Classifying Exurbia and the Limits of Regional-Scale Mapping: A Census Subdivision Analysis of Southern Ontario, Canada

by

Maria Clara Mendonça Dos Santos Ferreira

supervised by

Dr. Laura Taylor

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ABSTRACT

Exurbia is difficult to define and map. This research sought to map exurbia in Southern Ontario, but was confronted with the limitations of spatial data outside urban areas. Exurbia is a low-density landscape at the metropolitan edge where residents live surrounded by nature while remaining economically tied to the city, but it has not been systematically carried out for Southern Ontario. This research asks how spatial frameworks can identify, represent and interpret exurbia in Southern Ontario. Adapting the Brookings Institution's structural model of exurban development, it builds a multi-stage classification of 263 Census Subdivisions using data from the 2021 Census of Population of Canada. A first stage identifies exurban municipalities through commuting, housing density and population growth, and a second stage adds socioeconomic dimensions of income, education and economic structure, and a third stage integrates both into a single hierarchical classification. The analysis finds that exurbanization in Southern Ontario is not a single condition. 56 municipalities meet all three structural criteria, and among these, distinct forms emerge from the criteria, including 33 classified as "Strong Exurban", which combine structural and socioeconomic characteristics. These landscapes cluster at the outer edge of metropolitan cores rather than forming a uniform belt. The study demonstrates that low-density settlement only does not identify exurbia, and that census-based classification, while effective at a regional scale, generalizes internal variation and cannot capture as a whole the reality of exurbia. Concluding that mapping exurbia at a regional scale is best understood not as a definitive representation but as an orientation for finer-grained study, and that the way exurbia is measured shapes which landscapes

become visible to planning.

Keywords: exurbia; peri-urban; urban-rural fringe; Southern Ontario; spatial classification; census analysis; environmental planning.

FOREWORD

This Major Research Paper is submitted as a partial fulfillment of the requirement for the Master in Environmental Studies at the Faculty of Environmental and Urban Change at York University, Canada. This paper represents the culmination of the Plan of Study I developed under my area of concentration, *Environmental Planning in Exurban Areas*, and reflects the integration of coursework, research and professional practice taken throughout the program. My Plan of Study centred on a single question that followed me since I began my undergraduate degree in Architecture and Urban Planning in Brazil, to my current graduate studies in Canada: how planning governs the landscapes it does not fully see.

The Master in Environmental Studies program allowed me to pursue these three connected currents: the definition and drivers of exurbia, environmental planning and conservation and the politics of governance at the metropolitan edge. This research brings these currents together into an empirical study of how exurbia can be identified and represented in Southern Ontario using contemporary census data and spatial analysis. In that way, the research fulfills the objectives of my area of concentration by moving from the conceptual understanding of exurban development, built through coursework in planning theory, environmental planning and land-use law, toward an applied methodology that tests how these landscapes can be defined. Doing so, the paper connects the theoretical and technical dimensions of planning that my Plan of Study is designed to unite. Learning Objectives 1.1 and 1.2 address the relationship of natural landscapes, planning and exurban settlement. The amenity-seeking motivations and the proximity to nature are consequences of exurban regions that these objectives describe,

and the very characteristics my classification seeks to make visible. Learning Objective 3.3, which emphasizes spatial analysis and mapping tools for interpreting land use patterns and planning decisions. The centre of this paper is the direct application of objective 3.3. More than a technical exercise, this paper reflects the central conviction of my studies: that planning is not only a technical discipline but a social one that is concerned with how we live alongside nature and how the decisions that shape that relationship are made and represented.

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1. Introduction

More than a decade ago, Taylor (2011) observed that exurbia is "difficult to describe". The landscape at the edge of the metropolis is neither fully urban nor rural, it is a place where people live surrounded by agricultural lands and forests, while remaining tied through work and daily life in the cities they normally left behind. Peripheries are among the fastest-changing lands, and yet they resist the categories through which settlement is usually understood. They are not unseen, they are everywhere visible along the metropolitan fringe, but they are persistently defined by what they are outside of, rather than by what they are. This difficulty of description is not occasional and is the starting point of this research. Exurban development is built by the motivation to live near the nature while remaining tied to urban economies, and by the planning frameworks that enable, constrain and redirect that desire across metropolitan fringes. Understood this way, exurbia is not a residual space of the city, nor a stage to become urban, but a distinct landscape produced through the interaction of markets, policies and the meanings people attach to rural and natural places. Its characteristics are not evenly distributed, which is why describing and deciding how it should be represented is as much a conceptual and political question as a technical one.

The question of how to describe exurbia has taken on new urgency since 2015. Taylor & Hurley's (2016) *A Comparative Political Ecology of Exurbia* consolidated three decades of scholarship that marked the close of a first phase of exurban research. In the years since, the conditions shaping the metropolitan edge have shifted markedly. The

COVID-19 pandemic accelerated migration from dense urban centres toward lower-density regions, a housing-affordability crisis has pushed households outside the urban centres and the normalization of remote work has loosened the link between where people live and where they earn a living. At the same time, the data available to study these changes has advanced, the 2021 Canadian Census allows metropolitan connection to be measured directly, through commuting flows rather than approximated through distance.

The main question of this research is: How can post-2015 spatial and planning frameworks identify, represent and interpret exurbia in Southern Ontario? To attempt to answer this question, the study develops a multi-stage classification of Census Subdivisions across the region, drawing together structural and socioeconomic variables from the 2021 Census (Statistics Canada, 2023). The goal of the research is not to settle a single definition of exurbia, nor to fix its boundaries, but to examine what contemporary analytical tools can, and cannot, reveal about those regions. This study matters because the frameworks through exurbia is identified are not neutral, since they shape which landscapes and land uses become visible to planning, and how the benefits and risks of exurban growth are recognized and governed.

The organization of the paper starts with the Literature Review of the scholarship on exurbia and the peripheries, situating the study within urban political ecology and planning policies in Ontario, the Greenbelt Plan and the Oak Ridges Moraine. The Methodology chapter then sets a classification of Census Subdivisions in Southern Ontario, built from structural criteria (commuting, housing density and population growth) and socioeconomic criteria (income, education and economic structure) drawn from the 2021

Census. The Findings chapter presents the results of each classification stage and their spatial distribution around the region, and finally, the Discussion brings the implications and limitations of mapping exurban areas and suggests next steps for the research.

2. Literature Review

2.1. What a *Comparative Political Ecology of Exurbia* consolidated?

Exurbia is not a new concept in urban planning. Spectorsky (1955) brought the term for the affluent commuter belt beyond the suburbs, and later scholarship has given it competing definitions: demographic, spatial, and cultural (Nelson, 1992; Taylor, 2011). *A Comparative Political Ecology of Exurbia: Planning, Environmental Management, and Landscape Change* (Taylor & Hurley, 2016) marked a turning point for the studies of exurbia. Its central claim was that exurbia deserves to be studied in its own right, with its own theoretical and empirical frameworks. The case studies from the United States and Australia argued that exurbanization promotes environmental injustice by shifting access to land and resources from traditional producers toward elite exurbanites, a process of reterritorialization driven by the land markets' movements away from productive rural economies toward amenity-based ones, which are enabled by planning policy and local land-use decisions.

In advancing the concepts of competing rural capitalism and uneven environmental management, and by tracing a chain of explanation through environmental scientists, planners, property managers, and owners, the book consolidates exurbia as a field with its own analytical apparatus. The book *A Comparative Political Ecology of Exurbia* (Taylor & Hurley, 2016) did not declare a formal cutoff date, but along the volume, there is a consistency on the dates. The most recent scholarship cited across the book is from 2015, including two major political ecology handbooks (Bryant, 2017; Perreault et al., 2015) which the authors situate their approach. Taylor & Hurley (2016) also observed that

planning scholarship “does not focus rigorously on exurbia”, and the absence motivates the questions framing this review: what has changed since 2015, and how do new risks, governance and data technologies reshape the study of peripheral urbanization?

2.2. Post-2015 turns periphery into a socio-ecological frontier

Political Ecology is the main study that connects real, material landscapes to the political economies that produce them. Capitalist urbanization continually reorganizes nature, generating uneven distributions of environmental benefits and risks (Swyngedouw & Kaika, 2014). It is known that most studies in Urban Political Ecology have analyzed “nature in the city” rather than the process of urbanization beyond the formally bounded city. In that way, all political ecological studies that see the natural landscape as the main field and urbanization as a process embedded within it directly challenge the methodological “cityism” of formal Urban Political Ecology (Angelo & Wachsmuth, 2021; Bartels et al., 2020). Bringing Urban Political Ecology to the suburb, peri-urban, and exurb is critical to understand those spaces not as afterthoughts of the city, but as live laboratories in which urban processes surface as visible socio-ecological tensions that are active drivers of the “urban metabolism” (Keil, 2020; Phelps et al., 2026; Tzaninis et al., 2021).

Besides an extension of Urban Political Ecology, an integration of Political Ecology of Exurbia brings a more comprehensive understanding of the social, political and economic processes that are shaping the uneven urbanization beyond the urban limits. Political Ecology of Exurbia (ExPE) brings continuity to the study done in Urban Political Ecology, but now evolving the focus on the challenges that emerge from “flows of people,

materials, and representation between cities and other spaces" (Cadieux & Taylor, 2013; McKinnon et al., 2019; Taylor & Hurley, 2016). Political Ecology of Exurbia provided early on what Tzaninis et al. (2021) suggest for a "move beyond the city limits," and later, what "peripheral centralities" theory called for: a rework of urban theory from the outside in (Phelps et al., 2023), by highlighting the centrality of the urban periphery. Political Ecology of Exurbia provides ethnographic insights into how local actors and cultural dynamics shape land use and environmental management in spaces beyond traditional urban areas, filling a gap in Urban Political Ecology (McKinnon et al., 2019). On the other hand, the two studies, Urban Political Ecology and Political Ecology of Exurb, have examined the institutions that shape decision-making processes in the environmental governance dynamics, bringing a mutual commitment to understanding the drivers of socio-ecological change and the governance dynamics that emerge to manage those changes (McKinnon et al., 2019).

With a broader lens, the study of peri-urbanization from an Urban Political Ecology perspective can be insightful for a better visualization of the uneven processes happening in peri-urban regions. The transitional character of peri-urban regions in general can lead stakeholders to view those spaces as temporary, which can bring a political marginality to peri-urban spaces (Mehta et al., 2014). In that way, a methodological approach that recognizes the permanence of exurban land use is needed, which identifies different forms and boundaries of peri-urban spaces, the transformations happening in nature and the power relations that make those regions an uneven site of urbanizations is essential to the

analysis of peri-urban areas in an urban political ecology perspective (Bartels et al., 2020; Mortoja & Yigitcanlar, 2022).

What this body of work makes clear is that exurban growth is not a neutral lifestyle preference but the outcome of deliberate political and economic projects: as Growth Machine theory holds, coalitions of developers, local governments and business interests treat peripheral land as a vehicle for capital (Logan & Molotch, 2007). Read together, these literatures reposition exurbia as a dynamic site where living, housing and ecology are produced, and, as the next section shows, where the very meaning of "nature" is now shifting from amenity to risk.

2.3. Nature as amenity and as climate risk

Across earlier exurban scholarship, the function of nature was described as a pull factor, the aesthetic and moral appeal that draws households out of the city in search of space and contact with the "natural" environment (see Cadieux & Taylor, 2013). This appeal is itself a cultural construction rather than a neutral fact. As Cronon (1996) argues, the very idea of "pristine wilderness" is a social invention that shapes how people value and pursue landscapes. And this desire has intensified since 2015. González-Leonardo et al. (2022) document an era marked by the pandemic, that surge of out-migration from dense cities toward low-density and high-amenity areas, while Komaki et al. (2023) show that residential choice is increasingly governed by quality of life and proximity to nature rather than workplace location, a shift that telecommuting has made durable even after COVID-19.

However, these drivers are not equally supported. Argent & Plummer (2022) studied migration between Sydney and rural New South Wales from 2011 to 2016 and found that rural amenity is a strong draw for people leaving the city. Although they did not find good data supporting the idea that people are pushed out by the problem of city life, they suggest this may be because two migration systems overlap in the same region: new arrivals moving into the crowded suburbs for housing and work, and long-term residents moving out toward the countryside (Argent & Plummer, 2022). In that way, a single measure of density could not separate these two groups, showing from a methodological perspective how the way a process is measured can hide the real flows (i.e. city to peri-urban regions) that are happening on the ground, some seeking affordable housing and work opportunity in the suburbs, and others as new exurbanites.

At the same time, recent work reframes that same nature as much a risk as an amenity. Johnston & Flannigan (2018) map Canada's Wildland-Urban Interface to show how expanding settlement increasingly overlaps with high-hazard fire zones, and Greenberg et al. (2024) tie housing-affordability pressure in California to accelerated Wildland-Urban Interface settlement, such that environmental risk becomes a residual cost of socio-economic displacement rather than a free (but perhaps uninformed) choice about where to live. Read this way, the amenity that draws people outward and the hazard that meets them are two faces of the same process (Greenberg, 2021). But the two faces are not shown equally to everyone. The wealthy amenity-seeker chooses a fire-prone landscape and can afford protection from it through insurance and defensible space. The household exiting the metropolitan core is looking for affordable housing in the same

landscape as the exurbanites, but absorbs the same hazards with fewer resources. This shows that exurban landscapes can distribute risk as unevenly as it distributes access to nature.

2.4. Governance tension in Ontario

If Political Ecology explains the structural forces producing exurbia, planning theory situates those forces within the institutions that authorize or constrain them, where planning acts as a mediating tool between ecological and market pressures. Cadieux et al. (2013) show that in the Greater Golden Horseshoe region centred on Toronto, planning discourse translates moral claims about the countryside into regulatory categories that often obscure the "on-the-ground" complexities. Scott (2019) observes that planning institutions remain split between urban and rural mandates, leaving the in-between spaces under-theorized and poorly governed. The result is fragmented governance, in which growth boundaries, rural and urban zoning and environmentally protected areas address only part of the problem, never the intersection of all of them. The Ontario Greenbelt exemplifies this tension, at the same time constrains exurbanization and stimulates it, redirecting demand beyond its edge (Cadieux et al., 2013). The policy is designed to protect rural and agricultural land at its core, but in doing so, produces speculation along its boundary (Cadieux et al., 2013). Land immediately outside the protected area becomes more valuable because the surrounding nature is guaranteed to remain where buyers are assured of permanent open green space. The green belt instrument, meant to hold development back, therefore helps relocate it, concentrating

growth pressure in the *whitebelt* lands just beyond the line (O'Neill-Kizoff, 2015). The Oak Ridges Moraine intensify the point further, where conservation planning for Oak Ridges Moraine has functioned less as a brake on growth than as a mechanism for redirecting it to other regions (Sandberg et al., 2013). This does not mean that policies such as the Greenbelt are not important to the protection of nature, actually, it is indeed an essential tool to accommodate growth with less impact in highly natural regions. The edges of these policies deserve as much attention as the areas they protect, since it is along those edges that exurban growth is dispersed.

Protection and development are not opposing forces at the fringe, they operate together. This paradox and controversy are enabled by the institutions that manage it. Caldwell et al. (2021) show that Ontario municipalities responsible for implementing Greenbelt policy often lack the capacity to respond to the pressures it generates, resulting in regional protections being administered by local governments with uneven resources and competing incentives. Han et al. (2020) find a similar pattern across Canadian metropolitan regions, where growth management inside a boundary is accompanied by dispersal outside it. Governance at the exurban edge is therefore not weak or absent; it is actually active, and its effects are frequently the opposite of what it intends. These contradictions frame exurbia as a landscape produced through policy, making the question less about whether it is governed than how, and with what consequence, which is precisely what the analytical challenge of seeing it must confront.

2.5. Conceptualizing Exurbia

Exurbia is not a product of urbanization only, but is an essential lens through which major urbanization processes can be examined. Brenner & Schmid (2015) critique 'city-centrism' drawing attention to an urbanization process that is now planetary, in which they downplay 'the city' as a site of study, but the conceptual framework of a concentrated, extended, and differential urbanization does instead. However, Davidson & Iveson (2015) argue that 'the city' exists and requires interrogation in light of its direct relationship to urbanization processes and politics. For Davidson & Iveson (2015), we need to prioritize a particular part of the urbanization spectrum, such as 'the city', to understand how localized processes connect to major urbanization processes (p. 656). This debate is particularly relevant to exurbia. Caldeira (2017) approaches the problem from a different angle, arguing that peripheries are not residues left behind by the centre but are actively produced through their own logics of construction, politics, and time. In this frame, peripheral urbanization reinforces the point that the edge is a site of production. City and urbanization, exurbia and exurbanization and *things* and *processes* exist in a dialectical relationship.

Exurbia as a *thing* should not be understood solely as a morphological or typological category defined by density, settlement or location, despite the limitations of spatial data available for analysis. Rather, exurbia represents a social, economic and political territory produced through a broad process of urbanization. Without understanding exurbia as a lived, localized condition, it becomes difficult to fully grasp how contemporary urbanization manifests across metropolitan regions, raising the question of how such a

lens can be operationalized at all. Peri-urban and exurban areas are often described as transition spaces. Mondal & Sen (2020) characterize them as dynamic regions where what is peri-urban today will be part of the urban tomorrow. On this view, the peri-urban is essentially a transition, but peri-urban, exurban and other forms of in-between spaces should not be understood as the urban of tomorrow, because their relation to land and settlement is fundamentally different from that in the city. Phelps & Silva (2017) describe these zones as urban interstices that remain under-theorized exactly because they are read as gaps between more legible categories.

Not everything at the metropolitan edge is simply an early phase of urban growth, exurbia is its own kind of process, shaped by distinct dynamics rather than by the city's trajectory (Taylor, 2011). Hoffmann et al. (2023) propose "rurbanity" as a way of studying rural-urban transformation without assuming the two are separate processes, treating the hybrid condition as the object of analysis. This is why the question of how exurbia is identified and measured matters, since if it is treated as a "waiting city", the features that make exurbia distinct will disappear or become even less visible.

2.6. How methods construct different exurbias

How exurbia is measured determines what exurbia is seen to be. For Berube et al. (2006), who conducted a quantitative study of exurbia in the continental United States, it appears that through commuting ties, low housing density and rapid population growth, an exurban area is defined by its dependence on the urban core, an urban character transplanted into a rural setting. Theobald (2005) locates it instead through housing density, proximity to

nature and distance from the urban core—a more autonomous exurbia, loosened from the metropolis. Sutton et al. (2006) read it from nighttime satellite light, rendering exurbia as dispersed infrastructure. Each approach genuinely finds exurbia, but not the same exurbia: the urban-in-the-rural, the autonomous, the infrastructural. The object shifts with the instruments. This is more than a technical problem of definition. Every boundary a method draws is also a line of inclusion and exclusion, deciding which households and which form of settlement are counted as exurban, deciding which become visible to planning and subject to its instruments. A commuting threshold or a density cutoff will capture some people and dwellings while leaving others unregistered; in a governed landscape, to be unregistered is to fall outside the frameworks that distribute environmental benefits and risks. Taylor (2011) cautioned that data-driven indicators, while valuable, remain limited for a contested cultural landscape; density delineations, as Taylor & Hurley (2016) insist, must be read through political-ecological frameworks rather than as neutral physical facts. Yet acknowledging that different methods produce different exurbia there is still value in doing the analysis

Demarcating peri-urban boundaries remains necessary precisely because these areas experience rapid population and physical change—with attendant negative environmental and social impacts—and lack the recognition that would allow them to be governed. Without a boundary, peri-urban space is rendered legible only as transitional land, a holding pattern awaiting urbanization, and therefore exposed to growth pressure and political short-termism, with communities given little clear information about what that growth will cost them (Mortoja & Yigitcanlar, 2022). Identification is not a neutral

technical act, but neither is its refusal; to decline to map exurbia is also to leave it ungoverned.

