres	9%	13%	14%
Farms 240 to 399 acres	12%	19%	16%
Farms 400 to 559 acres	6%	6%	7%
Farms 560 to 759 acres	4%	8%	5%
Farms 760 to 1,119 acres	3%	4%	0%
Farms 1,120 to 1,599 acres	2%	1%	0%
Farms 1,600 to 2,239 acres	1%	0%	2%

Source: McSweeney & Associates and 2016 Statistics Canada Agriculture Census http://bit.ly/2dbolPA

Economic Value of Agriculture

In 2015, the sum of Burk's Falls & Area total farm capital plus total gross receipts of farms amounted to nearly 13 million dollars (Table 6). Although the economic value of agriculture is declining in Parry Sound, it continues to increase in Burk's Falls & Area.

Table 6: Total Farm Capital & Gross Receipts (excluding forest products sold) ($), 2015

Region	Total gross farm receipts ($) 2016	% Change in receipts 2011-2016	Total Farm Capital ($) 2016	% Change in receipts 2011-2016
Ontario	15,126,845,283	27%	131,785,355,823	54%
Burk's Falls & Area	**1,193,619**	**12%**	**11,980,824**	**20%**
Parry Sound	8,698,627	-19%	165,128,414	**-9%**

Source: McSweeney & Associates and 2016 Statistics Canada Agriculture Census http://bit.ly/2dbolPA

Age of Farm Operators

The Burk's Fall Area has approximately 40 farm operators (Note the census rounds to the nearest 5). The average age of a farm operator is above 60 in the Burk's Falls & Area. There are only 5 or less operators under the age of 35.

Table 7: Average Age of Farm Operators, 2016

Region	Average Age	Total Farm Operators
Ontario	55.3	70,470
Burk's Falls & Area	**63.3**	**40**
Parry Sound	59.5	365

Source: McSweeney & Associates and 2016 Statistics Canada Agriculture Census http://bit.ly/2dbolPA

Major Crops

In 2016, Burk's Falls & Area had the highest percentage of farm land in tame hay and fodder crops; 18% of farm land. As shown in Table 8, the data suggests oats, alfalfa, potatoes, and mixed grains are also important in the region.

Table 8: Major Hay and Field Crops, 2016

Region	Tenure of Land	Number of Farms	Acres	% of Total Acres
Ontario	**Total**	**49,600**	**13,880,090**	**100%**
	Soybeans	19,629	2,783,443	20%
	Corn	18,737	2,457,664	18%
	Wheat	13,422	1,202,309	9%
	Alfalfa and alfalfa mixtures	17,214	1,119,194	8%
	All other tame hay and fodder crops	9,373	602,020	4%
Burk's Falls & Area*	**Total**	**43**	**13,234**	**100%**
	All other tame hay and fodder crops	19	2,330	18%
	Alfalfa and alfalfa mixtures	7	447	0.1%
	Oats	4	n/a	n/a
	Potatoes	2	n/a	n/a
	Mixed Grains	2	n/a	n/a
Parry Sound	**Total**	**252**	**93,482**	**100%**
	All other tame hay and fodder crops	151	16,925	18%
	Alfalfa and alfalfa mixtures	32	1,769	2%
	Oats	31	513	1%
	Potatoes	10	11	0%
	Mixed Grains	8	291	0%

Source: McSweeney & Associates and 2016 Statistics Canada Agriculture Census http://bit.ly/2dbolPA

Crops such as corn, soybeans, canola, buckwheat, flax and barley can thrive in cooler climates. Eastern Ontario municipalities seeking to diversify crops will benefit from long-term trend of warming climate conditions and increased tile drainage. Market factors, such a favourable exchange rate with the United States, also provide an opportunity to increase production of cereals and other crops in Ontario to supply local, domestic and international markets[1]. The production of non- GMO and organic products is a viable niche market opportunity for new farmlands, which benefit from being surrounded by forests and never before sprayed soils.

