Economic Development Framework of Small Communities in Canada

Phase One:
An Inventory of "Small" Communities

Appendix One:
Literature Review

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Table of Contents

Phase One Project Overview ..... A-ii

Acronyms ..... A-iii

List of Tables ..... A-iv

List of Figures ..... A-v

Introduction: Context of Rural and Small Town Canada A-1

Part One – Literature Review of Definitions A-5
- Statistics Canada
- US Census Bureau
- Beale Codes: USA and Canada
- United States Department of Agriculture
- Organization for Economic Co-operation and Development

Part Two – Evaluation and Recommendation A-41

References A-47

Summary Tables of Parameters Used in Definitions A-50
- Statistics Canada
- US Census Bureau
- Beale Codes: USA and Canada
- United States Department of Agriculture
- Organization for Economic Co-operation and Development

Phase One Project Overview

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1) Conduct a literature review to provide a definition of "small" and explain if there is a universal definition of "small" communities that would be applicable in all provinces and territories; if not, then provide alternative definitions of "small".

2) Indicate the parameters (population density, population size, influence by and distance from an urban area, distance to an essential service) within the above definitions used in classifying the boundaries of the inventory of small communities.

3) Discuss the rationale for the parameters and explain whether or not they can be applied to all provinces and territories and why.

4) Weigh the pros and cons of restricting small places to just municipalities, to Census Subdivisions (or including non-municipal units), or to some other elements and make a recommendation.

5) Based on the above recommendation, compile a list of relevant small communities in Canada.

6) It is expected that the list of small communities will emerge mainly from low to moderate Metropolitan Influenced Zones (MIZ), or non metro-adjacent communities.

Acronyms

Census Agglomeration	CA
Census Consolidated Subdivision	CCS
Census Division	CD
Census Metropolitan Area	CMA CMSA
Census Subdivision	CSD
Interdepartmental Committee on Rural and Remote Canada	ICRRC
Metropolitan Area	MA MCD MSA
Metropolitan Influenced Zones	MIZ
Organization for Economic Co-operation and Development	OECD
Rural Area	RA
Rural and Small Town	RST
Statistical Area Classification	SAC
Urban Area	UA
Urban Cluster	UC
United States Department of Agriculture	USDA
USDA, Economic Research Service	USDA, ERS

List of Tables

1 Selected Census Division Types from the 2001 Census A-9

2 Population Distribution by SAC from the 1996 Census A-15

3 Census Subdivisions by SAC from 2001 Census (%)..... A-15

4 "Beale Codes" for metro and non-metro Counties A-21

5 "Beale Codes" as adapted for Canadian application A-24

6 USDA's Rural-Urban Continuum Codes A-26

7 Urban Influence Codes A-28

8 Rural-Urban Commuting Areas A-29

9 OECD's Urban and Rural Regions A-33

10 Rank of Canada's Rural Population for Each Definition of Rural, 1996 Census Data A-37

11 Overlap of Alternative Definitions of 'Rural', 1996 Census Data A-38

12 Sample socio-economic characteristics of 'rural' A-39

List of Figures

1 Selected Census Geographical Areas – Hierarchy A-6

2 CSDs and Statistical Area Classifications A-12

3 CMA/CA Metropolitan Influenced Zones A-13

4 USA Rural and Urban Commuting Areas A-31

5 Distribution of Canada's 'Rural' Population A-37

Introduction:
Context of Rural and Small Town Canada

It is now well described in the popular, research, and public policy literatures that the context for rural and small town Canada is changing. Processes of social, political, and economic restructuring have affected all aspects of the ways rural and small town places are organized, serviced, and integrated into the local, regional, national, and global economy (Freshwater, 2004).These shifts are occurring together with "concurrent rapid changes in technologies, information flows and the composition of markets" (OECD, 1996, 9). There is also clear recognition in Canada that rural areas are subject to changing economic factors, including "continuous pressures to improve competitiveness and to compete in global markets ... to increase substitution of capital for labour in traditional resource industries ... [and that those industries] are not expected to provide major sources of new employment" (OECD, 1996, 49).

While change is not a new phenomenon in rural and small town Canada, what is new is that the pace of that change has accelerated. In response to this acceleration, new approaches are being applied in both the public and private sector responses. Economic actors are applying increasingly flexible and lean production systems to respond to rapidly shifting market and consumer trends (Barnes, 1996; Hayter, 2000). The OECD has been in the lead in rural public policy responses, and has moved considerably in the

direction of 'place-based' policy and regulation. Their position is that:

> Rural development policy has a territorial focus. It is concerned with thinly populated areas and small towns. These areas face major challenges posed by globalization, increasing competitiveness, and the need to improve and safeguard environmental conditions. In certain areas, unemployment and a stagnating economy are the challenges ahead. In others, dealing with rapid growth in fast changing economic situations [sets] the priorities (OECD 1996, 3).