3. Methodology

This research had an exploratory methodology. The goal of this research is not to arrive at a settled definition of exurbia, but to test what a sequence of analytical approaches can and cannot reveal about it in Southern Ontario. The starting point was the Brookings Institution's *Finding Exurbia: America's Fast-Growing Communities at the Metropolitan Fringe* framework (Berube et al., 2006), applied in Phase 1 through three structural criteria: commuting connection, low housing density and population growth. Applying it made its limits visible. A structural model can identify where exurban development is likely to be found, but it cannot account for the socio-economic composition of those places, nor for the differences between municipalities sharing an identical structural profile. Phase 2, therefore, introduces demographic variables: income, educational attainment and economic structure, and Phase 3 integrates the two into a single classification. Even this integrated model reaches only part of what constitutes exurbia.

As Taylor & Hurley (2016) argue, exurbia is produced as much through cultural representation and the ideology of nature as through settlement patterns and commuting flows, and those dimensions are not visible in census data of any kind. In that way, this study does not attempt to measure them. It should therefore be read as an opening stage in a longer inquiry, an account of what census-based data make visible, what they distort and what they leave entirely out of view about exurbia in Southern Ontario.

This research relies on the 2021 Census of Population of Canada Statistics (Statistics Canada, 2023), whose reference period captures the years of the COVID-19

pandemic. The pandemic disrupted the processes this study measures precisely. Migration from dense urban centres towards lower-density regions accelerated (Girotti Sperandio et al., 2022; González-Leonardo et al., 2022; Komaki et al., 2023; Rowe et al., 2023), so inter-censal population growth between 2016 and 2021 reflects an exceptional period rather than a settled trend. At the same time, the expansion of remote work weakened the link between where people live and where they work (Komaki et al., 2023), meaning that commuting flows recorded in 2021 may understate the metropolitan ties of households who no longer travel to a workplace at all. Each of these effects is discussed in the variable to which it applies, but both should be read as conditioning the results as a whole

4. Phase 1: Exurbia in the Canadian Census

Phase 1 identifies the Census Subdivisions in Southern Ontario. The classification does not determine whether a municipality *is* exurban or not, but screens for the structural conditions under which exurbia is likely to be found, using three criteria adapted from the Brookings Institution research: *connection, density and growth.* Dr. Taylor adopted Brookings' approach, using two of its three criteria – a dwelling density below the lowest third of the regional average, and more than 20 percent of the workforce commuting beyond the census subdivision of residence. Growth was omitted there, since the study sought to identify existing exurban areas rather than the process of exurbanization. Because the 2006 Canadian census provided no destination data for commuters, boundary-crossing served as a proxy for metropolitan connection.

The present research follows this lineage while taking advantage of a data environment that has since changed: the 2021 census reports commuting flows from place of residence to place of work, allowing metropolitan connection to be measured directly rather than approximated. The model is adopted here not as a definition of exurbia but as a screening instrument to identify the municipalities where exurban development is most likely to occur.

Brooking's research used census tracts as its statistical boundary to gather the different data; for our research, census tracts could not be used due to the lack of extension in Southern Ontario, being present only in the main urban centers (i.e. Toronto, Ottawa, London, Kingston). For that reason, the most appropriate statistical boundary that

provides a view of all the municipalities in Southern Ontario is the census subdivision – a general term for municipalities, as determined by provincial/territorial legislation. According to the Brookings Institution (Berube et al., 2006), a census subdivision qualifies as an exurban area if it meets three criteria.

1. ***Economic connection to a large metropolis*.** Exurb has, by definition, a relationship with an urban area, maintaining "ex" or "outside of" the "urb". Past researchers used geographical distance to identify exurbs. Still, when spatial proximity is used, other forms of connections can be excluded, underlying the assumption that spatial proximity to the urban core implies connection. In that way, commuting ties can offer a way to measure economic connection to the metropolis, since commuting patterns can be analyzed.

   For the Brookings Institution, an exurb is physically located outside a large city, with a percentage of residents who work in the large metropolitan area of connection. To identify those areas, we use data compiled by Statistics Canada from the 2021 Census, which identifies commuting flows from the geography of residence to the geography of work at the census subdivision level (Statistics Canada, 2022). By selecting 264 census subdivisions in Southern Ontario, we identified tracts with at least **20 percent** of workers commuting to an urbanized area within a large metropolitan area (Figure 1).

   We further identify as exurban only those tracts with commuting ties to census subdivisions in Southern Ontario that had a 2021 population of at least 100,000,

based on the definition of large urban centres, referred to as census metropolitan areas (CMAs) (Government of Canada, 2022). Although we used Census Subdivision, the Government of Canada's (2022) definition of a large urban centre was used to maintain a statistical basis beyond the population threshold. Exurban tracts can be located within metropolitan areas, either in smaller urbanized areas or outside urban areas, or they can lie outside metropolitan areas, and even within micropolitan areas.

One limitation of the commuting-based measure should be stated. Since 2020, telecommuting has weakened the link between where people live and where they work. Some exurban residents may not physically commute at all, and others may have no workplace within driving distance of their home. A model built on commuting flows will not see these households. Therefore, the commuting variable captures a particular kind of exurbanite, one still tied to a metropolitan workplace, and may undercount those whose connection to the urban economy is remote rather than physical.

2. ***Low housing density*.** All measures of urbanization and ruralization will take housing density into consideration. Some use population density, which varies with household size, age structure and occupancy, so two municipalities with identical built form can register very different population densities. Because the built landscape is the most visible component of a settlement type, dwelling counts provide a more stable proxy for spatial structure. Using Census 2021 data, we

calculate the census subdivision on housing density (acres per unit). The Brookings Institution (2006) had a minimum housing density threshold of 2.6 acres per unit, based on one-third of the nation's housing units in the United States in 2000. Since our research is done with the census of 2021 in Southern Ontario, we applied the methodology and the maximum housing density cutoff of roughly 1.25[1] acres per unit, reflecting the lowest one-third of the dwelling density in the Southern Ontario region. In that way, for the research, the minimum housing density to classify as potentially exurban was **1.25 acres per occupied dwelling unit** (Figure 1). Housing density was measured using the number of private dwellings occupied by usual residents divided by the land area of the census subdivision. This approach was selected over household-based data because dwellings more accurately represent the spatial distribution of residential units. Households can vary independently of the built environment due to differences in occupancy (multi-family households, secondary suites); dwellings provide a more stable proxy for the spatial structure of settlement.

3. ***Population growth*.** Exurbs are typically considered growth regions where people have been moving in large numbers over the last few decades. A large number of people come from denser parts of the same metropolitan area, seeking more open space, a small-town feel, and lower housing costs. In that case, to be considered

[1] The 1.25 acres per unit threshold represent the density below which one-third of Southern Ontario's occupied dwelling are located (n= 5,080,636 dwelling occupied by usual resident across 263 Census Subdivisions), replicating the Brookings Institution's dwelling-weighted definition of the lowers third of housing density (Berube et al., 2006). Because dwelling is concentrated in a small number of dense urban municipality, 202 of 263 Census Subdivision fall at or above the 1.25 acres per unit threshold while together accounting for approximately one third of the region's housing stock.

exurban, a census subdivision must be experiencing population growth between the two latest censuses, 2016 and 2021. Brookings' research set a threshold of at least 10 percent population growth for a potential exurb. Since the research is using census data from 2021, moments when migration to the countryside due to COVID-19 was ongoing (González-Leonardo et al., 2022; Komaki et al., 2023; Mell & Whitten, 2021; Rowe et al., 2023), it is important to consider that population growth and even past factors, such as commuting, can be distorted.

To maintain fidelity to Brookings' methodology while aligning with the research time frame, we used a minimum population growth rate of **5 percent** (Figure 1). Reducing half the percentage used by Brookings but still considering growth as an important metric to identify exurbs. Not all approaches treat growth as necessary. Theobald (2005), for example, finds exurbia solely by housing density and distance from the urban core, bringing a more stable form of exurbia.

Although those cases should be brought to attention, the most common cases of exurbia are communities undergoing change, often with rapid growth alongside efforts to preserve their rural character. Areas profiled as exurbia with the growth component are distinct from the slow-growing or stagnant areas with commuting ties to the urban centre. In that way, the inclusion of population growth in the research methodology is a way to highlight the areas in Southern Ontario that have undergone significant change and development.

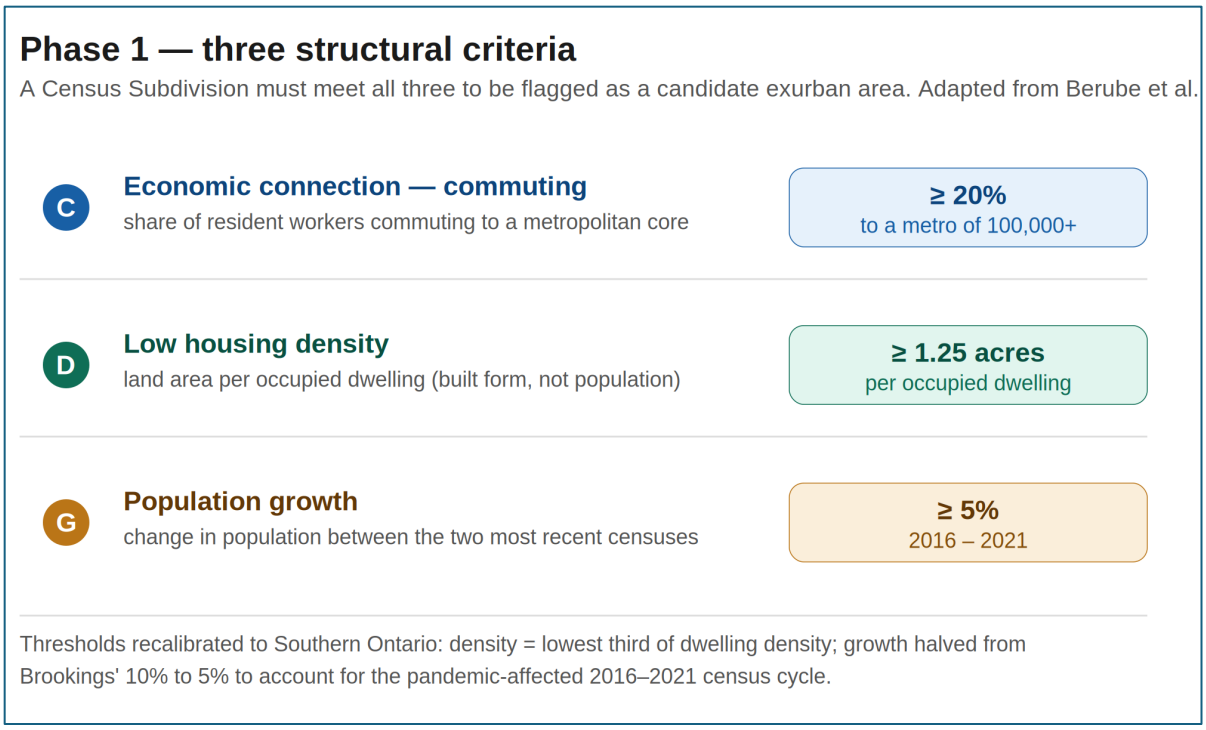


Figure 1: Three Structural Criteria of Phase 1

To apply these three criteria to all Census Subdivisions in Southern Ontario, a workflow was created to classify Census 2021 data. The process was divided between Excel, for data organization and classification logic, and ArcGIS Pro, for spatial joins, validation, and cartographic representation. To extract the correct data from Statistics Canada's raw census data, it was necessary to identify all census subdivision names and IDs in Southern Ontario. For that, a boundary shapefile from Ontario GeoHub delineating Southern Ontario was used to extract which census subdivisions were included within the boundary (Ontario Ministry of Natural Resources, 2019). Southern Ontario has a total of 263 census subdivisions. This step was essential since all subsequent variables and analyses were based on the identified subdivisions (Figure 2). The complete list of Census Subdivisions used as the unit of analysis, along with their corresponding identifiers, is provided in Table 1.

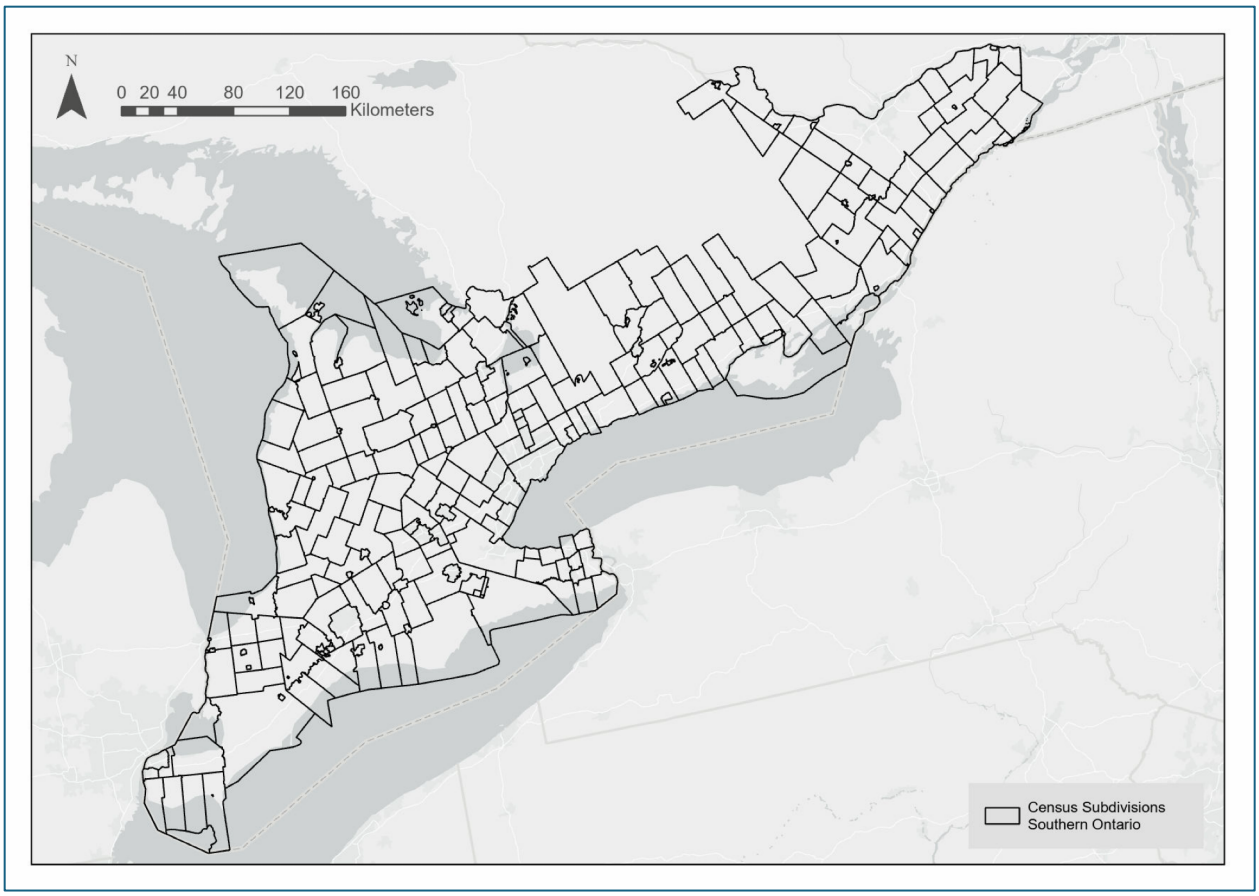


Figure 2: Boundaries of the 263 Census Subdivisions in Southern Ontario

After identifying the 263 Census Subdivisions (CSDs) of Southern Ontario, the selected CSDs were used to filter and organize the relevant Census 2021 variables into a master spreadsheet. Each structural variable used in the exurban model was collected and standardized individually before being integrated into the classification workflow. The commuting variable required the most extensive processing. Using the commuting flow table from the Statistics Canada website, it was necessary to isolate only commuting flows associated with the selected CSD in Southern Ontario. Since the raw commuting table included all commuting flows from the place of residence to the place of work of all CSDs in Canada, the dataset was filtered to include only commuting flows originating from the selected study area and directed toward CSDs with populations greater than or equal

to 100,000 residents in 2021 inside Southern Ontario (see Table 2 for selected Urban Centres in 2021)

As a result, commuting flows toward metropolitan areas located outside the study region were not included in the analysis. This decision was made to maintain the research's regional coherence and to conceptualize exurbia as part of a geographically integrated metropolitan system in Southern Ontario. In that way, this approach may underestimate commuting relationships to other large urban centres near the edge of the study area. For instance, commuting flows to Montreal and other urban centres were not included, since the objective was not to identify all possible commuting relationships but to examine exurban development patterns connected to the major urban centres that shape the regional urban structure in Southern Ontario. The selected commuting flows were then aggregated in Excel using lookup and summation functions to calculate the percentage of commuters travelling to large urban centres relative to the total commuting population of each Census Subdivision. The commuting percentage was calculated using the following equation:

$$Commuting\ Percentage = \frac{Selected\ Commuters}{Total\ Commuters}$$

Equation 1: Commuting Percentage

"Selected Commuters" represents the commuting flows directed toward Census Subdivisions with populations greater than or equal to 100,000 residents within Southern Ontario. While "Total Commuters" represented all commuting flows originating from the

Census Subdivision, including internal commuting within the municipality and outside Southern Ontario. With the formula applied across all Census Subdivisions of Southern Ontario, the Commuting Percentage became one of the variables to be analyzed to determine the connection between possible exurbs and urban centres.

Housing density was constructed using the amount of land area per occupied dwelling unit. Since Statistics Canada reports land area in square kilometres, the values were converted into acres to maintain consistency with the Brookings Institution methodology. So, density was calculated as acres per occupied dwelling unit by usual residents on each Census Subdivision (Equation 2), allowing a comparison between municipalities with significantly different territorial dimensions and active residents.

$$Dwelling\ Density\ (acres/unit) = \frac{Land\ Area\ (converted\ to\ acres)}{Private\ dwellings\ occupied\ by\ usual\ residents}$$

Equation 2: Dwelling Density

The third variable, population growth, was taken directly from Census 2021, which reports the percentage change in population between 2016 and 2021. Unlike commuting and density, it required no preprocessing, since it is already a standardized census variable. Once all three structural variables were assembled in the master table, each was converted into a binary indicator based on the earlier thresholds. A Census Subdivision meeting a threshold received a 1, and one falling below it received a 0. This produced a standardized framework in which the three exurban characteristics could be compared and combined across Southern Ontario.