[1] OMAFRA, July 2016. "Northern Ontario Agriculture, Aquaculture and Food Processing Sector Strategy Discussion Paper". Found online at: http://www.omafra.gov.on.ca/english/policy/northernagrifoodpaper.htm

Major Livestock

In 2016, the major livestock produced in the Burk's Falls & Area was cattle and calves. With 14 farms of 43 farms reporting this type of agriculture, cattle and calves' operations represent 33% of farms (Table 9). In contrast with the figures from the 2011 Census of agriculture, total cattle and calf farms decreased from 19 to 14 in 2016.

The number of animals for many of the livestock tables are suppressed to maintain the anonymity of the farm. An minimum expected number has been approximated based on previous year stock and stock disclosed.

Table 9: Major Livestock, 2016

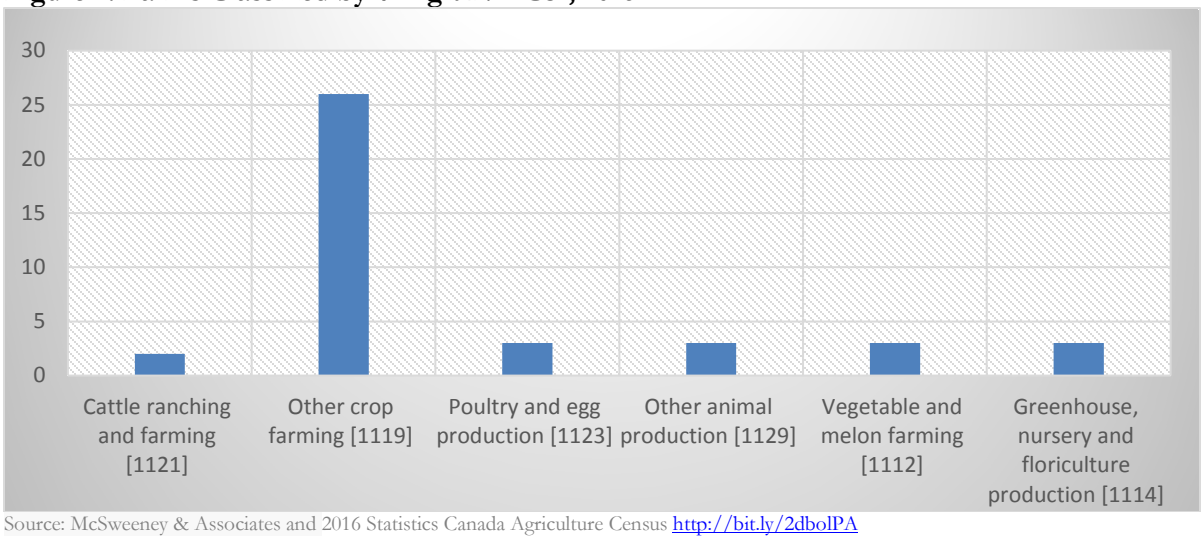
Region	Tenure of Land	No. of Farms reporting	Number of Animals
Ontario	**Total number of farms**	49,600	**N/A**
	cattle and calves	17,452	1,623,710
	Chickens and Hens	8,246	50,759,994
	Horses and ponies	9,294	64,536
	Pigs	2,760	3,534,104
	Sheep and Lambs	3,119	321,495
Burk's Falls & Area	**Total number of farms**	**43**	**N/A**
	cattle and calves	14	375+
	Chickens and Hens	9	793+
	Horses and ponies	9	50
	Pigs	29	30+
	Sheep and Lambs	4	50+
Timiskaming	**Total number of farms**	**252**	**N/A**
	cattle and calves	103	3762
	Chickens and Hens	65	2,729
	Horses and ponies	64	316
	Pigs	17	100+
	Sheep and Lambs	24	1556

Source: McSweeney & Associates and 2011 2016 Statistics Canada Agriculture Census http://bit.ly/2dbolPA