But to develop effective place-based policy or regulation responses, it is necessary to have a framework available to effectively differentiate places by criteria important to the public policy issues one is interested in addressing. To date, however, efforts at defining rural and small town Canada within public policy have not made use of available tools which could differentiate the complexity of this landscape to usefully serve place-based policy initiatives. Traditional efforts defining rural as some 'remainder' outside of an urban benchmark have "tended to give the impression that rural Canada is one residual area largely homogeneous in its demography, employment base, income, culture and social infrastructure" (Hawkins, 1995, 7). Yet, the outcomes of change and restructuring as experienced at the local level differ tremendously across rural Canada.

In an effort to overcome the barriers to rural definitions and their flexible application to public policy questions, a recent publication by du Plessis *et al.* (2004) emphasizes the importance of knowing why you need to know about rural places and then to select a definitional framework that provides data appropriate to informing that need. They argue

that:

> Researchers, decision-makers, local leaders, and rural policy analysts often start with the question, 'what is the size of the rural population?' We suggest that an appropriate response is, "the answer depends upon the issue you are addressing". An answer to this second question is important because several alternative definitions of 'rural' are available for national and provincial level analysis in Canada. The challenge is to decide which definition to use (du Plessis *et al.*, 2004, 52).

This report outlines various options and frameworks for defining rural and small town places and discusses their relative usefulness for addressing housing issues and particularly with respect to understanding the implications of the different economic trajectories of rural and small town places. The purpose is to provide CMHC with background information on the delineation of different 'rurals' across Canada as part of an effort to better inform debates about place-based information and decision making.

Conceptualizing 'Small'

Many feel they can recognize rural and small town places when they see them, yet when we try to define these units for analysis that which seems intuitively easy becomes next to impossible. As noted below, there is no single definition of rural or small town places which satisfies all users and all geographic contexts, and there are almost as many approaches as there are uses for the data. At its simplest, rural and small town places are distinguished by small population numbers, low population densities, an economy usually based upon extensive land uses, and a way of life which recognizes these attributes. For understanding economic trajectories, and their implications for housing markets, it is important to link 'small' to both population size and geographic context. Population size is important for identifying which places to include or exclude from analysis, and context

is important as there are critical differences between small places which are located close to metropolitan centres and those in more remote locations. Similarly, data linked to administrative units (such as municipalities) is readily accessible but does not capture the wider regional setting within which such individual places are set. The purpose of this review is to find a solution which is not limited by these considerations but employs them in a more robust method for tracking local development trajectories across Canada's diverse rural and small town places.

Part One: Literature Review

The following literature review contains information regarding the definition and classification of rural and small town places in Canada. This review is divided into sections based on the agency which, or the individual who, developed each set of classifications. Some classifications contain similar parameters or use categories developed by others in their application of 'rural'. The definitions outlined use the term 'rural' as opposed to 'small'. Due to the nature of this research, and for discussion purposes of, the term rural is used. Definitions and parameters of 'rural' drawn from Statistics Canada, the US Census Bureau, Calvin Beale, the United States Department of Agriculture, and the Organization for Economic Co-operation and Development are reviewed in the following paragraphs.