The three binary indicators were then combined into a three-digit code, read left to right as commuting, density and growth (Figure 3). A Census Subdivision coded 111 met all three criteria and was classified as exurban, while codes such as 110 or 101 identify municipalities that meet part of the exurban conditions. Rather than reducing the classification to a single exurban/non-exurban split, this approach records these partial profiles, allowing municipalities that satisfy one or two criteria to be distinguished from those that satisfy all three or none.

Census Subdivisions with a population of 100,000 or more were set aside as urban cores, before coding, regardless of their scores. This step follows from the definition of an exurb as lying *outside* a metropolitan centre: a municipality of this size is itself such a centre, so including it would classify the urban core as its own periphery. A large city may register population growth or high internal commuting, but these reflect metropolitan

characteristics rather than exurban dynamics

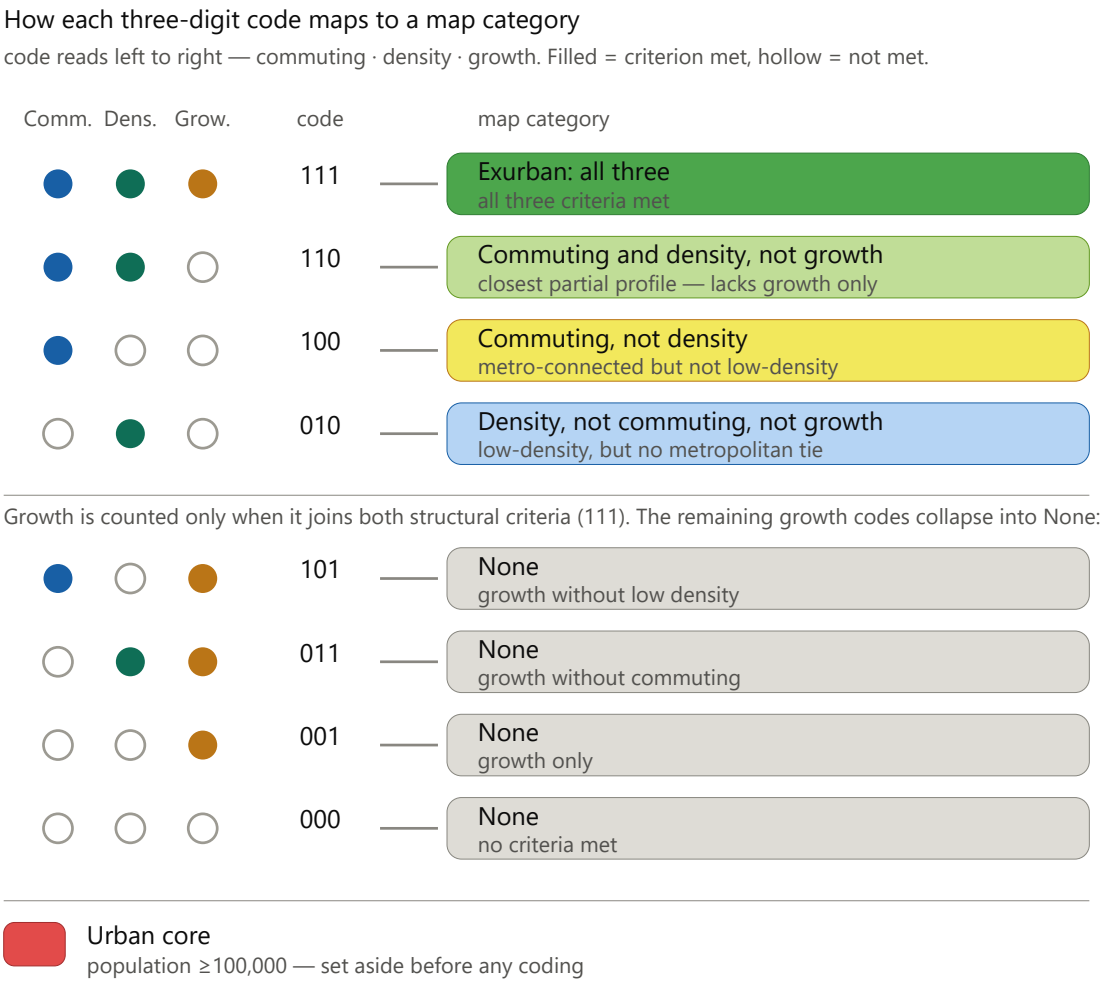


Figure 3: Exurban Classification of Phase 1

Because the three criteria are not equally diagnostic of exurban settlement, they are not treated as simply additive. Growth alone is a weak indicator, since many municipalities gain population for reasons unrelated to exurbanization. In that way, growth is counted only where it meets both structural criteria: metropolitan commuting and low density, which together define the exurban form. Codes 101, 011 and 001 (growth without one or both structural criteria) are grouped with 000 in the “None” category rather than being

treated as partial exurban profiles. Commuting and low-density function as the structural backbone of the classification, and growth serves to distinguish consolidated exurban municipalities (111) from those meeting the two structural criteria without recent growth (110). Once the coding was complete in Excel, the master table was joined to the Census Subdivision boundary shapefile in ArcGIS Pro using standardized municipality names, enabling the classifications to be mapped across Southern Ontario.

5. Findings of Phase 1

The exurban classification model of Census Subdivisions in Southern Ontario shows an uneven, regionally clustered distribution of Census Subdivisions meeting the exurban criteria. Using the combination of commuting, low density and population growth, the classification system identified regions with different levels of exurban characteristics across the study areas. As urban core connection was one of the major variables, the data show a concentration of exurban regions around the major urban cores, particularly within the extended influence zones of the Greater Toronto Area, Ottawa, Kingston, London, Chatham-Kent, and Windsor.

The resulting classification confirms that municipalities meeting the criteria cluster around the metropolitan core, an expected outcome, given that commuting integration is one of the three inputs that differentiate them from traditional suburban environments on the outskirts of urban core regions.

The classification distinguishes not only fully exurban municipalities but also those that meet some of the criteria. Since the classification model combined three binary indicators, the methodology generated a three-digit classification code representing the different combinations of commuting, low density and population growth. In that case, to improve interpretation and cartographic readability, these combinations were translated into simplified classification names and associated with different colours (Figure 3). This method of classification allowed not only the identification of consolidated exurban regions but also areas with partial exurban characteristics.

Census Subdivisions classified within the “Commuting and Density, not Growth” category represented the closest transitional condition to the full “Exurban: All three” classification, since they fulfilled the two most demanding variables of the model: metropolitan commuting integration and low-density residential development. These regions differed from the “Exurban: All three” classification only through the absence of significant population growth between 2016 and 2021. The interpretation of the population growth variable requires further consideration given the temporal context of the Census 2021 data. As mentioned earlier, because the selected growth period included 2020 and 2021, the dataset partially reflects demographic conditions during the COVID-19 pandemic. The social and economic disruptions associated with this period may have influenced migration dynamics and population change patterns across Census Subdivisions, potentially reducing the precision of growth as a structural indicator of exurbanization during this specific census cycle. As a result, Census Subdivisions classified in the “Commuting and Density, not Growth” category may still exhibit exurban characteristics even if they do not meet the selected population growth threshold of 5% between 2016 and 2021.

There is a total of 31 Census Subdivisions included within the “Commuting and Density, not Growth” classification, representing a combined population of 393,097 residents in 2021. The regions included within this category are listed in Table 4 alongside the respective structural variable values and classification results. This relatively large number of municipalities represented within this partial profile indicates that exurban

characteristics are better read as a gradient than as a fixed threshold, with many places satisfying the structural conditions while differing in growth.

Census Subdivisions classified within the “Exurban: All three” category meet all three structural criteria within Phase 1. These municipalities have a strong metropolitan connection due to the commuting patterns, low-density landscapes and sustained population growth between 2016 and 2021. Spatially, these regions are concentrated along the outer metropolitan fringe surrounding the Greater Toronto Area, Ottawa, Kingston, London, Chatham-Kent, and Windsor (part of the Urban Core classification). The distribution of these municipalities suggests that exurbs in Southern Ontario function as an extension of metropolitan urbanization beyond traditional suburban boundaries. While physically dispersed, these regions remain economically integrated with nearby urban centres through commuting relationships. Reinforcing the interpretation of exurbia as a hybrid territory situated between urban and remote-rural environments. There is a total of 56 Census Subdivisions included in the “Exurban: All three” classification, with a total of 1,288,435 residents in these regions.

It is important to emphasize that these population values do not imply that all residents within these Census Subdivisions can be individually classified as exurban residents. Since the research was conducted at the Census Subdivision scale, the classification identifies municipalities that predominantly present structural exurban characteristics rather than directly measuring the proportion of exurban residents within each municipality. As a result, the classification identifies the Census Subdivisions most

likely to contain exurban development, those more likely to include exurban characteristics, rather than measuring the proportion of exurban residents within each municipality. For future research continuation, a finer-scale analysis using Dissemination Areas or parcel data would reveal additional internal variation within some municipalities.

Low density alone does not produce exurbia; the low-density regions of Northwestern and Southwestern Ontario lack the commuting and growth that define exurban Census Subdivisions. The Greater Toronto Area has the largest concentration of exurban Census Subdivisions; in contrast, Northwestern and Southwestern Ontario are classified with mainly “None” and “Density, not Commuting, not Growth” categories, regions with low-density residential landscapes, but lack both sustained population growth and significant commuting integration with major urban centres. This spatial contrast shows that low-density patterns alone are insufficient to characterize exurbanization. Instead, the pattern is consistent with exurban development being metropolitan-dependent, shaped by ongoing demographic expansion and urban integration via commuting. Municipalities with “Exurban: All three” rarely appeared geographically isolated within the regional landscape. Rather, they are consistently located adjacent to “Urban Cores” and “Exurban: All three” classification areas.

The spatial clustering reinforces the interpretation of exurbanization as a geographically dependent process extending outward from metropolitan regions rather than emerging independently within isolated rural territories. Although the commuting-based methodology adopted in this research avoids the limitations associated with

distance-based approaches identified by the Brookings Institution (2006), the resulting patterns suggest territorial limits to metropolitan commuting integration. In that way, even if the commuting variable makes it possible to connect longer distances from the urban cores, there is a limit that maintains exurban regions close to or within the metropolitan areas.

Although the structural classification isolates municipalities that meet the criteria, important differences remain among municipalities with similar structural profiles. Several Census Subdivisions classified within the same category displayed distinct geographic contexts, settlement intensities and regional relationships. In that way, these findings showed that Phase 1 indicators alone were insufficient to fully characterize the diversity of exurban landscapes. During the processing and interpretation of Census 2021 data, it was evident that municipalities in the same classification could differ substantially in terms of income, educational attainment and economic structure (Berube et al., 2006; Taylor & Hurley, 2016). In that way, a second phase of the research was developed, focusing on socioeconomic variables to refine and contextualize the structural exurban model established in Phase 1.

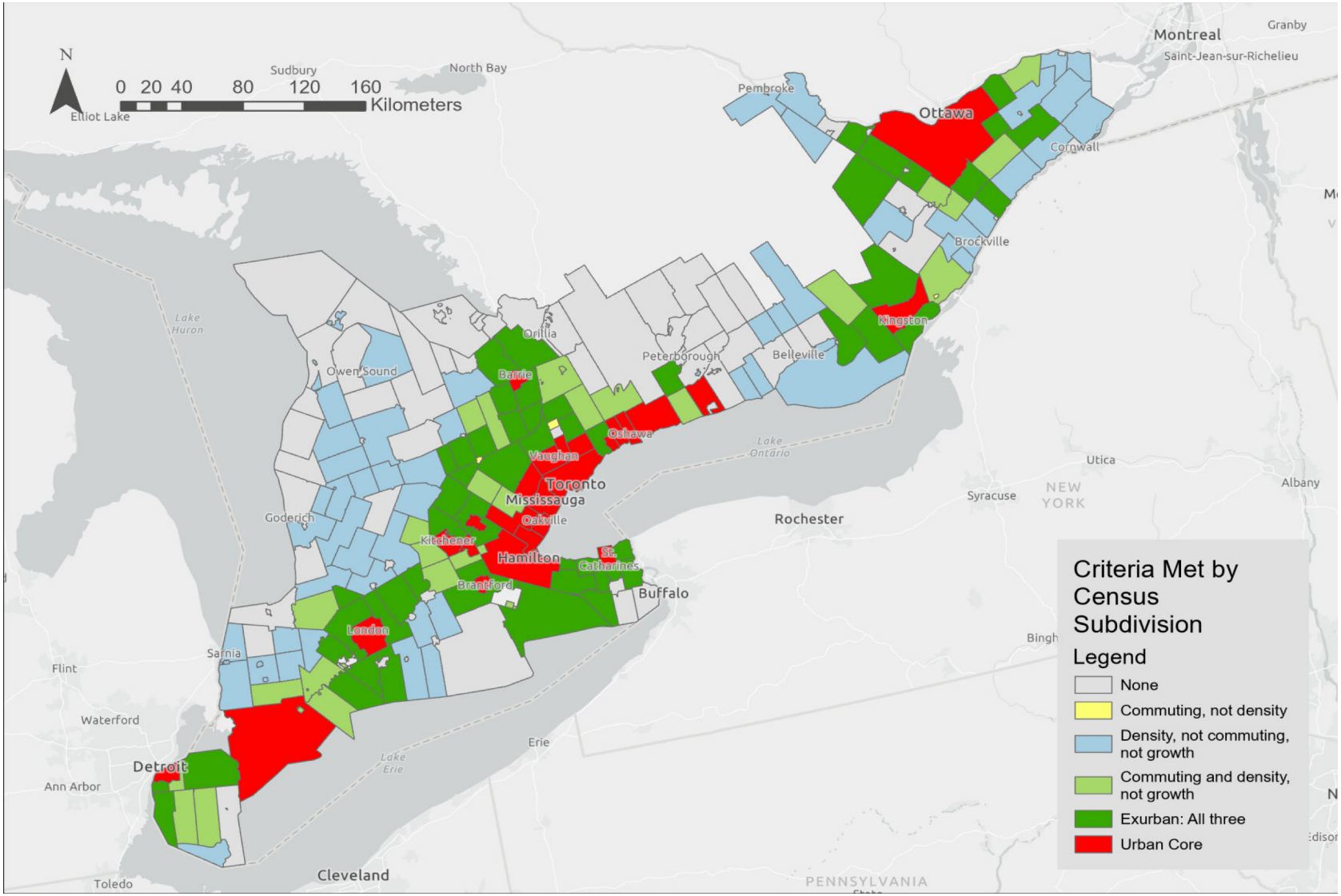


Figure 4: Exurban Classification of Census Subdivisions, Southern Ontario, Phase 1
Source: Cartography by the author
Note: Six Census Subdivisions (Akwesasne, Chippewas of the Thames, Oneida, Six Nations and Walpole Island) appear within the "None" category for cartographic clarity but were not classified, as 2021 Census data was unavailable.

6. Phase 2: Socioeconomic variables characterizing exurbia

Phase 2 add socioeconomic variables to distinguish between municipalities that share the same structural profile in Phase 1. In that way, the objective of Phase 2 was not to redefine exurbia independently from the structural classification model pre-established by the Brookings Institution methodology, but to contextualize the socioeconomic composition of structurally exurban municipalities. As an exploratory phase, it served as an intermediate analytical layer design, introducing additional variables into the broader exurban classification framework (Phase 3).

The socioeconomic combinations generated during this phase should not be interpreted as a standalone exurban classification system detached from the model developed in Phase 1. Their selection follows from a consistent characterization in the literature: exurbanites are described as affluent professionals who leave the city for lower-density, nature-proximate living while retaining metropolitan careers (Cadieux & Taylor, 2013; Nelson, 1992; Spectorsky, 1955; Taylor & Hurley, 2016). This phase operationalizes that profile through three complementary variables: household income, educational attainment and non-rural economic structure, each intended to refine, not replace, the structural classification established in Phase 1.

When analyzed independently, some socioeconomic classifications may appear spatially fragmented relative to the Phase 1 findings. However, the purpose of Phase 2 was precisely to identify and isolate socioeconomic characteristics that could later be

integrated with the structural variables in Phase 3, where both analytical dimensions are combined into a major classification model. In that way, the interpretation of Phase 2 focuses less on defining exurbia and more on presenting and explaining the rationale for incorporating socioeconomic variables into the research.

1. ***Household income***. Exurban areas are frequently associated with residential decentralization patterns linked to larger housing lots, homeownership and the search for nature proximity, combined with lower-density residential environments, conditions that often require a certain degree of household economic capacity. Median household income was selected instead of average income because the median provides a more representative value, less influenced by extremely high- and low-income values, which can skew the total average. The variable was extracted from the Census 2021 category "Median total income of household in 2020 ($)". The median total income in Ontario was $91,000. A threshold of $100,000 was selected to represent the typical household condition within each Census Subdivision, reflecting relatively higher household affluence than Ontario values.
2. ***Educational attainment as an indicator of socioeconomic composition within exurban regions***. While the structural variables used in Phase 1 identified regions exhibiting exurban territorial characteristics based on Brookings Institution research, educational attainment can provide a more complete insight into the social profile. Educational attainment captures the credential behind that same professional profile, since the "white-collar" occupations associated with exurbia typically correspond to higher levels of formal education. Educational attainment

reflects the credential behind that same professional profile, since the "white-collar" occupations associated with exurbia typically require higher education. In that way, educational attainment was measured using the population aged 25 to 64 years in private households to maintain consistency with the Census 2021 education dataset and focus specifically on the core working-age population.

The main goal of this category was to obtain the percentage of high education residents on each Census Subdivision, for that it was used the "Total-Highest certificate, diploma or degree for the population aged 25 to 64 years in private households – 25% sample data" as the denominator, and the nested category "Postsecondary certificate, diploma or degree" as the nominator, making it possible to obtain the percentage of resident with postsecondary certificate or higher. A threshold of 60 percent was selected to identify Census Subdivisions with above-average postsecondary educational attainment in Southern Ontario. The threshold was intentionally established above broader provincial educational attainment levels to isolate municipalities with stronger concentrations of postsecondary-educated working-age residents.

$$Educational\ Attainment\ Rate = \frac{Residents\ with\ Postsecondary\ Education}{Total\ Population\ Aged\ 25-64}$$

3. ***Economic structure through the identification of non-rural labour regions*.**

Although exurban municipalities are frequently associated with low-density residential landscapes, they differ from predominantly rural regions whose labour

force remains strongly dependent on primary industries such as agriculture and resource extraction. As known, professional occupations are part of the socioeconomic profile of exurban regions, but identifying professional occupations through Census industry categories can be methodologically challenging due to the distribution of professional employment across multiple industrial classifications. In that way, this research adopted an inverse approach by identifying municipalities whose labour force remained tied to traditional rural industries. Allowing the creation of a screening variable that distinguished highly exurban areas from regions maintaining predominantly rural economic structures.