2 Economic Base Analysis

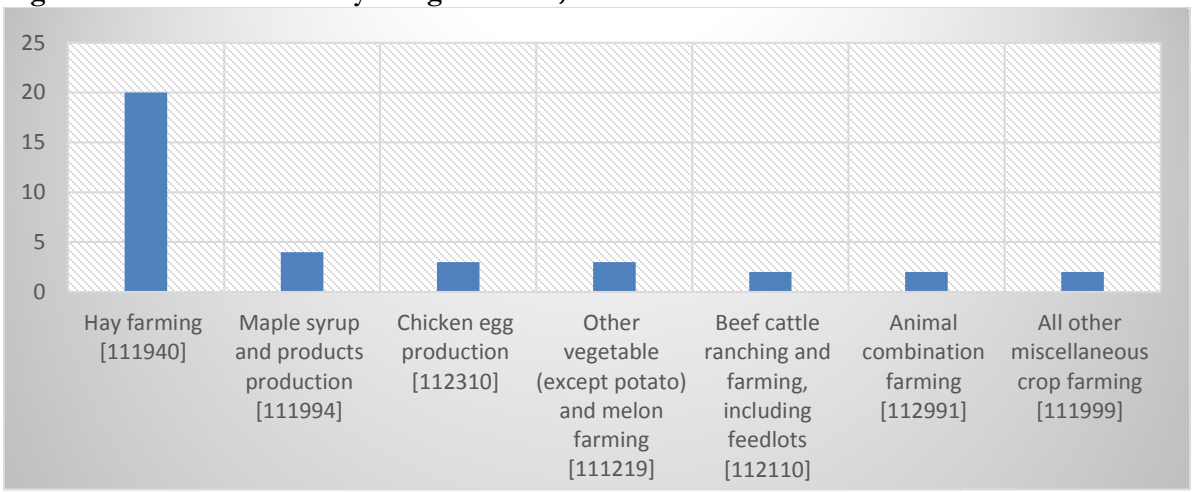
Figure 2 shows the top five sectors employed by farms in the Burk's Falls & Area region, classified by four-digit NAICS codes. As shown in the bar graph, Other Crop Farming[2] is by far the most common industry classification, which more in-depth analysis is needed. Figure 3 illustrates the use of land by 6-digit industry classification; hay, maple syrup and products production, and chicken egg production are the most common uses of farm land in the Burk's Falls & Area as of 2016.

Figure 2: Farms Classified by 4 Digit NAICS[3], 2016



Source: McSweeney & Associates and 2016 Statistics Canada Agriculture Census http://bit.ly/2dbolPA

Figure 3: Farms Classified by 6 Digit NAICS, 2016



Note: All other miscellaneous crops include. cash crops - wheat, corn, rice, soybeans, and other grains and oilseeds.
Source: McSweeney & Associates and 2016 Statistics Canada Agriculture Census http://bit.ly/2dbolPA

[2] This industry group comprises establishments, not classified to any other industry group, primarily engaged in growing crops, such as tobacco, peanuts, sugar beets, cotton, sugar-cane, hay, agave, herbs and spices, mint, hops, and hay and grass seeds. Combination crop farming and the gathering of maple sap are included in this industry group.

[3] North American Industry Classification System (NAICS): http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=307532

Location Quotient (LQ) can be used to gauge the concentration of an industry within a community, compared to a benchmark (i.e. province or region). This helps to identify unique attributes of a community. Here the level of farm concentration (or specialization) in an agricultural sector in the Cochrane District*, is compared to Ontario as a benchmark. In other words, the LQ is employed to uncover the question: does the region have proportionately more or less farms in a specific sector than Ontario?

$$LQ_{sector} = \frac{number\ of\ sector\ farms\ in\ the\ District*}{total\ number\ of\ farms\ in\ the\ District*} \div \frac{number\ of\ sector\ farms\ in\ Ontario}{total\ number\ of\ farms\ in\ Ontario}$$

An LQ between 0.75 and 1.25 signifies a normal industry concentration, higher than 1.25 (shown in green) implies there is a relative specialization, and lower than 0.75 (shown in red) implies there is a relative shortage in the region.