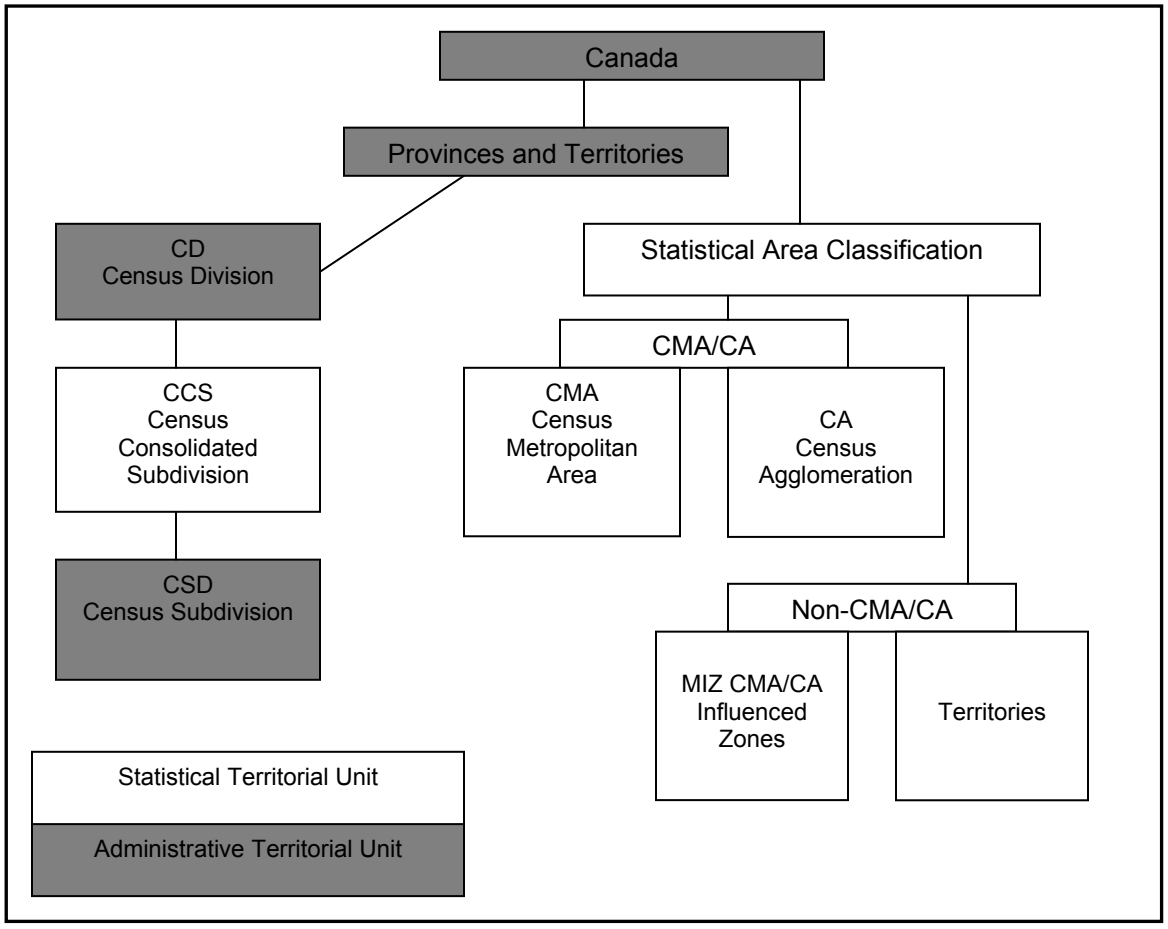
Statistics Canada Definitions of Rural

Statistics Canada has developed a number of ways of defining and classifying the Canada population and land base across a continuum from urban to rural. This section provides an overview of Statistic Canada's geographical units used for disseminating information (see Figure One).

At its simplest, Statistics Canada (2001, 261) defines rural areas as "all territory lying outside urban areas". This use of 'urban' as the benchmark relegates 'rural' to a residual category (Hawkins, 1995; Mendelson, 2001; du Plessis *et al.* 2002). In Canada, urban areas have "a minimum population of 1,000 persons and a population density of a least 400 persons per square kilometer" (Statistics Canada, 2001, 262; see also: Bollman and

Biggs, 1992; Rambeau and Todd, 2000; du Plessis *et al.* 2002). These territorial units, based on population count and population density, are statistical territorial units applicable in both local and regional contexts. In their reporting of population information, Statistics Canada often uses the 5,000 population level as a low end cut off for reporting urban place data. This cut off point may mark a useful line for distinguishing small places from urban settlements.

Figure One: Selected Census Geographical Areas – Hierarchy



Adapted from: Statistics Canada. (2001). pp.205.

This definition of rural faces certain limitations. For example, it can lead to remote towns with a population of barely more than 1,000 being classified as urban just as would a metropolitan area such as Toronto (Bollman and Biggs, 1992). As well, since there is no universally accepted definition of 'urban' places (Yeates, 1990), it is difficult to conceptualize rural as being a residual. Finally, this type of definitional framework conveys the idea that rural is homogeneous and does not take into account the diversity found in rural and small town places (Hawkins, 1995). There is a gap in our knowledge about the differences and connections between urban and rural places, and between types of rural places. Ehrensaft and Beeman (1992, 197) argue that it is "not sufficient to classify the population as rural simply on the basis of having a combination of total population and population density which is less than a specified threshold".

If we are to develop definitional frameworks useful to place-based policy or regulation responses, then we need to know about different ways to construct those definitions. du Plessis *et al.* (2002) describe the territorial units or 'building blocks' that make up Canada's census geography and explain the different ways in which these building blocks can be assembled for classifying geographic space or creating a hierarchy of census geography. From standard building blocks, Canada's geographic areas can be divided into administrative (defined by federal and provincial statues) and statistical (part of the spatial frame of Statistics Canada for disseminating census data) areas (Statistics Canada, 2001). These geographic areas can involve villages, towns or municipalities, counties or regional districts, provinces or territories.