The variable was calculated using Census 2021 labour force data by industry from the category "Total - Labour force aged 15 years and over by industry – Sector – North American Industry Classification System (NAICS) 2017 – 25% sample data". From all the categories available on NAICS, the rural component included the categories "11 Agriculture, forestry, fishing and hunting" and "21 Mining, quarrying, and oil and gas extraction"; see Table 21 to check the complete list of NAICS categories. A maximum threshold of 15 percent was selected, meaning that Census Subdivisions with 15 percent or less in this variable were classified as exhibiting a non-rural economic structure.

$$Rural\ Labour\ Share = \frac{Agriculture + Mining\ Labour\ Force}{Total\ Labour\ Force}$$

Equation 3: Rural Labour Share

It is important to emphasize that this was the only variable in the research methodology that used a maximum threshold rather than a minimum threshold. While the other variables identified Census Subdivisions exhibiting higher levels of commuting, low density (acres per unit), population growth, income and educational attainment, the rural share variable operates inversely by identifying municipalities with lower levels of labour force dependence on rural industries. In that way, Census Subdivisions classified as meeting this criterion were not identified by the presence of rural activity, but by its absence.

7. Findings of Phase 2

Phase 2 shows that socioeconomic advantage in Southern Ontario concentrates in metropolitan cores, not at the exurban fringe. The strongest category, meeting all three thresholds, contains 65 Census Subdivisions and 5,976,011 residents, a large share of whom are urban cores excluded from Phase 1. This confirms that socioeconomic variables cannot identify exurbia on their own and must be combined with the structural criteria (Phase 3).

Same as the structural classification developed in Phase 1, the Phase 2 model combined three binary indicators, generating a three-digit classification code representing different combinations of household affluence, educational attainment and non-rural economic structure. For better classification, different colours were assigned for the possible combinations (Figure 5). A total of 65 Census Subdivisions were classified within the strongest socioeconomic category “Education + Income + Non-Rural", simultaneously meeting the three thresholds created (see Table 8). Together, these Census Subdivisions had a population of 5,976,011 residents in 2021. Unlike the spatial distribution in Phase 1, a significant proportion of these municipalities corresponded to urban cores that were previously excluded from the structural classification in Phase 1. This overlap shows that the socioeconomic variables selected in Phase 2 are strongly associated with broader metropolitan socioeconomic concentration rather than exclusively with structurally exurban landscape.

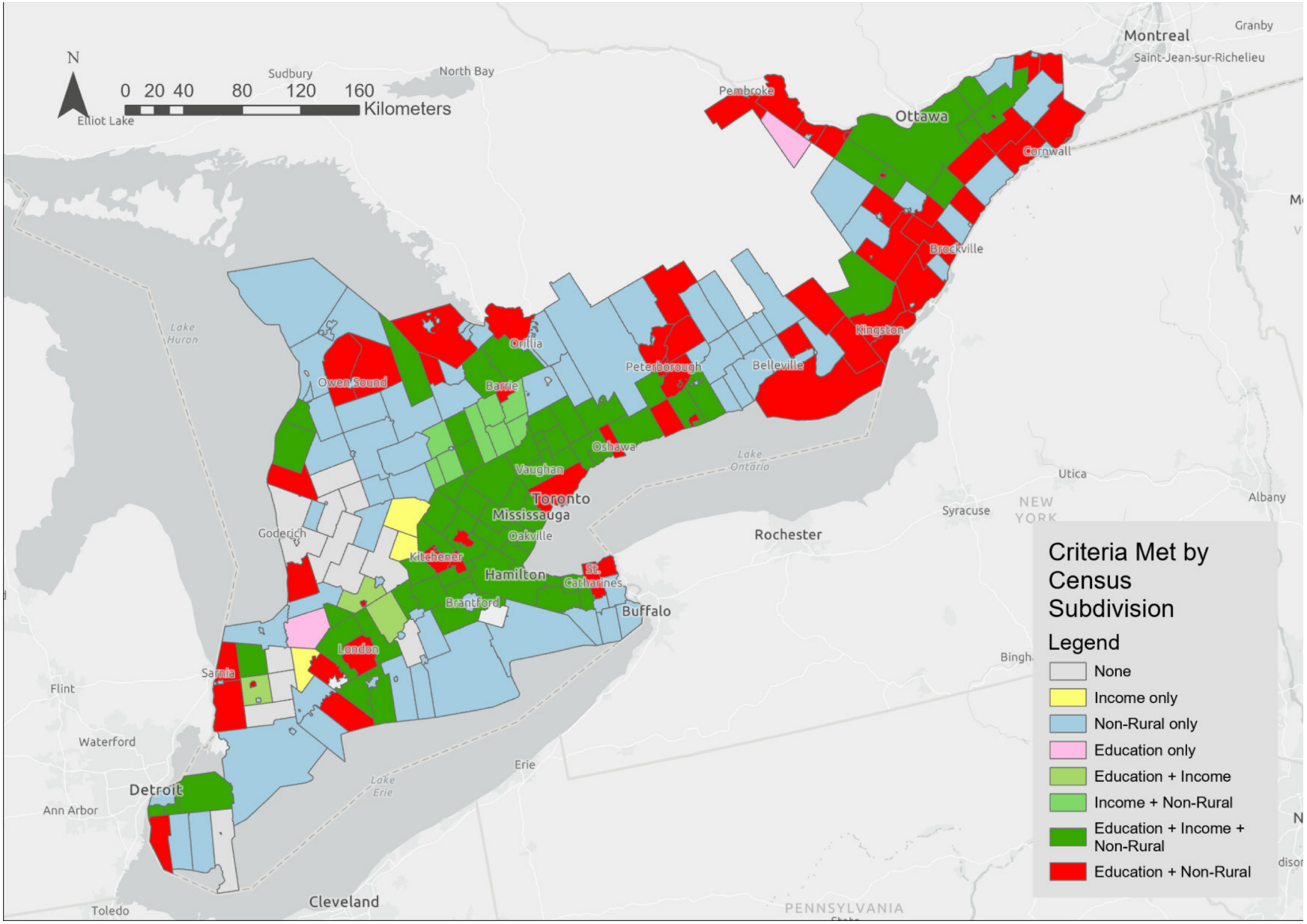


Figure 5: Socioeconomic Classification of Census Subdivisions, Southern Ontario, Phase 2.
Note: Fourteen Census Subdivisions, predominantly First Nations communities, together with Pelee, appear within the "None" category for cartographic clarity but were not classified, as 2021 income data was suppressed by Statistics Canada. In several cases, education data were available, whereas income data were not.

The resulting classification also shows important relationships, categories exclusively associated with education (2 CSDs), income (3 CSDs) or the combination of both variables (3 CSDs) produced a relatively small number of Census Subdivisions across Southern Ontario (see Table 12, Table 14 and Table 10 respectively). In contrast, the combinations integrating income, education and non-rural economy generated substantially larger concentrations of municipalities, with 65 Census Subdivisions (Table 8). This pattern suggests a strong socioeconomic interdependence between higher levels of education, higher income and a labour force structure *less* dependent on traditional rural industries. At the same time, the classification identified many municipalities classified exclusively within the "Non-Rural only" category, with a total of 95 Census Subdivisions, representing that 36 percent of Southern Ontario Census Subdivisions are below the educational and income thresholds (see Table 13), while maintaining a labour force no longer predominantly dependent on rural activities.

This finding reinforces the idea that the transition away from traditional rural economic structures does not correspond to higher levels of household income or educational attainment. This pattern suggests that the economic transformation of rural regions into more diversified non-rural labour may occur independently of the socioeconomic characteristics associated with exurban regions. In other words, the decline in rural employment does not imply the emergence of affluent or highly educated populations; instead, the findings indicate that some municipalities may experience a partial economic (labour) transition without developing the socioeconomic profiles often

associated with structurally exurban regions. Geographically, this reinforces the uneven nature of socioeconomic transformation across Southern Ontario, where major metropolitan zones frequently demonstrated simultaneous concentrations on the three variables, many municipalities only met the non-rural labour threshold.

8. Phase 3: Integrating structural and socioeconomic dimensions

Phase 3 integrates the structural and socioeconomic variables into a single classification because neither dimension alone identifies exurbia. Phase 1 located the territorial structure: commuting, low density and growth. Phase 2 showed that socioeconomic advantage concentrates in metropolitan cores rather than at the fringe. Combining them is what allows exurban municipalities to be distinguished from both rural areas and urban ones.

Although Phase 3 seemed an expected phase of the research, it was only after completing Phase 2 that the importance of merging the results was recognized, since only the structure or socioeconomic factors could not capture the full complexity of exurban regions. While Phase 1 identified the territorial structure through commuting integration, low-density residence, and population growth, Phase 2 demonstrated that socioeconomic variables alone were insufficient to characterize exurban regions, as these variables were also strongly concentrated within major urban centres. As a result, Phase 3 was needed as the synthesis stage of the research, integrating both phases into a single classification model capable of identifying Census Subdivisions. The main goal of this phase was not only to refine the identification of exurban municipalities across Southern Ontario, but also to distinguish different forms and intensities of exurban development emerging throughout the region.

Like the other phases, the classification model operated through the binary system, where each variable received 1 when it met the thresholds and 0 when the condition was

not met. But now, the variables of Phase 1 and Phase 2 were combined simultaneously: commuting, density, population growth, household income, educational attainment and non-rural labour. The integration of the six binary variables generated 64 possible classification combinations, which would result in a cartography hard to interpret and read. To improve interpretation, these combinations were grouped into fewer categories based on the relationship between the Phase 1 and Phase 2 classifications.

The classification hierarchy was done by maintaining Phase 1 as the foundation of the analysis. Census Subdivisions first had to exhibit the structural characteristics associated with exurbanization based on the Brookings Institution before being differentiated according to the socioeconomic profiles, which were used as refinement variables. As a result, the combinations were grouped into seven broader categories representing different forms and intensities of exurban developments (Figure 6). Subdivisions failing to demonstrate a sufficient combination of structural and socioeconomic exurban characteristics were classified as “Not Exurban”, while major metropolitan centres with more than 100,000 residents were retained as a separate “Urban Core” category.

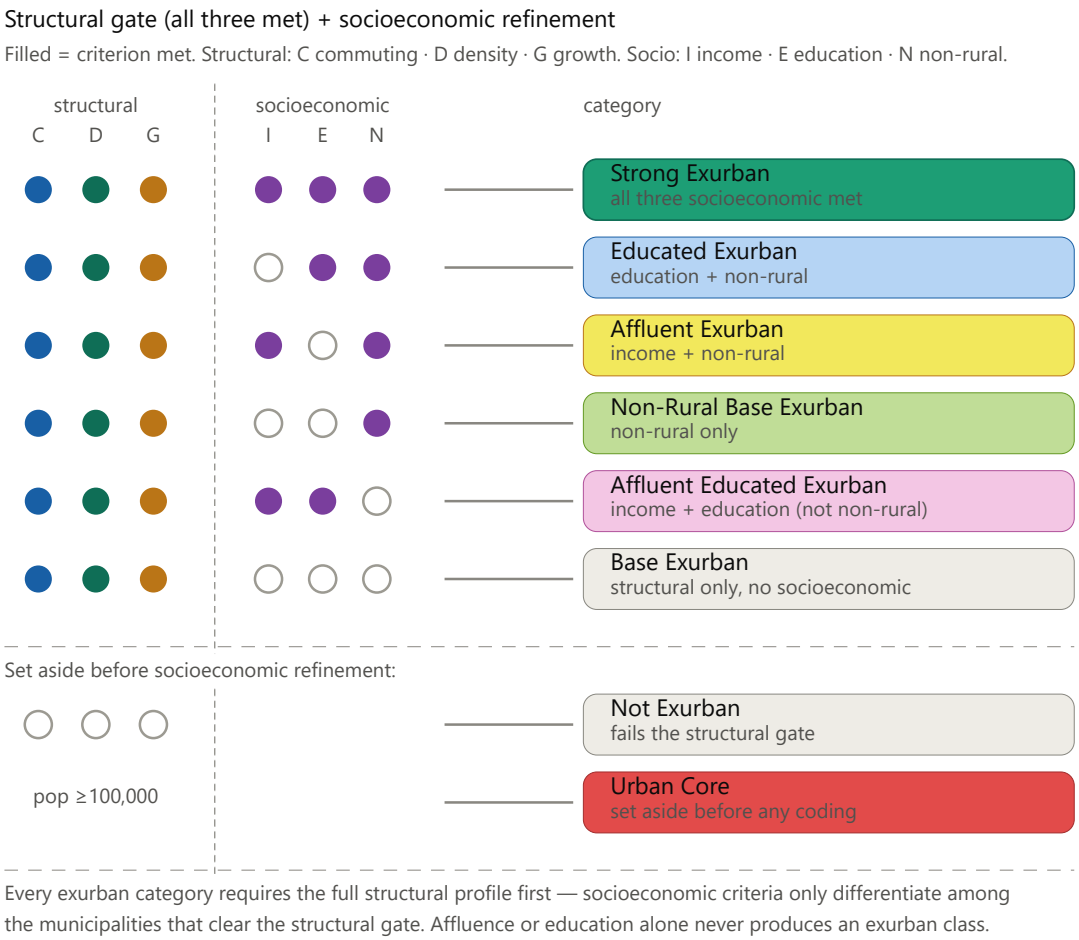


Figure 6: Hierarchy Classification of Phase

The remaining classifications represent different levels of exurban development, ranging from “Non-Rural Base Exurban” municipalities, which satisfied the structural criteria while exhibiting limited socioeconomic characteristics, only the non-rural variable. Categories such as “Affluent Exurban”, “Educated Exurban” and “Affluent Educated Exurban” were created to capture intermediate forms of socioeconomic differentiation within the broader exurban landscape. At least, “Strong Exurban” classification simultaneously demonstrated structural exurban characteristics and met all three socioeconomic thresholds.

9. Findings of Phase 3

The third and final classification identified 33 Census Subdivisions within the Strong Exurban category, representing approximately 13% of all Census Subdivisions included in Southern Ontario (see Table 15). On the other hand, 181 (69%) areas were classified as Not Exurban (Table 20), and 26 (10%) areas were labelled as Urban Cores (Table 2). The remaining Census Subdivisions were distributed among the intermediate exurban classifications, including 10 (4%) Educated Exurban (Table 18), 6 (2%) Affluent Exurban (Table 19), 1 (0.4%) Affluent Educated Exurban (Table 17) and 5 (2%) Non-Rural Base Exurban (Table 16). These results demonstrate the highly selective nature of the integrated classification framework, in which only a relatively small proportion of regions exhibited a full combination of structural and socioeconomic exurban characteristics.

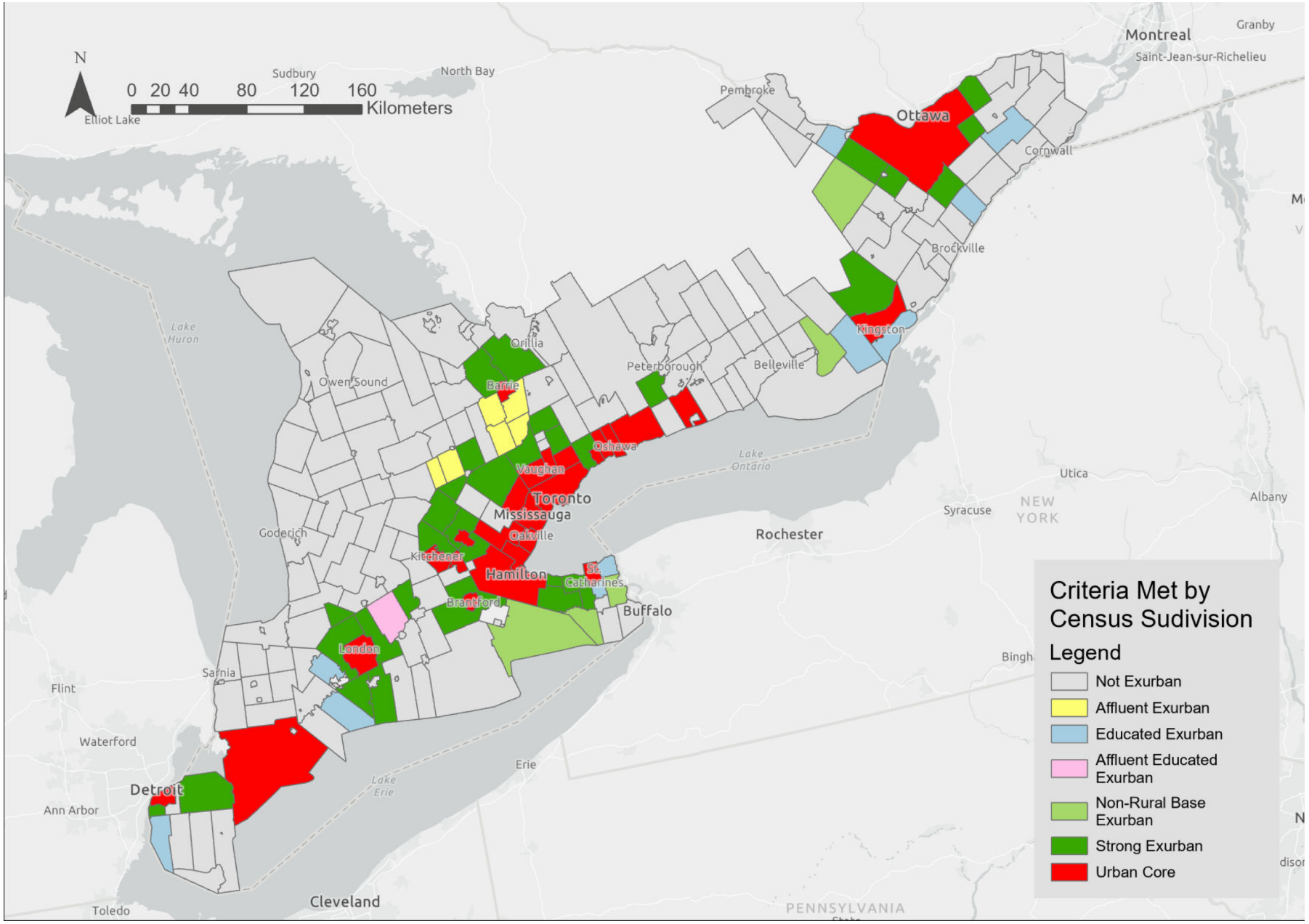


Figure 7: Integrated Exurban Classification of Census Subdivision, Southern Ontario, Phase 3.

When applying the classification model to spatial analysis, it is easy to identify the Strong Exurban regions. Similar to the results in Phase 1, the highly exurban classification is placed around the Urban Core areas, mostly concentrated around the Greater Toronto Area, Ottawa, Kingston, London, Chatham-Kent and Windsor. Strong Exurban areas are mainly directly adjacent to Urban Core municipalities and neighbouring another Strong Exurban Census Subdivision, or in another unique case, are placed between an intermediate exurban classification, Affluent Educated Exurban. While the Strong Exurban category represents the highest concentration of structural and socioeconomic characteristics, the intermediate classification should not be interpreted as failed exurban categories. Since the integrated classification framework developed in Phase 3 was built upon the model established in Phase 1, all intermediate exurban categories retain an exurban territorial foundation.