Table 10: Agricultural Sectors, Location Quotients, 2016

NAICS	Ontario	Parry Sound	Burk's Falls & Area	LQ Compared to Ontario	LQ Compared to Parry Sound
Total number of farms	49600	252	43	/	/
Other crop farming [1119]	14%	55%	60%	4.2	1.1
Sheep and goat farming [1124]	2%	4%	5%	2.1	1.2
Poultry and egg production [1123]	4%	3%	7%	1.9	2.2
Vegetable and melon farming [1112]	4%	4%	7%	1.9	1.8
Greenhouse, nursery and floriculture production [1114]	4%	4%	7%	1.7	1.8
Fruit and tree nut farming [1113]	3%	1%	2%	0.8	2.9
Other animal production [1129]	12%	12%	7%	0.6	0.6
Cattle ranching and farming [1121]	21%	16%	5%	0.2	0.3
Hog and pig farming [1122]	2%	0%	0%	0.0	0.0
Oilseed and grain farming [1111]	34%	1%	0%	0.0	0.0

Source: McSweeney & Associates and Census of Agriculture 2016.

According to 2016 Census of Agriculture data analysis of farms classified by 4-digit NAICS (Table 12), the following sectors have a concentration in the region when compared to the rest of Ontario:

- Other crop farming [1119]
- Sheep and goat farming [1124]
- Poultry and egg production [1123]
- Vegetable and melon farming [1112]
- Greenhouse, nursery and floriculture production [1114]

Using location quotient calculations, Table 11 highlights sub sectors (at the 6-digit NAICS) with a relative concentration in green; and sub sectors insufficient for local demand are highlighted in red.

Table 11: Agricultural Sub Sectors, Location Quotient, 2016

NAICS	Ontario	Parry Sound	Burk's Falls & Area	LQ Compared to Ontario	LQ Compared to Parry Sound
Total number of Farms	**49,600**	**252**	**43**	/	/
Mushroom production [111411]	0%	1%	2%	13.0	2.0
Maple syrup and products production [111994]	1%	6%	9%	11.8	1.6
Chicken egg production [112310]	1%	3%	7%	5.4	2.5
Hay farming [111940]	9%	42%	47%	4.9	1.1
Goat farming [112420]	1%	2%	2%	3.3	1.5
Other vegetable (except potato) and melon farming [111219]	3%	4%	7%	2.0	2.0
Floriculture production [111422]	1%	2%	2%	2.0	1.5
Sheep farming [112410]	2%	2%	2%	1.5	1.0
All other miscellaneous crop farming [111999]	3%	7%	5%	1.3	0.7
Animal combination farming [112991]	4%	5%	5%	1.2	1.0
Nursery and tree production [111421]	2%	1%	2%	1.1	2.0
Horse and other equine production [112920]	6%	5%	2%	0.4	0.5
Beef cattle ranching and farming, including feedlots [112110]	14%	14%	5%	0.3	0.3

Source: McSweeney & Associates and Census of Agriculture 2016.

The following sub sectors may represent a future opportunity for further development given that they have a concentration relative to Ontario and account for more than 1% of farms in Burk's Falls & Area:

- Mushroom production
- Maple syrup and products production
- Chicken egg production
- Hay farming
- Goat farming

3 Soil Capacity in Burk's Falls & Area

The majority of the soil in Parry Sound District consists of rock with a thin covering of stony and gravely material derived from and other hard rock, with varying soil depths. The Monteagle[4] gravelly sandy loam soil occurs more frequently than any other in this District. It occurs on the rocky upland where rock outcrop is frequent, and where the soil cover is generally thin. The Monteagle soil developed from sandy granitic materials which are usually ten to twenty feet deep. Some variations in the soil material depend on the degree of sorting that has been done by water. The soil near Highway 11 contains more sand, gravel and cobbles than that farther west.