Provinces and territories are among the largest geographical classifications of census information and are administrative territorial units. Census Divisions (CD) are the next largest and represent counties, regional districts, regional municipalities, and any other equivalent provincially legislated areas (du Plessis *et al.* 2002). CDs are comprised of a "group of neighbouring municipalities joined together for the purposes of regional planning and managing common services" (Statistics Canada, 2001, 225). Not all provinces or territories, however, have invoked such legislated designations. In these cases, equivalent areas have been established by Statistics Canada in cooperation with provincial or territorial governments in order to disseminate statistical data.

As is shown in Table One, there are eleven different administrative territorial units used across Canada in order to create or delineate CDs (or their equivalent). For example, in Prince Edward Island, Nova Scotia, New Brunswick and Ontario, 'counties' are used as CD types. In Ontario, 'districts', 'district municipalities', 'regional municipalities', and 'united counties' are also used to delineate CDs. Conversely, the entire Yukon Territory is classified as one CD (Statistics Canada, 2001; du Plessis *et al.*, 2002). Although the types are diverse, the CD designation is one of the most stable administrative geographic areas. CDs can also be grouped to create an Economic Region (ER) in order to analyze regional economic activity (Statistics Canada, 2001). Hawkins (1995) used CDs as a unit to develop a *Typology of Rural Canada*. This report will be discussed further in phase two of this project.

Table One: Selected Census Division Types from the 2001 Census

CD Type	Canada	Nfld Lab.	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Y.T	NWT	Nvt.
CTY County	57	-	3	18	15	-	21	-	-	-	-	-	-	-
CU Communauté urbaine	3	-	-	-	-	3	-	-	-	-	-	-	-	-
DIS District	10	-	-	-	-	-	10	-	-	-	-	-	-	-
DIV Census Division	80	10	-	-	-	3	7	23	18	19	-	-	-	-
DM District Municipality	1	-	-	-	-	-	1	-	-	-	-	-	-	-
MRC Municipalité régionale de comté	93	-	-	-	-	93	-	-	-	-	-	-	-	-
RD Regional District	27	-	-	-	-	-	-	-	-	-	27	-	-	-
REG Region	6	-	-	-	-	-	-	-	-	-	1	-	2	3
RM Regional Municipality	7	-	-	-	-	-	7	-	-	-	-	-	-	-
TER Territory	1	-	-	-	-	-	-	-	-	-	-	1	-	-
UC United Counties	3	-	-	-	-	-	3	-	-	-	-	-	-	-

Adapted from: Statistics Canada. (2001). 2001 Census Dictionary. pp.226.

Census Subdivisions (CSD) are also administrative territorial units. They are the geographic areas associated with municipalities (as determined by provincial legislation) or their equivalent such as unorganized territories and Indian settlements and reserves (Statistics Canada, 2001; du Plessis *et al.*, 2002). There are two exceptions. In Newfoundland and Labrador and Nova Scotia, the designations of '"Subdivision of Unorganized Area" and "Subdivision of County Municipality", respectively, have been

designated by Statistics Canada and the provinces as municipal equivalents in order to disseminate data (Statistics Canada, 2001).

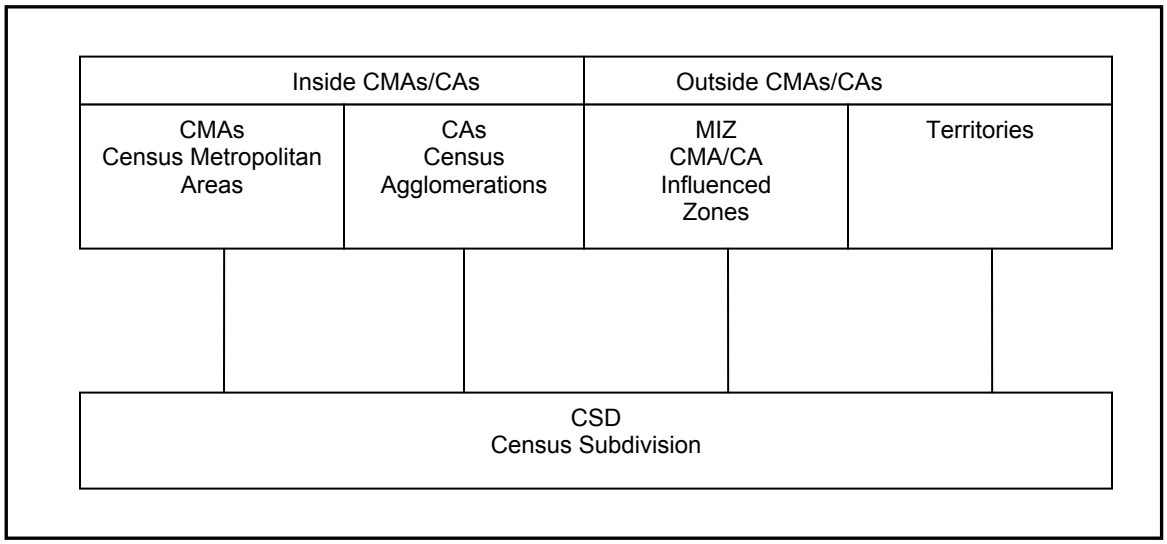
The types of CSDs are too varied to name them all. They range in type from city, town, district municipality, hamlet and Indian government district, to municipal district, Nisga'a land, northern village, specialized municipality, and regional district electoral area. Among the types common to most provinces and territories are: city, Indian Reserve, Indian settlement, town, unorganized territory, and village. CSDs can be grouped to form Census Consolidated Subdivisions (CCS). This happens in cases where a small urban CSD is surrounded by a larger more rural CSD and the two are combined for statistical purposes (Statistics Canada, 2001). This creates a geographical level between the CSD and CD. A recent study titled *Rural economic diversification – A community and regional approach* has been conducted using the CCS as the unit for analysis, representing communities. The authors looked at an index of community economic specialization and diversification (Page and Beshiri 2003). However, these have most often been used as a foundation for reporting Census of Agriculture statistics and are not especially suited to our purposes.

