Land use planning and agriculture: Measuring prime agricultural land conversion in Wellington County, Ontario

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Rural Ontario is in a constant state of change as economic, environmental, and political pressures impact the viability and resilience of many rural, agricultural communities. As farmland may be more valuable when converted for non-agricultural purposes, agricultural areas are often affected negatively by land development pressures. Farmland is frequently converted for residential, commercial, or aggregate land uses, significantly impacting agricultural viability.

The exact amount of Ontario farmland converted for non-agricultural use is not well understood. Currently, no standard, province-wide method of quantifying farmland conversion has been established. This research sought to develop and employ a new method of quantifying and monitoring farmland conversion by measuring the amount of prime agricultural land converted for the purposes of non-agricultural development. Prime agricultural land is defined as farmland which is comprised mainly of soil classes 1, 2 or 3, as identified in the Canada Land Inventory (Environment Canada 1972). Soils in these classes can support high agricultural productivity and comprise only 5% of Canadian land. The method developed consisted of reviewing Official Plan Amendments (OPAs) issued between the years 2000 and 2014 to track planning decisions that removed prime agricultural land from agricultural use. This method was applied to 10 counties and regions across Southern Ontario, and 7 additional sites are currently in progress. All of the counties and regions examined were located within the Greater Golden Horseshoe (GGH), which wraps around Lake Ontario from Niagara to Peterborough, and extends upward to Georgian Bay. The GGH is Canada's largest urban area and a center of economic growth, populated by more than 9 million residents and representing two-thirds of Ontario's gross domestic product (GDP). Below, a brief overview of the research findings to date is provided, along with an examination of findings specific to Wellington County.

Land development pressures affect farmland throughout Southern Ontario, with counties and regions in proximity to the Greater Toronto Area (GTA) facing the most significant challenges in retaining farmland for agricultural purposes. To accommodate future population growth and urban expansion, developable land is needed, and often it is farmland that is converted to meet these demands.

The permission process for the redesignation and development of prime agricultural land is initiated when an OPA is submitted to a municipal, regional, or county planning department. The approval of this OPA permits the land's redesignation and its subsequent development. Tracking OPAs can provide an accurate reflection of the amount of prime agricultural land converted for non-agricultural land uses.

For each county and region within the area studied, every OPA issued between 2000 and 2014 was reviewed and each amendment involving prime agricultural land was recorded. The time period studied is particularly significant, as it includes planning decisions made before and after strategic provincial land-preservation policies were enacted. These policies include the Greenbelt Plan, implemented in 2005, which sought to preserve permanently a stretch of Southern Ontarian prime agricultural land (as well as hydrological and ecological features) from fragmentation and redesignation (Ministry of Municipal Affairs and Housing, 2005). The 14-year period studied therefore allows for an analysis of the efficacy of these policies in preserving prime agricultural land.

This study classified prime agricultural land conversion into three redesignation types: development, rural and site-specific. The development classification denoted the conversion of prime agricultural land for residential, industrial, and commercial purposes which did not permit continued agricultural production on the land. The rural classification denoted the conversion of prime agricultural land for other, non-prime agricultural uses (including use as

secondary farmland and major open spaces). Finally, the site-specific classification denoted land which retained an agricultural designation but permitted additional use (such as accommodations, recreation, or agricultural services). **Table 1** provides a summary of the total amounts of prime agricultural land converted to each of these 3 redesignation types by county or region.

The preliminary results of this research indicate that prime agricultural land continues to be converted through OPAs in all counties and regions studied, with the majority of prime agricultural land converted being put to non-agricultural uses. Development was the dominant designation type, accounting for 80.3 % (17,030 of 21,107 ha) of prime agricultural land converted. Moreover, areas in closer proximity to the GTA accounted for a large proportion of prime agricultural land converted. The York, Peel, and Halton regions, for example, accounted for 63.2 % (13,332 of 21,107 ha) of prime agricultural land converted, even though they accounted for only 14.8 % (32 of 216) prime agricultural land-related OPAs issued. This reflects the greater developmental pressures these areas face as their populations continue to grow. This study also points to the effectiveness of provincial land use planning and conservation policies, including the 2005 Greenbelt Plan. Importantly, this study has thus far found that no farmland protected by the Greenbelt Plan has been converted through OPAs, thereby demonstrating the policy's efficacy.

Wellington County, specifically, faces considerable land development pressures, for it is both a growing city in proximity to the GTA and contains a large amount of farmland. As such, some farmland within the county has already been developed for non-agricultural uses, and even more remains under threat of similar development. Despite

these growth pressures, Wellington County has converted less prime agricultural land for non-agricultural uses than several counties and regions within the Greenbelt (see **Table 1**). From 2000 to 2014, 898 ha of prime agricultural land were converted within Wellington County, most of which were converted for residential development and urban expansion. It is important to note, moreover, that none of these conversions occurred after the enactment of the Greenbelt Plan in 2005, further indicating the success of this policy.

As rural Ontario continues to face the threat of agricultural land loss, this research provides a new way of monitoring and quantifying the conversion of prime agricultural land. Results from this research will provide insights for future policy decisions and for the preservation of Ontario's prime agricultural land.

References

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Table 1. Redesignation of prime agricultural land in Southern Ontario by county or region.

County or region	Number of OPAs approved which redesignated prime agricultural land	Redesignation type		
		Development (ha)	Rural (ha)	Site-specific (ha)
Brant County	4	47	0	0
Durham Region	5	1,723	56	18
Halton Region	12	2,656	0	287
Huron County	2	25	0	0
Niagara Region	42	943	240	849
Peel Region	4	3,274	0	127
Perth County	57	217	0	415
Simcoe County	47	2,100	82	162
Wellington County	27	812	0	86
York Region	16	5,233	1,755	0
Total	216	17,030	2,133	1,944