Burk's Falls & Area has within its boundaries Magnetawan[5] soils which are well drained, with clay and silt as the dominant material. The upper 10 or 12 inches are soft and friable and therefore relatively easy to work, below that it has the nature of a hard pan, specially in dry seasons. These soils are used in the production of hay, oats and other mixed grains.

Burk's Falls & area also contains a significant amount of Muck soils[6]. These soils consist of over 12 inches of black, well decomposed organic material presumably derived from grasses and sedges. They occupy the lowest positions in the landscape and are therefore too cold and wet for agricultural crops. Given a high enough demand for organic vegetables, these soils could be developed. Otherwise, these soil areas in the District are best used for wildlife and water reservoirs.

Rock & Wendigo sandy loam is also widely found in Burk's Falls & Area. These are the most acid soils that occur in this region and since they are composed of nearly pure sand they have little value for agricultural purposes. However, due to ease of clearing and workability, some of these soils are used for growing agricultural crops. Small areas are seeded both to hay and grain crops and subsequently used for pasture. Potatoes can be grown and
yields are high where there is sufficient moisture and heavy fertilization. Blue berries and other specialty crops could be seeded in this type of soil. However, much of these soils are covered by trees and would require clearing land, particularly so in Township of Armour.

More specifically, the Canadian Lands Inventory has classified the land's soil capacity for agriculture in Burk's Falls & Area as Class C & D. This classification would suggest that the soil in the is area is best suited for pasture and forage product. However, the broad classification does not take into account the specific altitude, topographies and complex soils of small area, hence there might be apparent contradictions with current levels of agriculture.

Detailed Soil Survey Reports for Ontario indicate the existence of class 3,4, 6,7[7], and Organic soils in Burk's Falls & Area. These soil classes are restrictive of the range of crops possible, or require at least some special conservation practices. There is a significant amount of Organic soils, which present an opportunity for the region to supply special crops in the organic markets such as barley and blue berries.