There are a number of Statistical Area Classifications (SAC) which are used to group CSDs in order to disseminated data. Such groupings are done "according to whether they are a component of a census metropolitan area, a census agglomeration, a census metropolitan area or census agglomeration influenced zone (strong MIZ, moderate MIZ, weak MIZ or no MIZ), or the territories (Northwest Territories, Nunavut and Yukon

Territory)" (Statistics Canada, 2001, 214). These are statistical territorial units (see Figure Two). A Census Metropolitan Area (CMA) or Census Agglomeration (CA) consists of one or more adjacent municipalities around an urban core. To be classified as a CMA, the urban core must have a population of 100,000 or more. To be classified as a CA, the urban core must be 10,000 or more. CMAs and CAs are conceptualized and defined as having "a high degree of social and economic integration" (Statistics Canada 2001, 202). As a consequence, commuter flows are used to determine whether individual CSDs are to be included within the boundaries of a CMA or CA. In this case, at least 50% of the employed labour force living in a CSD must commute to work in an urban core (called the 'forward commuting flow rule') and at least 25% of the employed labour force living in the urban core must commute to work in the CSD (called the 'reverse commuting flow rule') (Statistics Canada, 2001; du Plessis *et al.*, 2002).

Non-CMA and non-CA areas "cover all areas outside both [CMAs and CAs] and include small urban areas and rural areas" (Rambeau and Todd, 2000, 3; see also du Plessis *et al.*, 2002). Representing the non-CMA and non-CA population, the Rural and Small Town (RST) classification in Canada refers to the populations in CSDs living outside the commuting zones of urban centres (10,000 + population). For many public policy areas interested in Canada's non-metropolitan rural and small town places, the RST framework is one of the most commonly recommended classification schemes (du Plessis *et al.*, 2004).