Consequently, the classifications Affluent Exurban, Educated Exurban, Affluent Educated Exurban and Non-Rural Base Exurban represent distinct forms of exurban development rather than separate territorial phenomena. The final classification, therefore, reveals that exurbanization in Southern Ontario is not a single process, but multiple exurban expressions around different socioeconomic realities, while maintaining a common relationship with metropolitan cores, low-density patterns and population growth. This distinction is important to shift the final map from a binary identification, with Phase 3 findings being part of a hierarchy in which Census Subdivisions occupy more than

exurban classification, but it makes it possible to grade the exurban areas through the socioeconomic variables once selected in Phase 2.

An additional finding emerging from the integrated classification is the composition of the Not Exurban category. Of the 181 Census Subdivisions classified as Not Exurban (Table 20) in Phase 3, 61 Census Subdivisions had previously been identified in Phase 1 within the “Density, not Commuting, no Growth” category (Table 6). Showing that approximately one-third of all Not Exurban municipalities already exhibited low-density settlement patterns traditionally associated with rural or peripheral landscapes. This result reinforces one of the central points of the research: low-density alone is insufficient to characterize exurbanization. While these municipalities exhibit low-density patterns, they lack the broader combination of metropolitan connection from commuting and growth that defines exurban territories within the classification model.

Not exurban retains a diverse collection of territories, including urban centres under 100,000 residents, small towns, agricultural municipalities, rural communities, and conservation areas. Separately, fourteen Census Subdivisions, predominantly First Nations communities, together with Pelee, could not be classified at all, as Statistics Canada suppressed their income data, there are reported as excluded rather than as “Not Exurban”. That specific set of communities falls outside the classification entirely, which is itself a finding: the model can only assess what its data source discloses. In that way, the classification as “Not Exurban” should not be interpreted as an absence of territorial

significance or development, but as evidence that their current development paths differ from the exurban processes identified throughout the research.

This finding highlights the importance of adopting a multidimensional approach when researching metropolitan expansion. Exurbanization emerges through the interaction of metropolitan connectivity, demographic change, socioeconomic composition and settlement structure, and by integrating these dimensions into a classification framework, the research shows us that Southern Ontario contain multiple forms of non-urban territory, some of which can be accurately identified as exurban.

10. Discussion and Conclusion

The central finding of this research is that exurbanization in Southern Ontario, and possibly in any territory, is not characterized by a single condition but several interrelated conditions. The integrated classification developed in Phase 3 distinguished structurally exurban municipalities into distinct forms: Strong, Affluent, Educated and Non-Rural Base Exurban. Each area with these characteristics occupies a different geography while sharing a common structural foundation of metropolitan commuting, low-density housing and significant population growth. Rather than a uniform belt of "sprawl" at the peripheries, the region contains multiple exurban expressions, differentiated by socioeconomic profiles. This directly supports the argument across the political ecology literature that exurbia is a distinct socio-spatial object rather than a residual or transitional stage of urbanization (McKinnon et al., 2019; Taylor & Hurley, 2016). Granted, this study looks at a snapshot of data of these areas in the 2016 and 2021 census periods, and the classifications it produces should be read as a portrait of a moment rather than a permanent settlement geography. If, as this research argues, exurbia is constituted through the variables and thresholds used to represent it, then it is equally constituted through the temporal window in which those variables are observed. In that way, different Census Subdivisions likely will shift between categories as the variables change, particularly because the study period captures the COVID-19 disruption to residential location decisions and commuting patterns. So, the contribution of this research is not a fixed map but a replicable classification method where future census releases can be run through the same three-phase framework. It also answers, in the affirmative but with an important qualification,

the research question: post-2015 frameworks can identify and represent exurbia in Southern Ontario, but the exurbia the research reveals is plural—exurbia comes in many forms—and its form depends on the variables and thresholds through which it is measured (Mortoja & Yigitcanlar, 2022).

Research based on Census data variables can generate analytical challenges related to the spatial distribution of data. When information is aggregated and represented based on administrative units, in our case, the Census Subdivision, the resulting choropleth maps can create the impression that the measured characteristics are distributed evenly throughout the entire Census Subdivision (Dorling, 1993). This limitation is particularly relevant for the interpretation of the exurban classification developed in this research. Municipalities classified as (Strong, Affluent, Educated) Exurban or Not Exurban should not be interpreted as territories composed entirely of those characteristics. Each Census Subdivision contain a mixture of urbanized areas, rural landscapes, agricultural lands, natural environments and different forms of residential developments. In that way, the classification should be understood as representing the dominant characteristics of the Census Subdivision rather than a precise depiction of the settlement pattern at every location in the Census Subdivision and, even less certainly, in any given municipality.

This issue reflects the challenges with the Modifiable Areal Unit Problem (MAUP), where changes in boundaries and scale in data aggregation can influence the result of spatial data analysis (R. J. Johnston & Semple, 1983). While the use of Census Subdivisions provides a consistent unit across Southern Ontario, it inevitably masks internal variation

occurring within the municipal boundaries. As a result, the classification developed in this research should be interpreted as a regional-scale framework for identifying exurban tendencies rather than a small-scale representation or location of exurban developments.

Some researchers have attempted to overcome the generalization associated with choropleth mapping by applying dasymetric mapping techniques to the study of exurban development. Dasymetric mapping redistributes aggregated census data using ancillary datasets such as land cover and building footprint, creating small spatial units to reflect the actual distribution of development (Mennis, 2003; Shrestha & Conway, 2013). The underlying assumption is that a finer spatial representation should provide a more accurate depiction of exurban landscapes and reduce the problems associated with large administrative units. However, the relationship between spatial scale and analytical accuracy is not straightforward. Shrestha & Conway (2013) examined exurban in Peterborough County, Ontario, and found that dasymetric approaches did not consistently outperform simpler surrogate measures such as road density. Their results demonstrated that the effectiveness of both methods varied according to the geographical and historical context of the study area (Shrestha & Conway, 2013), suggesting that increasing spatial resolution alone does not necessarily produce a better representation of exurban development, instead, scale and context remain critical factors influencing exurban mapping approaches.

The generalizations produced by this study is itself a finding. Because the classification was applied at the scale of the Census Subdivisions, entire municipalities

were labelled at Phase 3 as “Strong, Affluent or Educated Exurban”, yet none of these places is, in reality, composed purely of the characteristics the classification implies. Each municipality contains a mixture of settlement types, and the classification captures only its dominant tendency based on the variables that were selected for the study, which in itself orients a specific exurbia to be portrayed (Mortoja & Yigitcanlar, 2022). This was a necessary compromise for the research; aggregating to the municipal scale was the only way to apply a consistent framework across the whole of Southern Ontario. But the compromise has consequences for the research itself and raises a question about the feasibility of large-scale exurban mapping in general. If a single municipality cannot be reduced to one exurban type without distortion, then mapping exurbia across an entire nation risks generalizing away the very thing that defines it: the on-the-ground reality of how these landscapes are actually lived and built, much less providing any direction for how planning might intervene.

This does not make large-scale classification worthless, but it does reposition what it can do. Rather than a definitive map of exurbia, the framework developed here is perhaps better understood as an orientation tool to identify where exurban development is most likely concentrated, so that closer study can follow. The “Strong Exurban” municipalities identified in Phase 3 are precisely the places that would reward a finer investigation, for example through a dissemination area and a parcel-level analysis, combined with the ethnographic and landscape methods that census data alone cannot provide (Taylor & Hurley, 2016). As Taylor (2011) cautioned, aggregated data can indicate that exurbia is present, but not who occupies the land, much less how they are using the land, or why. The

contribution of this study is not to have mapped exurbia definitively but to have narrowed the field, to point future research toward the specific territories where the process of exurbanization can be studied in depth.

As a preliminary step in this direction, a windshield survey was conducted in the Census Subdivision of Mono (Table 15 and Figure 8), one of the municipalities classified as “Strong Exurban” in Phase 3, in the company of Dr. Laura Taylor. Phase 1 Mono met all three structural thresholds, with a commuting to urban cores of 35.3%, a housing density of 22.0 (acres per unit) and a population growth of 9.4% between 2016 and 2021 (see Table 3). In the socioeconomic phase had a median household income of $138,000 a postsecondary attainment of 67.7% and only 4% of its workforce in rural industries (see Table 8).

Within the framework developed here, Mono represent the fullest expression of the exurban classification. The purpose of the visit was not to collect data but to experience, even if briefly, one of these classified territories directly (Figure 9). Even a brief visit made clear that the classification, while accurate in its structural terms cannot convey how these landscapes are composed and inhabited. This initial observation reinforces the need for a sustained program with resident surveys, engagement with community institutions and in-depth interviews to understand life inside these territories.

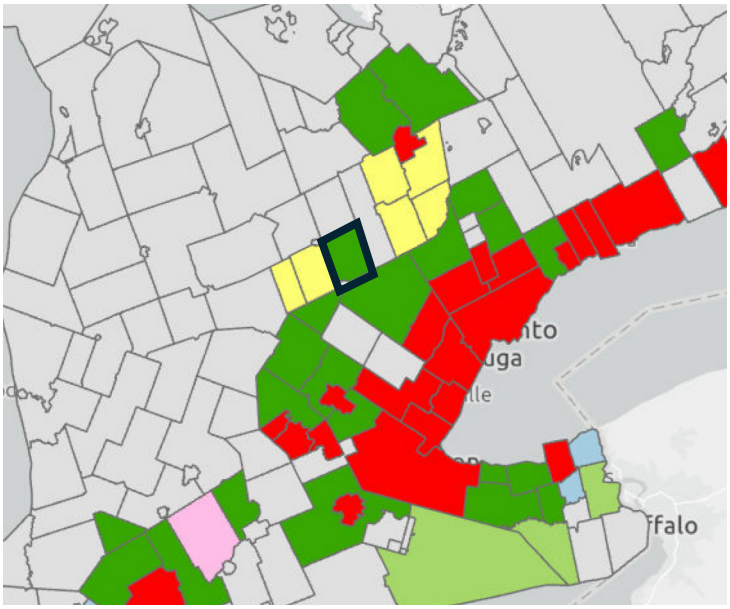


Figure 8: Census Subdivision of Mono highlighted in black

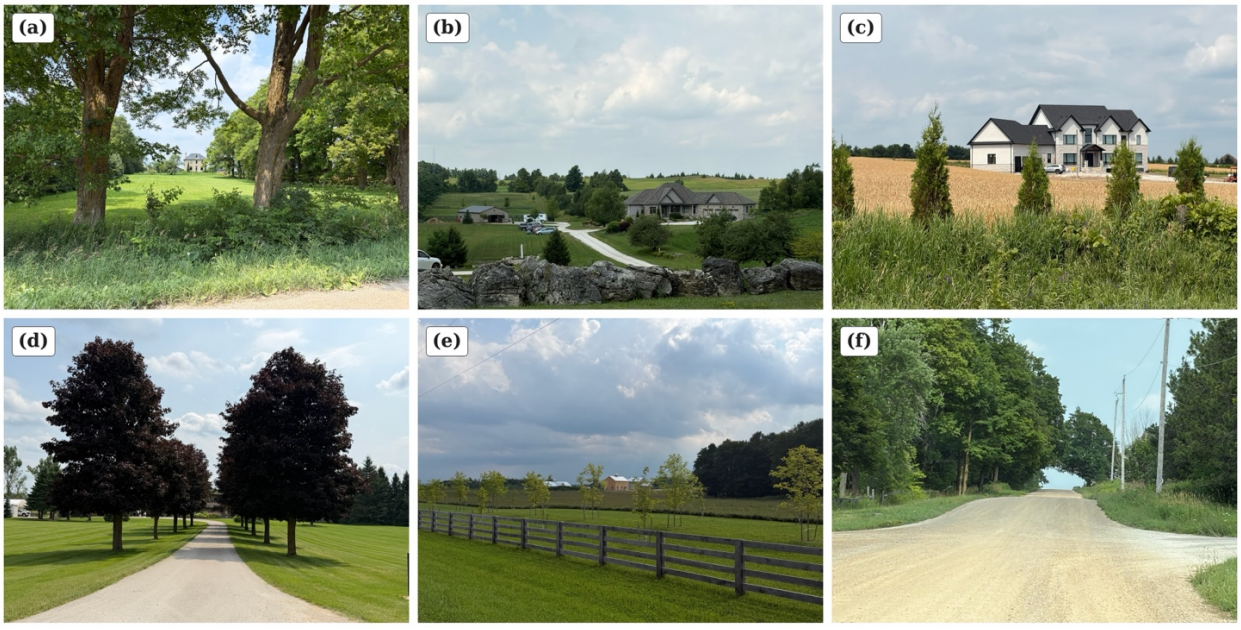


Figure 9: Landscapes observed in the Town of Mono, July 2026[2]

[2] (a) Older stone dwelling set back across an open lawn; (b) a property with barns, paddock fencing and horse trailers suggesting equestrian or hobby-farm uses; (c) a large, recently constructed residence with field of standing grain; (d) a formally landscaped, tree-lined driveway; (e) young tree plantings ahead property in construction; (f) gravel concession roads that connect those properties. A windshield survey registers the outward appearance of the landscape, and cannot interpret the histories, tenures or uses behind, which is precisely the limit that resident survey, property assessment and interviews would address.

It is important to note that the most comprehensive statistical effort reviewed in this research was also realistic about its own limitations. Berube et al. (2006) acknowledge that their criteria predetermined their findings, communities defined by growth, density and commuting thresholds unsurprisingly emerged as fast-growth, low-density and commuter-dominated. Their growth rule also left out 6.8 million people living in similar fringe areas that were not growing. Their county-level profile mixed together newcomers, long-time residents and people in nearby exurban areas. And the data could not explain *why* families move to exurbia, only suggesting. Berube et al. (2006) described their work as a starting point for future research, since the results could not give a final answer for all the questions involving exurbia (p.32). These limits matter for this research directly, because Phase 1 adopted the method created by Berube et al. (2006), adjusting the thresholds to fit Southern Ontario rather than the United States. By borrowing the method, we also borrowed the problems. Specifically, the growth rule likely excludes slow-growing communities that may be exurban in every other way. In that way, we present this classification as an orientation tool rather than a defined map, admitting the limits that only finer-grained methods can overcome.

The vocabulary through which the metropolitan fringe is studied is defined in relation to the city. The labels suburban, peri-urban and exurban share *the city* relation in their grammar. To be *ex-urban* is to be outside the urban, just as the *sub-urban* sits below and the *peri-urban* around it. In every case, the urban remains the centre, and the periphery is understood as something that is apart from the city. If exurban landscapes are not simply diluted cities but places with their own logics, then defining them primarily by

what they are *outside of* may obscure as much as it reveals. This continues the argument developed in the Literature Review, that the periphery can be understood as a site of production of its own rather than a residual of the centre (Caldeira, 2017; Davidson & Iveson, 2015; Phelps et al., 2023, 2026). This reframing carries a question that this study cannot answer, but raises. The dominant explanation for exurban growth casts it as an *exit*, an escape from the urban. But if the urban is not, in fact, the organizing centre of these landscapes, the motive may be a pull towards the rural and the natural, even as residents retain thoroughly urban lives and livelihoods. Whether people move to these regions to leave the city or are drawn to the countryside on its own terms is a question that census data cannot answer, and only an ethnographic study can resolve. This research offers a foundation for future research to explore it, showing where these exurban landscapes are and that they are diverse enough to deserve study that does not take the city as its starting point.

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Appendix

Table 1: Census Subdivisions of Southern Ontario

Count	Census Subdivision
1	Adelaide-Metcalfe
2	Adjala-Tosorontio
3	Admaston/Bromley
4	Ajax
5	Akwesasne (Part) 59 3 6
6	Alderville First Nation
7	Alfred and Plantagenet
8	Alnwick/Haldimand
9	Amaranth
10	Amherstburg
11	Arnprior
12	Arran-Elderslie
13	Ashfield-Colborne-Wawanosh
14	Asphodel-Norwood
15	Athens
16	Augusta
17	Aurora
18	Aylmer
19	Barrie
20	Bayham
21	Beckwith
22	Belleville
23	Blandford-Blenheim
24	Bluewater
25	Bradford West Gwillimbury
26	Brampton
27	Brant
28	Brantford
29	Brighton
30	Brock
31	Brockton
32	Brockville
33	Brooke-Alvinston
34	Burlington
35	Caledon

36	Cambridge
37	Carleton Place
38	Casselman
39	Cavan Monaghan
40	Central Elgin
41	Central Huron
42	Centre Hastings
43	Centre Wellington
44	Champlain
45	Chatham-Kent
46	Chatsworth
47	Chief's Point No. 28
48	Chippewas of Georgina Island First Nation
49	Chippewas of Rama First Nation
50	Chippewas of the Thames First Nation 42 6
51	Christian Island 30
52	Christian Island 30A
53	Clarence-Rockland
54	Clarington
55	Clearview
56	Cobourg
57	Collingwood
58	Cornwall
59	Cramahe
60	Curve Lake First Nation 35
61	Dawn-Euphemia
62	Deseronto
63	Douro-Dummer
64	Drummond/North Elmsley
65	Dutton/Dunwich
66	East Garafraxa
67	East Gwillimbury
68	East Hawkesbury
69	East Zorra-Tavistock
70	Edwardsburgh/Cardinal
71	Elizabethtown-Kitley
72	Enniskillen
73	Erin
74	Essa
75	Essex
76	Fort Erie

77	Front of Yonge
78	Frontenac Islands
79	Gananoque
80	Georgian Bluffs
81	Georgina
82	Goderich
83	Grand Valley
84	Greater Napanee
85	Grey Highlands
86	Grimsby
87	Guelph
88	Guelph/Eramosa
89	Haldimand County
90	Halton Hills
91	Hamilton
92	Hamilton
93	Hanover
94	Havelock-Belmont-Methuen
95	Hawkesbury
96	Hiawatha First Nation
97	Horton
98	Howick
99	Huron East
100	Huron-Kinloss
101	Ingersoll
102	Innisfil
103	Kawartha Lakes
104	Kettle Point 44
105	Kincardine
106	King
107	Kingston
108	Kingsville
109	Kitchener
110	Lakeshore
111	Lambton Shores
112	Lanark Highlands
113	LaSalle
114	Laurentian Valley
115	Leamington
116	Leeds and the Thousand Islands
117	Lincoln

118	London
119	Loyalist
120	Lucan Biddulph
121	Malahide
122	Mapleton
123	Markham
124	Marmora and Lake
125	McNab/Braeside
126	Meaford
127	Melancthon
128	Merrickville-Wolford
129	Middlesex Centre
130	Midland
131	Milton
132	Minto
133	Mississauga
134	Mississaugas of Scugog Island
135	Mississippi Mills
136	Mono
137	Montague
138	Moravian 47
139	Morris-Turnberry
140	Mulmur
141	Munsee-Delaware Nation 1
142	New Credit (Part) 40A
143	New Credit (Part) 40A
144	New Tecumseth
145	Newbury
146	Newmarket
147	Neyaashiinigmiing 27
148	Niagara Falls
149	Niagara-on-the-Lake
150	Norfolk County
151	North Dumfries
152	North Dundas
153	North Glengarry
154	North Grenville
155	North Huron
156	North Kawartha
157	North Middlesex
158	North Perth