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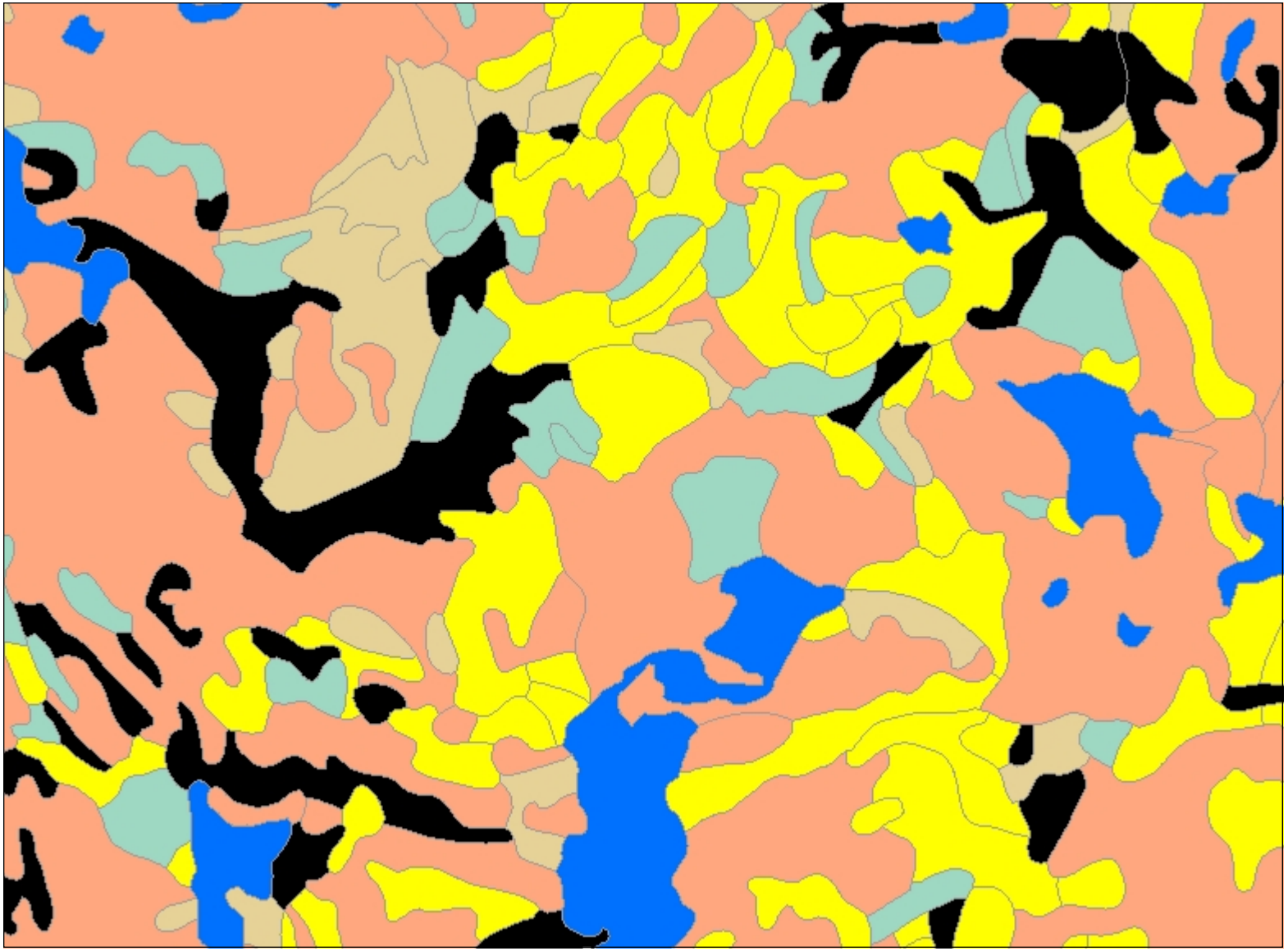
[4] Soil Survey of Parry Sound District. Report No 31 of the Ontario Soil Survey. Online: http://sis.agr.gc.ca/cansis/publications/surveys/on/on31/on31_report.pdf
[5] Ibid.
[6] Ibid
[7] Land Capability Class Descriptions: http://sis.agr.gc.ca/cansis/nsdb/cli/classdesc.html



Legend

Parcels
- Assessment Parcel
- Farm Tax Rated Parcels - Current Year
- Farm Tax Rated Parcels - Previous Year

Live Data

Administrative
- Conservation Authority
- Geographic Township
- Lots
- Ontario Public Sector Region

Municipality
- Lower or Single Tier Municipality
- Upper Tier or District Municipality

Crown Land Primary Land Use Area
- Conservation Reserve
- Enhanced Management Area
- Forest Reserve
- General Use Area
- Protected Area - Far North
- Provincial Park
- Provincial Wildlife Area
- Recommended Conservation Reserve
- Recommended Provincial Park
- Wilderness Area

Environment/Base
- Drain Connection
- ANSI
- NTS 50K Grid
- Quaternary Watersheds
- Tertiary Watersheds
- Secondary Watersheds
- Soils - Outline

Agricultural Tile Drainage - System Type
- Random
- Systematic

Constructed Drain Type
- Closed/Tiled
- Open or Unknown

Controlled Drainage Class
- Fair
- Good
- Poor

Drain Classification - DFO Class Authorization Type
- A
- B
- C
- D
- E
- F

Soils - CLI
- Class 1
- Class 2
- Class 3
- Class 4
- Class 5
- Class 6
- Class 7
- Organic Soil
- Unclassified
- Water

Soils - Drainage
- Not Applicable
- Imperfectly Drained
- Moderately Well Drained
- Poorly Drained
- Rapidly Drained
- Variable
- Very Poorly Drained
- Very Rapidly Drained
- Well Drained
- Water

Soils - Hydrologic Soil Group
- A
- B
- C
- D

N

0 5.1 km

Ontario

Map Created: November 2, 2017

Map Center: 45.58962 N, -79.40734 W