Figure Two: CSDs and Statistical Area Classifications

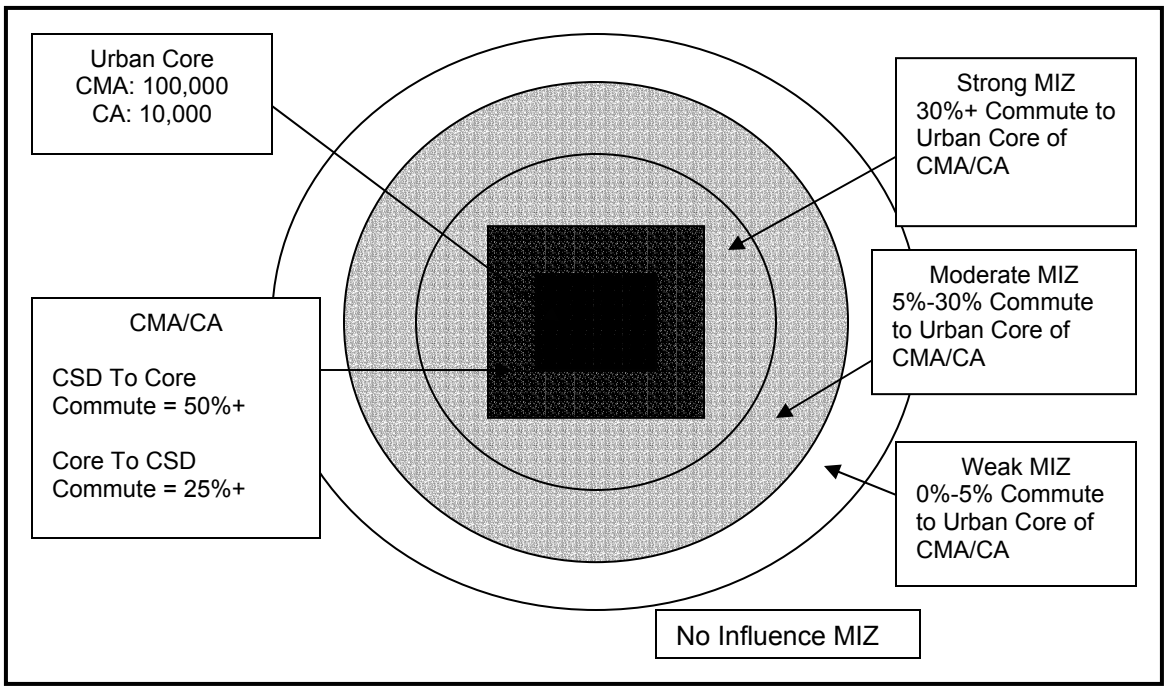


Adapted from: Statistics Canada. (2001). 2001 Census Dictionary. pp.214

In an effort to help differentiate places across the very large regions of Canada covered under the RST classification, Statistics Canada has introduced a method of further classifying these places according to the level of influences felt from CMAs and CAs. A Census Metropolitan Area and Census Agglomeration Influenced Zones (MIZ) are determined by the degree of influence that any CMA or CA has on these non-CMA/CA areas (McNiven *et al.*, 2000). This is a new component in the Statistical Area Classification (statistical territorial unit) system, aiding in the further differentiation of this largely rural area (Statistics Canada, 2001). It can be applied the same way across the country (McNiven *et al.*, 2000). Many of the CSDs in the Territories are large and sparsely populated, and the CSDs in these areas are considered together under the SAC, with the exception of the CAs of Whitehorse and Yellowknife (Statistics Canada 2001).

Because the RST definition is built from commuter flows, it is particularly useful for labour market analysis. At the same time, the commuter flows criteria also acts as a proxy for access to services such as health, education, financial institutions, shopping centres, cultural centres, and sports facilities (McNiven, *et al.*, 2000). Of particular interest to the CHMC project is that such a local labour and commuting market also fits with the structure of a local housing market.

Figure Three: CMA/CA Metropolitan Influenced Zones (MIZ)



The MIZ system employs four categories to describe the degree of influence that CMAs and CAs have on individual CSDs across RST Canada (McNiven *et al.*, 2000; Statistics Canada, 2001). MIZ influence is measured by commuter flow (i.e. the percentage of CSD residents employed in, and therefore commuting to, urban cores of the CMA/CA). These

four categories are (see Figure Three):

- ***strong MIZ***, where 30% or more of CSD residents are commuting to any urban core;
- ***moderate MIZ***, where 5% to 30% of CSD residents are commuting to any urban core;
- ***weak MIZ***, where 0% to 5% of CSD residents are commuting to any urban core; and
- ***no MIZ***, where 0% of residents are commuting or the occurrence is suppressed (Rambeau and Todd 2000, 3; Statistics Canada 2001, 208-209).

This delineation of MIZ recognizes "multiple centres of attraction" (McNiven *et al.*, 2000, 3). By using commuter data, the interdependence of home and work (the social and the economic spheres of daily life) is a focus. In addition, the use of MIZ influences can also build a more robust understanding of the regional context for small places.

As is shown in Table Two, the majority of the population in Canada is found in CMA CSDs, followed by CA CSDs. There are fewer people in strong MIZ CSDs than moderate and weak MIZ CSDs. When looking at the provincial SAC breakdown from the 2001 Census (Table Three), Quebec and Ontario have the highest percentage of CSDs in their provinces which are CMAs, while PEI and BC have the highest percentage of CSDs in their provinces which are CAs. In terms of MIZ influences, PEI, Quebec, and Ontario have the highest percentage of CSDs in their provinces with strong MIZ influences; Newfoundland and Labrador and PEI have the highest percentage of CSDs in their provinces with moderate MIZ influences; Nova Scotia and Manitoba have the highest

percentage of CSDs in their provinces with weak MIZ influences; and Saskatchewan and BC have the highest percentage of CSDs in their provinces with No MIZ influences.