159	North Stormont
160	Northern Bruce Peninsula
161	Norwich
162	Oakville
163	Oil Springs
164	Oneida 41 6
165	Orangeville
166	Orillia
167	Oro-Medonte
168	Oshawa
169	Otonabee-South Monaghan
170	Ottawa
171	Owen Sound
172	Pelee
173	Pelham
174	Pembroke
175	Penetanguishene
176	Perth
177	Perth East
178	Perth South
179	Peterborough
180	Petrolia
181	Pickering
182	Plympton-Wyoming
183	Point Edward
184	Port Colborne
185	Port Hope
186	Prescott
187	Prince Edward County
188	Puslinch
189	Quinte West
190	Ramara
191	Renfrew
192	Richmond Hill
193	Rideau Lakes
194	Russell
195	Sarnia
196	Sarnia 45
197	Saugeen 29
198	Saugeen Shores
199	Scugog

200	Selwyn
201	Severn
202	Shelburne
203	Six Nations (Part) 40 6
204	Six Nations (Part) 40 6
205	Smiths Falls
206	South Bruce
207	South Bruce Peninsula
208	South Dundas
209	South Frontenac
210	South Glengarry
211	South Huron
212	South Stormont
213	South-West Oxford
214	Southgate
215	Southwest Middlesex
216	Southwold
217	Springwater
218	St. Catharines
219	St. Clair
220	St. Marys
221	St. Thomas
222	Stirling-Rawdon
223	Stone Mills
224	Stratford
225	Strathroy-Caradoc
226	Tay
227	Tay Valley
228	Tecumseh
229	Thames Centre
230	The Blue Mountains
231	The Nation / La Nation
232	Thorold
233	Tillsonburg
234	Tiny
235	Toronto
236	Trent Hills
237	Trent Lakes
238	Tweed
239	Tyendinaga
240	Tyendinaga Mohawk Territory

241	Uxbridge
242	Vaughan
243	Wainfleet
244	Walpole Island 46 6
245	Warwick
246	Wasaga Beach
247	Waterloo
248	Welland
249	Wellesley
250	Wellington North
251	West Elgin
252	West Grey
253	West Lincoln
254	West Perth
255	Westport
256	Whitby
257	Whitchurch-Stouffville
258	Whitewater Region
259	Wilmot
260	Windsor
261	Woodstock
262	Woolwich
263	Zorra

Table 2: Census Subdivisions classified as Urban Core in Southern Ontario

Count	Census Subdivision	Population 2021
1	Ajax	126,666
2	Barrie	147,829
3	Brampton	656,480
4	Brantford	104,688
5	Burlington	186,948
6	Cambridge	138,479
7	Chatham-Kent	103,988
8	Clarington	101,427

9	Guelph	143,740
10	Hamilton	569,353
11	Kingston	132,485
12	Kitchener	256,885
13	London	422,324
14	Markham	338,503
15	Milton	132,979
16	Mississauga	717,961
17	Oakville	213,759
18	Oshawa	175,383
19	Ottawa	1,017,449
20	Richmond Hill	202,022
21	St. Catharines	136,803
22	Toronto	2,794,356
23	Vaughan	323,103
24	Waterloo	121,436
25	Whitby	138,501
26	Windsor	229,660

Table 3: Census Subdivisions meeting "Exurban: All three", Southern Ontario, Phase 1

Census Subdivision	Commuters to Urban Core (%)	Dwelling Density (acres/unit)	Population Growth 2016-2021 (%)	Map Class
Amaranth	35.6%	47.7	6.1	Exurban: All three
Amherstburg	42.6%	4.9	7.2	Exurban: All three
Beckwith	49.9%	17.5	18.0	Exurban: All three
Bradford West Gwillimbury	41.6%	3.7	21.4	Exurban: All three
Brant	58.6%	14.1	10.8	Exurban: All three
Caledon	63.2%	7.2	15.2	Exurban: All three
Cavan Monaghan	23.7%	21.3	13.4	Exurban: All three

Central Elgin	35.9%	12.7	9.0	Exurban: All three
Centre Wellington	38.9%	8.5	10.3	Exurban: All three
Clarence-Rockland	52.9%	7.3	8.1	Exurban: All three
Dutton/Dunwich	36.1%	45.6	7.4	Exurban: All three
East Garafraxa	36.8%	45.6	8.3	Exurban: All three
East Gwillimbury	39.8%	5.3	44.4	Exurban: All three
East Zorra-Tavistock	21.1%	20.1	10.2	Exurban: All three
Edwardsburgh/Cardinal	20.9%	24.4	6.1	Exurban: All three
Essa	35.5%	8.7	9.0	Exurban: All three
Frontenac Islands	53.7%	48.4	9.7	Exurban: All three
Grand Valley	37.6%	28.1	30.3	Exurban: All three
Greater Napanee	22.4%	16.6	6.2	Exurban: All three
Grimsby	57.7%	1.5	5.7	Exurban: All three
Guelph/Eramosa	63.8%	15.0	8.2	Exurban: All three
Haldimand County	41.1%	16.5	7.9	Exurban: All three
Innisfil	49.0%	4.1	18.5	Exurban: All three
King	62.1%	9.2	11.5	Exurban: All three
Lakeshore	46.2%	9.1	10.4	Exurban: All three
Lanark Highlands	28.3%	102.2	7.5	Exurban: All three
LaSalle	63.9%	1.4	8.4	Exurban: All three
Lincoln	32.7%	4.2	8.1	Exurban: All three
Loyalist	68.4%	12.4	5.7	Exurban: All three
Lucan Biddulph	40.7%	19.8	20.9	Exurban: All three
McNab/Braeside	33.1%	20.8	5.8	Exurban: All three
Middlesex Centre	62.9%	21.7	9.7	Exurban: All three
Mississippi Mills	44.7%	20.9	12.0	Exurban: All three
Mono	35.3%	22.0	9.4	Exurban: All three
New Credit (Part) 40A	45.8%	24.1	23.0	Exurban: All three
New Tecumseth	33.4%	4.3	28.3	Exurban: All three
Niagara Falls	25.1%	1.4	7.2	Exurban: All three

Niagara-on-the-Lake	32.2%	4.1	9.0	Exurban: All three
North Grenville	43.2%	12.4	9.2	Exurban: All three
North Stormont	26.6%	44.6	7.7	Exurban: All three
Oro-Medonte	41.3%	16.8	9.4	Exurban: All three
Pelham	30.9%	4.5	6.3	Exurban: All three
Pickering	70.6%	1.7	8.1	Exurban: All three
Puslinch	74.8%	18.6	8.3	Exurban: All three
Russell	57.6%	6.8	18.6	Exurban: All three
South Frontenac	73.6%	29.5	8.3	Exurban: All three
Southwold	34.1%	43.5	9.7	Exurban: All three
Springwater	50.2%	17.6	13.9	Exurban: All three
Strathroy-Caradoc	29.2%	7.1	14.4	Exurban: All three
Thames Centre	55.7%	20.7	6.0	Exurban: All three
Thorold	47.0%	2.3	26.7	Exurban: All three
Wainfleet	20.5%	20.6	8.1	Exurban: All three
West Lincoln	50.4%	18.1	6.6	Exurban: All three
Whitchurch-Stouffville	59.5%	3.1	8.8	Exurban: All three
Woolwich	48.1%	8.6	8.0	Exurban: All three
Zorra	28.7%	41.4	6.0	Exurban: All three

Table 4: Census Subdivisions meeting "Commuting and Density, not Growth", Southern Ontario, Phase 1

CSDNAME	Commuters to Urban Core (%)	Dwelling Density (acres/unit)	Population Growth 2016-2021 (%)	Map Class
Adjala-Tosorontio	32.9%	23.9	0.1	Commuting and density, not growth
Alfred and Plantagenet	31.0%	23.7	2.8	Commuting and density, not growth
Blandford-Blenheim	42.8%	34.0	2.2	Commuting and density, not growth

Chippewas of Georgina Island First Nation	28.6%	31.9	-11.5	Commuting and density, not growth
Dawn-Euphemia	36.6%	143.6	0.1	Commuting and density, not growth
Erin	49.7%	17.5	4.7	Commuting and density, not growth
Essex	33.5%	8.2	3.9	Commuting and density, not growth
Georgina	26.8%	4.0	4.9	Commuting and density, not growth
Halton Hills	54.8%	3.1	2.9	Commuting and density, not growth
Hamilton	95.0%	14.8	1.1	Commuting and density, not growth
Kingsville	20.4%	7.3	2.6	Commuting and density, not growth
Leeds and the Thousand Islands	36.8%	37.6	3.6	Commuting and density, not growth
Merrickville-Wolford	26.6%	41.1	2.2	Commuting and density, not growth
Montague	29.7%	45.8	4.1	Commuting and density, not growth
Moravian 47	25.0%	20.8	-17.0	Commuting and density, not growth
Mulmur	34.8%	50.9	2.7	Commuting and density, not growth
Munsee-Delaware Nation 1	50.0%	52.2	-15.7	Commuting and density, not growth
New Credit (Part) 40A	45.8%	25.0	0.7	Commuting and density, not growth
Newbury	34.4%	2.3	-5.6	Commuting and density, not growth
North Dumfries	66.0%	12.6	4.0	Commuting and density, not growth
North Dundas	44.0%	27.4	0.2	Commuting and density, not growth
North Middlesex	24.3%	61.9	-0.7	Commuting and density, not growth
Port Hope	29.5%	9.4	3.2	Commuting and density, not growth
Scugog	40.1%	14.2	-0.2	Commuting and density, not growth

Southwest Middlesex	27.5%	43.9	3.0	Commuting and density, not growth
Stone Mills	41.0%	55.8	1.6	Commuting and density, not growth
Tecumseh	57.7%	2.6	0.3	Commuting and density, not growth
Uxbridge	33.7%	13.0	1.8	Commuting and density, not growth
Wellesley	36.2%	20.4	0.5	Commuting and density, not growth
West Elgin	30.4%	37.8	1.3	Commuting and density, not growth
Wilmot	54.2%	8.3	4.3	Commuting and density, not growth

Table 5: Census Subdivisions meeting "Commuting, not Density", Southern Ontario, Phase 1

Census Subdivision	Commuters to Urban Core	Dwelling Density (acres/unit)	Population Growth 2016-2021 (%)	Map Class
Gananoque	37.2%	0.7	4.3	Commuting, not density
Newmarket	37.5%	0.3	4.4	Commuting, not density
Orangeville	35.8%	0.3	4.4	Commuting, not density

Table 6: Census Subdivisions meeting "Density, not Commuting, not Growth", Southern Ontario, Phase 1

Census Subdivision	Commuters to Urban Core (%)	Dwelling Density (acres/unit)	Population Growth 2016-2021 (%)	Map Class
Adelaide-Metcalfe	17.3%	80.8	0.7	Density, not commuting, not growth
Admaston/Bromley	6.3%	113.0	2.0	Density, not commuting, not growth

Arran-Elderslie	1.0%	40.7	1.6	Density, not commuting, not growth
Athens	9.7%	26.4	0.8	Density, not commuting, not growth
Augusta	7.0%	26.3	0.4	Density, not commuting, not growth
Bayham	6.3%	26.7	-4.1	Density, not commuting, not growth
Brighton	7.0%	11.0	2.2	Density, not commuting, not growth
Brockton	1.0%	34.6	3.4	Density, not commuting, not growth
Brooke-Alvinston	10.1%	83.8	-2.2	Density, not commuting, not growth
Central Huron	3.1%	34.0	2.9	Density, not commuting, not growth
Centre Hastings	4.8%	28.4	0.6	Density, not commuting, not growth
Champlain	5.6%	13.6	-0.5	Density, not commuting, not growth
Chief's Point No. 28	0.0%	203.3	0.0	Density, not commuting, not growth
Christian Island 30A	0.0%	1.3	-28.6	Density, not commuting, not growth
Clearview	16.8%	24.7	4.7	Density, not commuting, not growth
Cramahe	15.1%	19.2	2.4	Density, not commuting, not growth

East Hawkesbury	6.6%	40.8	3.7	Density, not commuting, not growth
Elizabethtown-Kitley	6.6%	36.2	-0.9	Density, not commuting, not growth
Enniskillen	1.2%	80.2	1.0	Density, not commuting, not growth
Front of Yonge	9.0%	28.8	-0.3	Density, not commuting, not growth
Hiawatha First Nation	0.0%	14.1	-5.8	Density, not commuting, not growth
Howick	4.9%	52.7	4.4	Density, not commuting, not growth
Huron East	4.7%	44.6	4.1	Density, not commuting, not growth
Laurentian Valley	1.3%	35.9	0.7	Density, not commuting, not growth
Malahide	18.5%	32.3	0.2	Density, not commuting, not growth
Mapleton	18.3%	40.8	3.0	Density, not commuting, not growth
Meaford	3.4%	28.8	4.5	Density, not commuting, not growth
Melancthon	15.5%	74.1	4.1	Density, not commuting, not growth
Minto	8.4%	21.7	4.9	Density, not commuting, not growth
Mississaugas of Scugog Island	0.0%	13.0	-4.6	Density, not commuting, not growth

Morris-Turnberry	1.0%	77.9	2.7	Density, not commuting, not growth
Neyaashiinigmiing 27	0.0%	63.5	-5.7	Density, not commuting, not growth
North Glengarry	6.9%	36.0	0.3	Density, not commuting, not growth
North Huron	0.0%	20.5	2.4	Density, not commuting, not growth
Norwich	11.6%	27.9	2.9	Density, not commuting, not growth
Oil Springs	0.0%	7.5	-0.2	Density, not commuting, not growth
Pelee	0.0%	83.1	-2.1	Density, not commuting, not growth
Perth East	9.2%	42.8	2.6	Density, not commuting, not growth
Perth South	7.3%	69.4	-0.8	Density, not commuting, not growth
Petrolia	1.7%	1.3	4.7	Density, not commuting, not growth
Prince Edward County	5.2%	23.0	3.9	Density, not commuting, not growth
Sarnia	3.3%	1.3	0.6	Density, not commuting, not growth
Sarnia 45	6.5%	11.9	1.4	Density, not commuting, not growth
Saugeen 29	0.0%	32.2	-24.7	Density, not commuting, not growth

South Bruce	1.3%	52.8	4.3	Density, not commuting, not growth
South Dundas	17.0%	27.7	1.8	Density, not commuting, not growth
South Glengarry	4.0%	27.5	1.4	Density, not commuting, not growth
South Huron	8.3%	24.2	-0.3	Density, not commuting, not growth
South Stormont	6.4%	20.4	3.5	Density, not commuting, not growth
South-West Oxford	13.9%	34.9	-0.7	Density, not commuting, not growth
St. Clair	13.0%	25.4	4.1	Density, not commuting, not growth
Stirling-Rawdon	2.0%	35.4	2.7	Density, not commuting, not growth
Tay Valley	8.7%	54.0	4.6	Density, not commuting, not growth
The Nation / La Nation	0.0%	31.9	4.2	Density, not commuting, not growth
Tweed	5.3%	87.6	0.4	Density, not commuting, not growth
Tyendinaga Mohawk Territory	5.9%	17.3	-2.3	Density, not commuting, not growth
Warwick	2.2%	52.8	-1.4	Density, not commuting, not growth
Wellington North	13.4%	27.1	4.3	Density, not commuting, not growth

West Grey	4.9%	40.9	4.9	Density, not commuting, not growth
West Perth	4.7%	41.7	2.0	Density, not commuting, not growth
Whitewater Region	5.1%	45.5	3.1	Density, not commuting, not growth

Table 7: Census Subdivision meeting "None", Southern Ontario, Phase 1

Census Subdivision	Commuters to Urban Core (%)	Dwelling Density (acres/unit)	Population Growth 2016-2021 (%)	Map Class
Akwesasne (Part) 59 3 6	0.0%	0.0	0.0	None
Alderville First Nation	14.8%	12.3	9.5	None
Alnwick/Haldimand	17.6%	34.9	8.8	None
Arnprior	37.2%	0.7	9.5	None
Ashfield-Colborne-Wawanosh	3.8%	61.5	8.5	None
Asphodel-Norwood	4.1%	21.9	13.4	None
Aurora	48.6%	0.6	11.9	None
Aylmer	15.7%	0.5	2.8	None
Belleville	3.5%	2.6	8.6	None
Bluewater	9.4%	31.2	5.7	None
Brock	19.5%	21.8	7.9	None
Brockville	5.8%	0.5	2.5	None
Carleton Place	43.8%	0.5	17.6	None
Casselman	38.6%	0.8	11.6	None
Chatsworth	2.8%	54.4	6.8	None
Chippewas of Rama First Nation	3.8%	7.3	13.7	None
Chippewas of the Thames First Nation 42 6	0.0%	0.0	0.0	None
Christian Island 30	0.0%	58.0	10.6	None
Cobourg	14.0%	0.6	5.6	None
Collingwood	8.1%	0.7	13.8	None
Cornwall	3.3%	0.7	2.7	None
Curve Lake First Nation 35	4.0%	3.0	17.5	None

Deseronto	13.3%	0.9	-1.5	None
Douro-Dummer	6.0%	38.8	13.8	None
Drummond/North Elmsley	18.8%	27.5	5.3	None
Fort Erie	14.6%	2.9	7.1	None
Georgian Bluffs	1.7%	33.0	5.9	None
Goderich	0.8%	0.6	3.3	None
Grey Highlands	8.1%	53.1	6.3	None
Hanover	0.7%	0.7	3.6	None
Havelock-Belmont-Methuen	8.4%	58.6	12.2	None
Hawkesbury	4.7%	0.5	-0.7	None
Horton	17.2%	30.3	10.2	None
Huron-Kinloss	3.7%	36.0	9.3	None
Ingersoll	24.1%	0.6	7.3	None
Kawartha Lakes	16.6%	22.9	5.1	None
Kettle Point 44	4.2%	4.5	22.0	None
Kincardine	1.7%	25.8	7.7	None
Lambton Shores	10.1%	15.4	11.7	None
Leamington	10.5%	6.1	7.6	None
Marmora and Lake	6.3%	70.5	7.9	None
Midland	10.7%	1.1	5.7	None
Norfolk County	16.5%	14.3	5.4	None
North Kawartha	7.0%	135.2	16.1	None
North Perth	7.8%	20.4	18.3	None
Northern Bruce Peninsula	6.9%	86.9	10.1	None
Oneida 41 6	0.0%	0.0	0.0	None
Orillia	14.4%	0.5	7.2	None
Otonabee-South Monaghan	11.3%	31.3	6.3	None
Owen Sound	1.6%	0.6	1.3	None
Pembroke	1.8%	0.5	3.5	None
Penetanguishene	9.5%	1.6	12.4	None
Perth	12.3%	0.9	9.1	None
Peterborough	5.8%	0.4	3.2	None
Plympton-Wyoming	2.3%	24.8	6.6	None
Point Edward	0.0%	0.9	-5.3	None
Port Colborne	16.5%	3.5	9.4	None
Prescott	7.9%	0.6	-3.4	None
Quinte West	3.6%	6.4	6.8	None
Ramara	17.8%	23.3	9.4	None
Renfrew	8.7%	0.8	-0.4	None
Rideau Lakes	17.6%	37.5	5.4	None
Saugeen Shores	1.2%	6.1	16.0	None