Table Two: Population Distribution by SAC from the 1996 Census

SAC	Total Population	% of Total Population
CMA	17,864,646	61.9
CA	4,585,209	15.9
Strong MIZ	1,564,700	5.4
Moderate MIZ	2,365,175	8.2
Weak MIZ	2,078,342	7.2
No MIZ	332,604	1.2
Territories	56,085	0.2
Total: Canada	28,846,761	100.0

Adapted from: Statistics Canada. (2001). 2001 Census Dictionary. pp.215

Table Three: Census Subdivisions by SAC from 2001 Census (%)

Province/Territory	CSDs	Total # CMAs	Total # CAs	Strong MIZ	Moderate MIZ	Weak MIZ	No MIZ	Territories
Nfld. and Labrador	381	3%	5%	5%	40%	19%	27%	-
Prince Edward Is.	113	-	21%	26%	39%	11%	4%	-
Nova Scotia	98	4%	18%	2%	19%	40%	15%	-
New Brunswick	275	6%	15%	11%	34%	24%	10%	-
Quebec	1,476	13%	8%	17%	36%	11%	15%	-
Ontario	586	13%	12%	16%	22%	15%	22%	-
Manitoba	298	4%	3%	6%	23%	35%	30%	-
Saskatchewan	1,002	4%	2%	5%	20%	23%	46%	-
Alberta	452	10%	10%	8%	17%	27%	29%	-
British Columbia	816	8%	20%	3%	10%	14%	44%	-
Yukon Territory	35	-	14%	-	-	-	-	86%
Northwest Terr.	37	-	3%	-	-	-	-	97%
Nunavut	31	-	-	-	-	-	-	100%
Canada	5,600	8%	9%	10%	25%	18%	27%	2%

Adapted from: Statistics Canada. (2001). 2001 Census Dictionary. pp.215

McNiven and Puderer (2000, 1) found that the four MIZ categories "did not appear to apply as well in northern areas as in the south." This led to a decision to separate northern and southern CSDs by devising a north-south divide based on four parameters: geographic location, southern limit of the boreal forest, heating degree-days, and accessibility. As well, a number of other indicators were also used to delineate northern and southern CSDs, so that the "complex set of environmental, political, biotic and human factors … can form a functional definition of Canada's north" (McNiven and Puderer, 2000, 3).

Finally, another way to classify rural areas is to use rural postal codes. These postal codes mark areas where residents go to the corner post box or post office to pick up their mail (du Plessis *et al.*, 2002). These are administrative territorial units delineated by the federal government (Statistics Canada, 2001). One of the problems with using rural postal codes, however, is that they often cross several enumeration area boundaries and CSD or municipal boundaries.

In summary, rural places are defined as residual to the urban by Statistics Canada. This has been built into the other delineations of census geography. One of the commonly applied measures is the RST Canada definition. Attempts have also been made to address the diversity and regional context of rural areas through designating metropolitan influenced zones. These apply consistently across the country and recognize the differences in rural areas and their regional contexts. Combining MIZ and RST Canada provides a way of capturing size and regional context diversity.

United States

Definitions of rural in the United States (US) face some of the same challenges as outlined above for Canada. There are two basic descriptors in the American system: 1) 'urban' and 'rural' as established by the US Census Bureau, and 2) metropolitan and non-metropolitan categories as established by the Office of Management and Budget (Morrill *et al.*, 1999). Many of these descriptors have been implemented and modified by different agencies according to agency and policy needs. The following section outlines rural definitions and categories as developed by the US Census Bureau and the US Department of Agriculture's (USDA) Economic Research Service. First, the 'building blocks' of US census geography are outlined as they apply to definitions of small and rural. The Beale Codes are illustrated next as they provide a means of categorizing counties based on whether they are adjacent (or not) to metropolitan or non-metropolitan areas (Butler and Beale, 1994). Building upon the Beale Codes, three other sets of parameters for delineating rural and urban areas are described: a rural-urban continuum, urban influence zones, and community zones (which are similar to Statistics Canada's MIZ categories).

US Census Bureau Definitions

Like Statistics Canada, the US Census Bureau (the Bureau) has different sets of parameters to categorize settlements, both urban and rural. The Bureau classifies urban land uses through Urban Areas (UAs) and Urban Clusters (UCs) categories (USDA-ERS, 2003a). An urbanized area "consists of densely settled territory that contains 50,000 or more people … [and is delineated] to provide a better separation of urban and rural territory, population, and housing in the vicinity of large places" (US Census Bureau,

2000, A-22). Using similar parameters, an urban cluster is a "densely settled territory that has at least 2,500 people but fewer than 50,000 people" (US Census Bureau, 2000, A-22). The delineation for population density ranges from 1000 people per square mile in a cluster of census blocks, to a density of 500 people per square mile in surrounding block groups (US Census Bureau 2000, A-22). In something reminiscent of Canada's residual definition, rural is defined as "all territory, population and housing units located outside of UAs and UCs" (US Census Bureau, 2000, A-22). Previously, rural areas were defined only as comprising "open country and settlements with fewer than 2,500 residents" (USDA-ERS 2003a, para. 1). Now, urban clusters are defined regardless of political boundaries (i.e. incorporated or unincorporated) (USDA-ERS, 2003b). Many of the other 'building blocks' applied by the Bureau contain both urban and rural territory, population, and housing units. Examples include Counties and Minor Civil Divisions.