Selwyn	7.0%	10.4	9.3	None
Severn	14.9%	22.3	8.3	None
Shelburne	21.8%	0.5	10.7	None
Six Nations (Part) 40 6	0.0%	0	0.0	None
Six Nations (Part) 40 6	0.0%	0.0	0.0	None
Smiths Falls	16.1%	0.6	5.4	None
South Bruce Peninsula	2.1%	31.6	8.6	None
Southgate	15.0%	52.7	18.5	None
St. Marys	9.4%	1.0	1.7	None
St. Thomas	29.4%	0.5	10.1	None
Stratford	5.9%	0.5	5.6	None
Tay	12.7%	7.5	10.5	None
The Blue Mountains	13.7%	16.2	33.7	None
Tillsonburg	8.9%	0.7	17.3	None
Tiny	15.9%	15.2	10.0	None
Trent Hills	8.0%	21.5	7.4	None
Trent Lakes	13.2%	69.8	19.3	None
Tyendinaga	8.8%	46.8	7.4	None
Walpole Island 46 6	0.0%	0.0	0.0	None
Wasaga Beach	19.9%	1.3	20.3	None
Welland	23.4%	0.8	6.6	None
Westport	16.7%	1.6	7.5	None
Woodstock	16.8%	0.7	13.6	None

Table 8: Census Subdivisions meeting "Education + Income + Non-Rural", Southern Ontario, Phase 2

Census Subdivision	Household Median Income ($)	Education Rate (%)	Rural Labour Share (%)	Map Class
Ajax	$119,000	68.3%	0%	Education + Income + Non-Rural
Alnwick/Haldimand	$102,000	63.7%	4%	Education + Income + Non-Rural
Aurora	$119,000	77.3%	0%	Education + Income + Non-Rural

Beckwith	$126,000	72.7%	2%	Education + Income + Non-Rural
Blandford-Blenheim	$107,000	62.5%	9%	Education + Income + Non-Rural
Brampton	$111,000	64.8%	0%	Education + Income + Non-Rural
Brant	$106,000	65.0%	6%	Education + Income + Non-Rural
Burlington	$110,000	76.3%	1%	Education + Income + Non-Rural
Caledon	$133,000	66.9%	1%	Education + Income + Non-Rural
Cavan Monaghan	$110,000	67.3%	4%	Education + Income + Non-Rural
Central Elgin	$103,000	67.9%	6%	Education + Income + Non-Rural
Centre Wellington	$101,000	65.4%	5%	Education + Income + Non-Rural
Clarence-Rockland	$106,000	63.6%	1%	Education + Income + Non-Rural
Clarington	$112,000	67.9%	1%	Education + Income + Non-Rural
East Garafraxa	$137,000	64.8%	7%	Education + Income + Non-Rural
East Gwillimbury	$119,000	70.9%	2%	Education + Income + Non-Rural
East Zorra-Tavistock	$100,000	62.2%	13%	Education + Income + Non-Rural

Erin	$127,000	65.7%	6%	Education + Income + Non-Rural
Grimsby	$104,000	70.7%	2%	Education + Income + Non-Rural
Guelph/Eramosa	$129,000	69.4%	5%	Education + Income + Non-Rural
Halton Hills	$127,000	67.9%	1%	Education + Income + Non-Rural
Hamilton	$106,000	65.7%	4%	Education + Income + Non-Rural
Hamilton	$106,000	65.7%	4%	Education + Income + Non-Rural
Kincardine	$101,000	72.1%	6%	Education + Income + Non-Rural
King	$141,000	71.5%	3%	Education + Income + Non-Rural
Lakeshore	$114,000	65.8%	3%	Education + Income + Non-Rural
LaSalle	$119,000	74.9%	2%	Education + Income + Non-Rural
Lincoln	$102,000	67.6%	7%	Education + Income + Non-Rural
Lucan Biddulph	$105,000	74.5%	8%	Education + Income + Non-Rural
Markham	$104,000	71.3%	0%	Education + Income + Non-Rural
Middlesex Centre	$125,000	77.2%	7%	Education + Income + Non-Rural

Milton	$126,000	77.2%	1%	Education + Income + Non-Rural
Mississauga	$102,000	72.9%	0%	Education + Income + Non-Rural
Mississippi Mills	$100,000	69.9%	4%	Education + Income + Non-Rural
Mono	$138,000	67.7%	4%	Education + Income + Non-Rural
Mulmur	$114,000	66.0%	6%	Education + Income + Non-Rural
Newmarket	$110,000	71.4%	1%	Education + Income + Non-Rural
North Dumfries	$128,000	69.8%	4%	Education + Income + Non-Rural
North Grenville	$108,000	68.9%	3%	Education + Income + Non-Rural
Oakville	$128,000	83.5%	1%	Education + Income + Non-Rural
Orangeville	$103,000	60.2%	1%	Education + Income + Non-Rural
Oro-Medonte	$114,000	68.6%	3%	Education + Income + Non-Rural
Ottawa	$102,000	76.8%	1%	Education + Income + Non-Rural
Pelham	$110,000	74.9%	5%	Education + Income + Non-Rural
Pickering	$118,000	71.1%	1%	Education + Income + Non-Rural

Plympton-Wyoming	$108,000	71.2%	10%	Education + Income + Non-Rural
Puslinch	$133,000	71.2%	4%	Education + Income + Non-Rural
Richmond Hill	$102,000	79.4%	0%	Education + Income + Non-Rural
Russell	$123,000	71.6%	2%	Education + Income + Non-Rural
Saugeen Shores	$103,000	74.9%	1%	Education + Income + Non-Rural
Scugog	$108,000	64.0%	5%	Education + Income + Non-Rural
South Frontenac	$104,000	65.9%	2%	Education + Income + Non-Rural
Southwold	$105,000	69.2%	10%	Education + Income + Non-Rural
Springwater	$122,000	68.9%	3%	Education + Income + Non-Rural
Tecumseh	$109,000	71.4%	1%	Education + Income + Non-Rural
Thames Centre	$112,000	68.2%	8%	Education + Income + Non-Rural
The Blue Mountains	$101,000	74.1%	5%	Education + Income + Non-Rural
The Nation / La Nation	$105,000	63.4%	8%	Education + Income + Non-Rural
Uxbridge	$117,000	68.7%	5%	Education + Income + Non-Rural

Vaughan	$124,000	73.3%	0%	Education + Income + Non-Rural
West Lincoln	$106,000	61.7%	7%	Education + Income + Non-Rural
Whitby	$123,000	71.9%	1%	Education + Income + Non-Rural
Whitchurch-Stouffville	$122,000	72.7%	1%	Education + Income + Non-Rural
Wilmot	$114,000	69.0%	5%	Education + Income + Non-Rural
Woolwich	$115,000	64.7%	6%	Education + Income + Non-Rural

Table 9: Census Subdivisions meeting "Income + Non-Rural", Southern Ontario, Phase 2

Census Subdivision	Household Median Income ($)	Education Rate (%)	Rural Labour Share (%)	Map Class
Adjala-Tosorontio	$117,000	56.2%	5%	Income + Non-Rural
Amaranth	$127,000	59.7%	5%	Income + Non-Rural
Bradford West Gwillimbury	$114,000	59.7%	2%	Income + Non-Rural
Essa	$108,000	57.3%	3%	Income + Non-Rural
Grand Valley	$101,000	55.3%	6%	Income + Non-Rural
Innisfil	$101,000	58.5%	1%	Income + Non-Rural
Melancthon	$100,000	48.9%	13%	Income + Non-Rural
New Tecumseth	$104,000	57.9%	2%	Income + Non-Rural

Table 10: Census Subdivisions meeting "Education + Income", Southern Ontario, Phase 2

Census Subdivision	Household Median Income ($)	Education Rate (%)	Rural Labour Share (%)	Map Class
Enniskillen	$104,000	65.0%	22%	Education + Income
Perth South	$101,000	61.7%	18%	Education + Income
Zorra	$106,000	65.3%	19%	Education + Income

Table 11: Census Subdivisions meeting "Education + Non-Rural", Southern Ontario, Phase 2

Census Subdivision	Household Median Income ($)	Education Rate (%)	Rural Labour Share (%)	Map Class
Amherstburg	$98,000	64.8%	3%	Education + Non-Rural
Arnprior	$75,500	62.0%	1%	Education + Non-Rural
Athens	$85,000	64.2%	5%	Education + Non-Rural
Barrie	$93,000	63.0%	1%	Education + Non-Rural
Bluewater	$85,000	60.9%	14%	Education + Non-Rural
Cambridge	$93,000	60.1%	1%	Education + Non-Rural
Carleton Place	$89,000	63.8%	1%	Education + Non-Rural
Casselman	$99,000	67.6%	1%	Education + Non-Rural
Champlain	$83,000	61.7%	6%	Education + Non-Rural
Cobourg	$77,000	61.8%	1%	Education + Non-Rural
Collingwood	$82,000	63.5%	1%	Education + Non-Rural
Douro-Dummer	$96,000	63.5%	6%	Education + Non-Rural
Drummond/North Elmsley	$98,000	66.1%	4%	Education + Non-Rural

Dutton/Dunwich	$90,000	61.7%	7%	Education + Non-Rural
East Hawkesbury	$81,000	60.9%	11%	Education + Non-Rural
Edwardsburgh/Cardinal	$84,000	62.0%	3%	Education + Non-Rural
Elizabethtown-Kitley	$91,000	61.8%	5%	Education + Non-Rural
Frontenac Islands	$90,000	71.4%	10%	Education + Non-Rural
Georgian Bluffs	$94,000	64.4%	6%	Education + Non-Rural
Guelph	$93,000	68.8%	1%	Education + Non-Rural
Hiawatha First Nation	$62,400	60.0%	0%	Education + Non-Rural
Horton	$90,000	61.1%	2%	Education + Non-Rural
Huron-Kinloss	$91,000	63.2%	14%	Education + Non-Rural
Kingston	$79,000	69.5%	1%	Education + Non-Rural
Kitchener	$87,000	65.2%	1%	Education + Non-Rural
Laurentian Valley	$94,000	63.9%	3%	Education + Non-Rural
Leeds and the Thousand Islands	$91,000	62.5%	5%	Education + Non-Rural
London	$76,500	67.8%	1%	Education + Non-Rural
Loyalist	$95,000	65.5%	1%	Education + Non-Rural
McNab/Braeside	$99,000	64.0%	2%	Education + Non-Rural
Meaford	$79,500	62.0%	6%	Education + Non-Rural
Merrickville-Wolford	$89,000	67.3%	7%	Education + Non-Rural
Niagara-on-the-Lake	$98,000	71.9%	6%	Education + Non-Rural
North Dundas	$90,000	61.3%	8%	Education + Non-Rural

North Kawartha	$73,000	60.1%	3%	Education + Non-Rural
North Stormont	$91,000	60.3%	11%	Education + Non-Rural
Oshawa	$86,000	60.7%	1%	Education + Non-Rural
Otonabee-South Monaghan	$97,000	66.6%	5%	Education + Non-Rural
Peterborough	$71,500	63.9%	1%	Education + Non-Rural
Petrolia	$86,000	68.5%	3%	Education + Non-Rural
Point Edward	$84,000	69.8%	3%	Education + Non-Rural
Port Hope	$88,000	60.0%	3%	Education + Non-Rural
Prince Edward County	$81,000	64.0%	7%	Education + Non-Rural
Rideau Lakes	$84,000	65.0%	4%	Education + Non-Rural
Sarnia	$77,500	65.4%	3%	Education + Non-Rural
Selwyn	$95,000	67.1%	3%	Education + Non-Rural
Severn	$94,000	61.4%	3%	Education + Non-Rural
South Glengarry	$91,000	64.3%	8%	Education + Non-Rural
South Stormont	$92,000	64.0%	3%	Education + Non-Rural
St. Catharines	$72,500	62.2%	2%	Education + Non-Rural
St. Clair	$98,000	66.6%	8%	Education + Non-Rural
St. Marys	$86,000	60.0%	2%	Education + Non-Rural
Stone Mills	$91,000	62.8%	5%	Education + Non-Rural
Strathroy-Caradoc	$89,000	62.4%	5%	Education + Non-Rural
Thorold	$82,000	62.1%	2%	Education + Non-Rural

Tiny	$88,000	63.0%	3%	Education + Non-Rural
Toronto	$84,000	72.5%	0%	Education + Non-Rural
Tyendinaga	$98,000	60.0%	4%	Education + Non-Rural
Waterloo	$94,000	78.5%	1%	Education + Non-Rural
Whitewater Region	$81,000	62.6%	9%	Education + Non-Rural

Table 12: Census Subdivisions meeting "Education only", Southern Ontario, Phase 2

Census Subdivision	Household Median Income ($)	Education Rate (%)	Rural Labour Share (%)	Map Class
Admaston/Bromley	$85,000	60.3%	17%	Education only
North Middlesex	$89,000	61.5%	17%	Education only

Table 13: Census Subdivisions meeting "Non-rural only", Southern Ontario, Phase 2

Census Subdivision	Household Median Income ($)	Education Rate (%)	Rural Labour Share (%)	Map Class
Alderville First Nation	$48,000	55.4%	4%	Non-Rural only
Alfred and Plantagenet	$85,000	55.5%	6%	Non-Rural only
Arran-Elderslie	$80,000	54.8%	13%	Non-Rural only
Asphodel-Norwood	$80,000	56.0%	5%	Non-Rural only
Augusta	$96,000	59.6%	4%	Non-Rural only
Aylmer	$73,500	45.4%	5%	Non-Rural only
Bayham	$83,000	36.6%	10%	Non-Rural only
Belleville	$73,000	58.8%	1%	Non-Rural only
Brantford	$79,500	57.2%	1%	Non-Rural only
Brighton	$81,000	58.4%	4%	Non-Rural only
Brock	$92,000	57.9%	6%	Non-Rural only
Brockton	$84,000	56.3%	11%	Non-Rural only
Brockville	$63,600	58.2%	1%	Non-Rural only
Centre Hastings	$77,500	56.9%	7%	Non-Rural only
Chatham-Kent	$72,000	54.7%	8%	Non-Rural only

Chatsworth	$81,000	57.9%	10%	Non-Rural only
Chippewas of Rama First Nation	$67,500	51.8%	2%	Non-Rural only
Christian Island 30	$52,000	56.7%	0%	Non-Rural only
Clearview	$97,000	58.7%	4%	Non-Rural only
Cornwall	$60,000	50.4%	1%	Non-Rural only
Cramahe	$86,000	55.1%	4%	Non-Rural only
Curve Lake First Nation 35	$53,200	50.0%	5%	Non-Rural only
Deseronto	$63,600	45.7%	0%	Non-Rural only
Essex	$87,000	58.0%	5%	Non-Rural only
Fort Erie	$76,000	57.2%	2%	Non-Rural only
Front of Yonge	$86,000	56.9%	4%	Non-Rural only
Gananoque	$67,000	59.0%	0%	Non-Rural only
Georgina	$98,000	57.2%	2%	Non-Rural only
Goderich	$69,500	57.9%	6%	Non-Rural only
Greater Napanee	$77,500	57.1%	3%	Non-Rural only
Grey Highlands	$85,000	53.3%	10%	Non-Rural only
Haldimand County	$93,000	58.9%	6%	Non-Rural only
Hanover	$69,000	50.5%	4%	Non-Rural only
Havelock-Belmont-Methuen	$71,000	50.9%	6%	Non-Rural only
Hawkesbury	$53,200	43.4%	2%	Non-Rural only
Ingersoll	$88,000	55.8%	1%	Non-Rural only
Kawartha Lakes	$82,000	56.8%	4%	Non-Rural only
Kettle Point 44	$53,200	50.0%	2%	Non-Rural only
Kingsville	$94,000	58.6%	11%	Non-Rural only
Lambton Shores	$80,000	58.9%	10%	Non-Rural only
Lanark Highlands	$81,000	59.3%	6%	Non-Rural only
Malahide	$95,000	45.4%	13%	Non-Rural only
Marmora and Lake	$62,800	45.5%	4%	Non-Rural only
Midland	$69,500	56.0%	1%	Non-Rural only
Minto	$84,000	45.1%	12%	Non-Rural only
Montague	$98,000	59.9%	2%	Non-Rural only
Moravian 47	$46,000	47.1%	0%	Non-Rural only
Newbury	$73,000	40.7%	4%	Non-Rural only
Neyaashiinigmiing 27	$42,800	52.5%	5%	Non-Rural only
Niagara Falls	$74,500	60.0%	1%	Non-Rural only
Norfolk County	$82,000	55.0%	9%	Non-Rural only
North Glengarry	$71,000	53.2%	9%	Non-Rural only

North Huron	$76,000	51.0%	8%	Non-Rural only
North Perth	$84,000	49.5%	13%	Non-Rural only
Northern Bruce Peninsula	$69,500	59.8%	7%	Non-Rural only
Norwich	$95,000	55.4%	13%	Non-Rural only
Oil Springs	$91,000	54.8%	3%	Non-Rural only
Orillia	$71,000	57.1%	1%	Non-Rural only
Owen Sound	$63,200	54.3%	2%	Non-Rural only
Pembroke	$63,200	53.3%	1%	Non-Rural only
Penetanguishene	$74,000	55.3%	1%	Non-Rural only
Perth	$63,200	57.6%	1%	Non-Rural only
Port Colborne	$70,000	54.9%	2%	Non-Rural only
Prescott	$61,200	54.5%	0%	Non-Rural only
Quinte West	$81,000	56.5%	2%	Non-Rural only
Ramara	$85,000	58.9%	3%	Non-Rural only
Renfrew	$60,400	49.0%	2%	Non-Rural only
Sarnia 45	$50,400	49.3%	0%	Non-Rural only
Saugeen 29	$54,800	45.0%	0%	Non-Rural only
Shelburne	$99,000	56.0%	1%	Non-Rural only
Smiths Falls	$61,200	46.9%	1%	Non-Rural only
South Bruce Peninsula	$71,500	56.4%	6%	Non-Rural only
South Dundas	$78,000	54.9%	7%	Non-Rural only
South Huron	$77,000	55.3%	9%	Non-Rural only
Southgate	$85,000	45.8%	13%	Non-Rural only
Southwest Middlesex	$80,000	56.9%	10%	Non-Rural only
St. Thomas	$75,000	57.7%	1%	Non-Rural only
Stirling-Rawdon	$81,000	55.9%	8%	Non-Rural only
Stratford	$77,000	60.0%	1%	Non-Rural only
Tay	$82,000	57.7%	2%	Non-Rural only
Tay Valley	$90,000	59.0%	6%	Non-Rural only
Tillsonburg	$73,500	51.4%	2%	Non-Rural only
Trent Hills	$73,000	56.3%	7%	Non-Rural only
Trent Lakes	$85,000	59.5%	3%	Non-Rural only
Tweed	$69,000	51.7%	5%	Non-Rural only
Tyendinaga Mohawk Territory	$59,200	59.2%	2%	Non-Rural only
Wainfleet	$96,000	58.7%	8%	Non-Rural only
Wasaga Beach	$76,000	53.4%	1%	Non-Rural only
Welland	$71,500	58.3%	2%	Non-Rural only

Wellington North	$78,000	46.4%	13%	Non-Rural only
West Elgin	$75,500	53.3%	10%	Non-Rural only
West Grey	$77,500	54.5%	8%	Non-Rural only
Westport	$62,400	56.9%	0%	Non-Rural only
Windsor	$70,000	58.4%	1%	Non-Rural only
Woodstock	$82,000	55.0%	2%	Non-Rural only

Table 14: Census Subdivisions meeting "Income only", Southern Ontario, Phase 2

Census Subdivision	Household Median Income ($)	Education Rate (%)	Rural Labour Share (%)	Map Class
Adelaide-Metcalfe	$105,000	58.7%	20%	Income only
Mapleton	$109,000	44.4%	23%	Income only
Wellesley	$119,000	49.6%	17%	Income only

Table 15: Census Subdivisions meeting "Strong Exurban", Southern Ontario, Phase 3

Census Subdivision	Base Exurban (Phase 1)	Socioeconomic Class (Phase 2)	Final Exurban Class
Beckwith	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Brant	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Caledon	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Cavan Monaghan	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Central Elgin	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Centre Wellington	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Clarence-Rockland	Base Exurban	Income + Education + Non-Rural	Strong Exurban

East Garafraxa	Base Exurban	Income + Education + Non-Rural	Strong Exurban
East Gwillimbury	Base Exurban	Income + Education + Non-Rural	Strong Exurban
East Zorra-Tavistock	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Grimsby	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Guelph/Eramosa	Base Exurban	Income + Education + Non-Rural	Strong Exurban
King	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Lakeshore	Base Exurban	Income + Education + Non-Rural	Strong Exurban
LaSalle	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Lincoln	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Lucan Biddulph	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Middlesex Centre	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Mississippi Mills	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Mono	Base Exurban	Income + Education + Non-Rural	Strong Exurban
North Grenville	Base Exurban	Income + Education + Non-Rural	Strong Exurban

Oro-Medonte	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Pelham	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Pickering	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Puslinch	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Russell	Base Exurban	Income + Education + Non-Rural	Strong Exurban
South Frontenac	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Southwold	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Springwater	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Thames Centre	Base Exurban	Income + Education + Non-Rural	Strong Exurban
West Lincoln	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Whitchurch-Stouffville	Base Exurban	Income + Education + Non-Rural	Strong Exurban
Woolwich	Base Exurban	Income + Education + Non-Rural	Strong Exurban

Table 16: Census Subdivisions meeting "Non-Rural Base Exurban", Southern Ontario, Phase 3

Census Subdivision	Base Exurban (Phase 1)	Socioeconomic Class (Phase 2)	Final Exurban Class
Greater Napanee	Base Exurban	Non-Rural only	Non-Rural Base Exurban
Haldimand County	Base Exurban	Non-Rural only	Non-Rural Base Exurban
Lanark Highlands	Base Exurban	Non-Rural only	Non-Rural Base Exurban
Niagara Falls	Base Exurban	Non-Rural only	Non-Rural Base Exurban
Wainfleet	Base Exurban	Non-Rural only	Non-Rural Base Exurban

Table 17: Census Subdivisions meeting "Affluent Educated Exurban", Southern Ontario, Phase 3

Census Subdivision	Base Exurban (Phase 1)	Socioeconomic Class (Phase 2)	Final Exurban Class
Zorra	Base Exurban	Income + Education	Affluent Educated Exurban

Table 18: Census Subdivisions meeting "Educated Exurban", Southern Ontario, Phase 3

Census Subdivision	Base Exurban (Phase 1)	Socioeconomic Class (Phase 2)	Final Exurban Class
Amherstburg	Base Exurban	Education + Non-Rural	Educated Exurban
Dutton/Dunwich	Base Exurban	Education + Non-Rural	Educated Exurban
Edwardsburgh/Cardinal	Base Exurban	Education + Non-Rural	Educated Exurban
Frontenac Islands	Base Exurban	Education + Non-Rural	Educated Exurban
Loyalist	Base Exurban	Education + Non-Rural	Educated Exurban

McNab/Braeside	Base Exurban	Education + Non-Rural	Educated Exurban
Niagara-on-the-Lake	Base Exurban	Education + Non-Rural	Educated Exurban
North Stormont	Base Exurban	Education + Non-Rural	Educated Exurban
Strathroy-Caradoc	Base Exurban	Education + Non-Rural	Educated Exurban
Thorold	Base Exurban	Education + Non-Rural	Educated Exurban

Table 19: Census Subdivisions meeting "Affluent Exurban", Southern Ontario, Phase 3

Census Subdivision	Base Exurban (Phase 1)	Socioeconomic Class (Phase 2)	Final Exurban Class
Amaranth	Base Exurban	Income + Non-Rural	Affluent Exurban
Bradford West Gwillimbury	Base Exurban	Income + Non-Rural	Affluent Exurban
Essa	Base Exurban	Income + Non-Rural	Affluent Exurban
Grand Valley	Base Exurban	Income + Non-Rural	Affluent Exurban
Innisfil	Base Exurban	Income + Non-Rural	Affluent Exurban
New Tecumseth	Base Exurban	Income + Non-Rural	Affluent Exurban

Table 20: Census Subdivisions meeting "Not Exurban", Southern Ontario, Phase 3

Census Subdivision	Base Exurban (Phase 1)	Socioeconomic Class (Phase 2)	Final Exurban Class
Adelaide-Metcalfe	Not Exurban	Income only	Not Exurban
Adjala-Tosorontio	Not Exurban	Income + Non-Rural	Not Exurban
Admaston/Bromley	Not Exurban	Education only	Not Exurban
Akwesasne (Part) 59 3 6	Not Exurban	Missing	Not Exurban
Alderville First Nation	Not Exurban	Non-Rural only	Not Exurban
Alfred and Plantagenet	Not Exurban	Non-Rural only	Not Exurban

Alnwick/Haldimand	Not Exurban	Income + Education + Non-Rural	Not Exurban
Arnprior	Not Exurban	Education + Non-Rural	Not Exurban
Arran-Elderslie	Not Exurban	Non-Rural only	Not Exurban
Ashfield-Colborne-Wawanosh	Not Exurban	None	Not Exurban
Asphodel-Norwood	Not Exurban	Non-Rural only	Not Exurban
Athens	Not Exurban	Education + Non-Rural	Not Exurban
Augusta	Not Exurban	Non-Rural only	Not Exurban
Aurora	Not Exurban	Income + Education + Non-Rural	Not Exurban
Aylmer	Not Exurban	Non-Rural only	Not Exurban
Bayham	Not Exurban	Non-Rural only	Not Exurban
Belleville	Not Exurban	Non-Rural only	Not Exurban
Blandford-Blenheim	Not Exurban	Income + Education + Non-Rural	Not Exurban
Bluewater	Not Exurban	Education + Non-Rural	Not Exurban
Brighton	Not Exurban	Non-Rural only	Not Exurban
Brock	Not Exurban	Non-Rural only	Not Exurban
Brockton	Not Exurban	Non-Rural only	Not Exurban
Brockville	Not Exurban	Non-Rural only	Not Exurban
Brooke-Alvinston	Not Exurban	None	Not Exurban
Carleton Place	Not Exurban	Education + Non-Rural	Not Exurban
Casselman	Not Exurban	Education + Non-Rural	Not Exurban
Central Huron	Not Exurban	None	Not Exurban
Centre Hastings	Not Exurban	Non-Rural only	Not Exurban
Champlain	Not Exurban	Education + Non-Rural	Not Exurban
Chatsworth	Not Exurban	Non-Rural only	Not Exurban
Chief's Point No. 28	Not Exurban	Missing	Not Exurban
Chippewas of Georgina Island First Nation	Not Exurban	Missing	Not Exurban
Chippewas of Rama First Nation	Not Exurban	Non-Rural only	Not Exurban

Chippewas of the Thames First Nation 42 6	Not Exurban	Missing	Not Exurban
Christian Island 30	Not Exurban	Non-Rural only	Not Exurban
Christian Island 30A	Not Exurban	Missing	Not Exurban
Clearview	Not Exurban	Non-Rural only	Not Exurban
Cobourg	Not Exurban	Education + Non-Rural	Not Exurban
Collingwood	Not Exurban	Education + Non-Rural	Not Exurban
Cornwall	Not Exurban	Non-Rural only	Not Exurban
Cramahe	Not Exurban	Non-Rural only	Not Exurban
Curve Lake First Nation 35	Not Exurban	Non-Rural only	Not Exurban
Dawn-Euphemia	Not Exurban	None	Not Exurban
Deseronto	Not Exurban	Non-Rural only	Not Exurban
Douro-Dummer	Not Exurban	Education + Non-Rural	Not Exurban
Drummond/North Elmsley	Not Exurban	Education + Non-Rural	Not Exurban
East Hawkesbury	Not Exurban	Education + Non-Rural	Not Exurban
Elizabethtown-Kitley	Not Exurban	Education + Non-Rural	Not Exurban
Enniskillen	Not Exurban	Income + Education	Not Exurban
Erin	Not Exurban	Income + Education + Non-Rural	Not Exurban
Essex	Not Exurban	Non-Rural only	Not Exurban
Fort Erie	Not Exurban	Non-Rural only	Not Exurban
Front of Yonge	Not Exurban	Non-Rural only	Not Exurban
Gananoque	Not Exurban	Non-Rural only	Not Exurban
Georgian Bluffs	Not Exurban	Education + Non-Rural	Not Exurban
Georgina	Not Exurban	Non-Rural only	Not Exurban
Goderich	Not Exurban	Non-Rural only	Not Exurban
Grey Highlands	Not Exurban	Non-Rural only	Not Exurban
Halton Hills	Not Exurban	Income + Education + Non-Rural	Not Exurban

Hamilton	Not Exurban	Income + Education + Non-Rural	Not Exurban
Hanover	Not Exurban	Non-Rural only	Not Exurban
Havelock-Belmont-Methuen	Not Exurban	Non-Rural only	Not Exurban
Hawkesbury	Not Exurban	Non-Rural only	Not Exurban
Hiawatha First Nation	Not Exurban	Education + Non-Rural	Not Exurban
Horton	Not Exurban	Education + Non-Rural	Not Exurban
Howick	Not Exurban	None	Not Exurban
Huron East	Not Exurban	None	Not Exurban
Huron-Kinloss	Not Exurban	Education + Non-Rural	Not Exurban
Ingersoll	Not Exurban	Non-Rural only	Not Exurban
Kawartha Lakes	Not Exurban	Non-Rural only	Not Exurban
Kettle Point 44	Not Exurban	Non-Rural only	Not Exurban
Kincardine	Not Exurban	Income + Education + Non-Rural	Not Exurban
Kingsville	Not Exurban	Non-Rural only	Not Exurban
Lambton Shores	Not Exurban	Non-Rural only	Not Exurban
Laurentian Valley	Not Exurban	Education + Non-Rural	Not Exurban
Leamington	Not Exurban	None	Not Exurban
Leeds and the Thousand Islands	Not Exurban	Education + Non-Rural	Not Exurban
Malahide	Not Exurban	Non-Rural only	Not Exurban
Mapleton	Not Exurban	Income only	Not Exurban
Marmora and Lake	Not Exurban	Non-Rural only	Not Exurban
Meaford	Not Exurban	Education + Non-Rural	Not Exurban
Melancthon	Not Exurban	Income + Non-Rural	Not Exurban
Merrickville-Wolford	Not Exurban	Education + Non-Rural	Not Exurban
Midland	Not Exurban	Non-Rural only	Not Exurban
Minto	Not Exurban	Non-Rural only	Not Exurban
Mississaugas of Scugog Island	Not Exurban	Missing	Not Exurban
Montague	Not Exurban	Non-Rural only	Not Exurban

Moravian 47	Not Exurban	Non-Rural only	Not Exurban
Morris-Turnberry	Not Exurban	None	Not Exurban
Mulmur	Not Exurban	Income + Education + Non-Rural	Not Exurban
Munsee-Delaware Nation 1	Not Exurban	Missing	Not Exurban
New Credit (Part) 40A	Not Exurban	Missing	Not Exurban
Newbury	Not Exurban	Non-Rural only	Not Exurban
Newmarket	Not Exurban	Income + Education + Non-Rural	Not Exurban
Neyaashiinigmiing 27	Not Exurban	Non-Rural only	Not Exurban
Norfolk County	Not Exurban	Non-Rural only	Not Exurban
North Dumfries	Not Exurban	Income + Education + Non-Rural	Not Exurban
North Dundas	Not Exurban	Education + Non-Rural	Not Exurban
North Glengarry	Not Exurban	Non-Rural only	Not Exurban
North Huron	Not Exurban	Non-Rural only	Not Exurban
North Kawartha	Not Exurban	Education + Non-Rural	Not Exurban
North Middlesex	Not Exurban	Education only	Not Exurban
North Perth	Not Exurban	Non-Rural only	Not Exurban
Northern Bruce Peninsula	Not Exurban	Non-Rural only	Not Exurban
Norwich	Not Exurban	Non-Rural only	Not Exurban
Oil Springs	Not Exurban	Non-Rural only	Not Exurban
Oneida 41 6	Not Exurban	Missing	Not Exurban
Orangeville	Not Exurban	Income + Education + Non-Rural	Not Exurban
Orillia	Not Exurban	Non-Rural only	Not Exurban
Otonabee-South Monaghan	Not Exurban	Education + Non-Rural	Not Exurban
Owen Sound	Not Exurban	Non-Rural only	Not Exurban
Pelee	Not Exurban	Missing	Not Exurban
Pembroke	Not Exurban	Non-Rural only	Not Exurban
Penetanguishene	Not Exurban	Non-Rural only	Not Exurban
Perth	Not Exurban	Non-Rural only	Not Exurban
Perth East	Not Exurban	None	Not Exurban

Perth South	Not Exurban	Income + Education	Not Exurban
Peterborough	Not Exurban	Education + Non-Rural	Not Exurban
Petrolia	Not Exurban	Education + Non-Rural	Not Exurban
Plympton-Wyoming	Not Exurban	Income + Education + Non-Rural	Not Exurban
Point Edward	Not Exurban	Education + Non-Rural	Not Exurban
Port Colborne	Not Exurban	Non-Rural only	Not Exurban
Port Hope	Not Exurban	Education + Non-Rural	Not Exurban
Prescott	Not Exurban	Non-Rural only	Not Exurban
Prince Edward County	Not Exurban	Education + Non-Rural	Not Exurban
Quinte West	Not Exurban	Non-Rural only	Not Exurban
Ramara	Not Exurban	Non-Rural only	Not Exurban
Renfrew	Not Exurban	Non-Rural only	Not Exurban
Rideau Lakes	Not Exurban	Education + Non-Rural	Not Exurban
Sarnia	Not Exurban	Education + Non-Rural	Not Exurban
Sarnia 45	Not Exurban	Non-Rural only	Not Exurban
Saugeen 29	Not Exurban	Non-Rural only	Not Exurban
Saugeen Shores	Not Exurban	Income + Education + Non-Rural	Not Exurban
Scugog	Not Exurban	Income + Education + Non-Rural	Not Exurban
Selwyn	Not Exurban	Education + Non-Rural	Not Exurban
Severn	Not Exurban	Education + Non-Rural	Not Exurban
Shelburne	Not Exurban	Non-Rural only	Not Exurban
Six Nations (Part) 40 6	Not Exurban	Missing	Not Exurban
Smiths Falls	Not Exurban	Non-Rural only	Not Exurban
South Bruce	Not Exurban	None	Not Exurban
South Bruce Peninsula	Not Exurban	Non-Rural only	Not Exurban
South Dundas	Not Exurban	Non-Rural only	Not Exurban

South Glengarry	Not Exurban	Education + Non-Rural	Not Exurban
South Huron	Not Exurban	Non-Rural only	Not Exurban
South Stormont	Not Exurban	Education + Non-Rural	Not Exurban
South-West Oxford	Not Exurban	None	Not Exurban
Southgate	Not Exurban	Non-Rural only	Not Exurban
Southwest Middlesex	Not Exurban	Non-Rural only	Not Exurban
St. Clair	Not Exurban	Education + Non-Rural	Not Exurban
St. Marys	Not Exurban	Education + Non-Rural	Not Exurban
St. Thomas	Not Exurban	Non-Rural only	Not Exurban
Stirling-Rawdon	Not Exurban	Non-Rural only	Not Exurban
Stone Mills	Not Exurban	Education + Non-Rural	Not Exurban
Stratford	Not Exurban	Non-Rural only	Not Exurban
Tay	Not Exurban	Non-Rural only	Not Exurban
Tay Valley	Not Exurban	Non-Rural only	Not Exurban
Tecumseh	Not Exurban	Income + Education + Non-Rural	Not Exurban
The Blue Mountains	Not Exurban	Income + Education + Non-Rural	Not Exurban
The Nation / La Nation	Not Exurban	Income + Education + Non-Rural	Not Exurban
Tillsonburg	Not Exurban	Non-Rural only	Not Exurban
Tiny	Not Exurban	Education + Non-Rural	Not Exurban
Trent Hills	Not Exurban	Non-Rural only	Not Exurban
Trent Lakes	Not Exurban	Non-Rural only	Not Exurban
Tweed	Not Exurban	Non-Rural only	Not Exurban
Tyendinaga	Not Exurban	Education + Non-Rural	Not Exurban
Tyendinaga Mohawk Territory	Not Exurban	Non-Rural only	Not Exurban
Uxbridge	Not Exurban	Income + Education + Non-Rural	Not Exurban
Walpole Island 46 6	Not Exurban	Missing	Not Exurban

Warwick	Not Exurban	None	Not Exurban
Wasaga Beach	Not Exurban	Non-Rural only	Not Exurban
Welland	Not Exurban	Non-Rural only	Not Exurban
Wellesley	Not Exurban	Income only	Not Exurban
Wellington North	Not Exurban	Non-Rural only	Not Exurban
West Elgin	Not Exurban	Non-Rural only	Not Exurban
West Grey	Not Exurban	Non-Rural only	Not Exurban
West Perth	Not Exurban	None	Not Exurban
Westport	Not Exurban	Non-Rural only	Not Exurban
Whitewater Region	Not Exurban	Education + Non-Rural	Not Exurban
Wilmot	Not Exurban	Income + Education + Non-Rural	Not Exurban
Woodstock	Not Exurban	Non-Rural only	Not Exurban

Table 21: Sectors of North American Industry Classification System (NAICS)

Sectors - North American Industry Classification System (NAICS) 2017
11 Agriculture, forestry, fishing and hunting
21 Mining, quarrying, and oil and gas extraction
22 Utilities
23 Construction
31-33 Manufacturing
41 Wholesale trade
44-45 Retail trade
48-49 Transportation and warehousing
51 Information and cultural industries
52 Finance and insurance
53 Real estate and rental and leasing
54 Professional, scientific and technical services
55 Management of companies and enterprises
56 Administrative and support, waste management and remediation services

61 Educational services
62 Health care and social assistance
71 Arts, entertainment and recreation
72 Accommodation and food services
81 Other services (except public administration)
91 Public administration