A county is the primary legal division of most states in the US. If a state does not have counties a statistically equivalent area (such as census areas, cities, and boroughs) is designated (US Census Bureau, 2000). Similarly, Minor Civil Divisions (MCDs) are "governmental or administrative divisions of a county in many states … [and] they represent many different kinds of legal entities with a wide variety of governmental and/or administrative functions" (US Census Bureau, 2000, A-13). They can be designated as reservations, assessment districts, boroughs, election districts, locations, and plantations, to name a few.

Metropolitan Areas (and non-metropolitan areas) are designated by the US Office of Management and Budget and are based upon county level building blocks (USDA-ERS, 2003a). The goal is to produce definitions that are consistent nation wide. A Metropolitan Area (MA) has "a large population nucleus, together with adjacent communities [that] have a high degree of economic and social integration with that nucleus" (US Census Bureau, 2000, A-15). To be categorized as an MA, a place must have a population of at least 50,000 or an urbanized area with a total MA population of at least 100,000 (USDA-ERS, 2003b). There can be one or more central counties in an MA, as well as "one or more outlying counties that have close economic and social relationships with the central county … [with] a specific level of commuting to the central counties" (US Census Bureau, 2000, A-15). This is similar to the idea of 'multiple centres of attraction' highlighted in the MIZ delineations from Statistics Canada. The concept of commuting will be elaborated below. Outlying counties must also meet particular parameters regarding population density, urban population, as well as population growth. The metropolitan delineation is for territory, population, and housing units within MAs, while "the territory, population, and housing units located outside territory designated as 'metropolitan' are referred to as 'nonmetropolitan'" (US Census Bureau, 2000, A-16). Urban and rural territories can be in both metropolitan and non-metropolitan areas of the US. However, those who study and discuss 'rural' America are most often referring to conditions in non-metropolitan areas (USDA-ERS, 2003a).

MAs can be further classified as Metropolitan Statistical Areas (MSAs) or "as a consolidated metropolitan statistical area [CMSA] divided into primary metropolitan

statistical areas" (US Census Bureau, 2000, A-16). MSAs are simply MAs not closely associated with other MAs (i.e. limited social and economic interaction). CMSAs are MAs with one million or more people, further divided into primary metropolitan statistical areas based on a large urbanized county or cluster of counties demonstrating that there are "strong internal economic and social links" (US Census Bureau, 2000, A-16).

Summary of US Census Bureau Definitions

The US Census Bureau has established 'building blocks' similar to those of Statistics Canada. There are various geographical levels and categories that are used interchangeably for various definitions. Much like the MIZ category, MAs and MSAs use commuter flow data and recognize the social and economic interaction of small and large places on a regional level.

Beale Codes for Metropolitan and Non-metropolitan Adjacency

Calvin Beale, a senior demographer with the Economic Research Service at the USDA, pioneered a method of accounting for rural diversity in an advanced industrial country (USDA-ERS 2003h). He developed "a system for distinguishing among counties located along different points of the continuum defined by population, distance from metropolitan centres, and the regional urban-rural mix" (Ehrensaft and Beeman, 1992, 198). This classification system is based on a broad categorization of US counties and aims to capture social and economic change (Hawkins, 1995). The focus is on two dimensions of adjacency, or lack thereof, to a metropolitan area, and the type of settlement that dominates the area (i.e. small cities, small towns, or rural settlements) (du

Plessis *et al.*, 2002). This concept may seem familiar as it preceded development in Canada of the MIZ parameters. The basic principle is that "changes in levels and types of employment and changes in population numbers or the age structure of rural communities will vary accordingly to the distance of an individual settlement to a major city" (Hawkins, 1995, 9). Settlements were "classified according to whether they were located in metro, non-metro adjacent, or non-metro non-adjacent counties" (Hawkins, 1995). In order to glean more detailed information, a settlement in a non-metro county was also coded to show "whether the county contained population dispersed into small towns" (Hawkins 1995, 9). Out of this Beale developed 10 original codes (Table Four).

Table Four: "Beale Codes" for metro and non-metro Counties

Metro	
0	Central counties of large metro regions of 1,000,000+ population
1	Fringe counties of large metro regions of 1,000,000+ population
2	Counties in metro areas of 250,000 to 1,000,000 population
3	Counties in metro areas of fewer than 250,000 population
Nonmetro	
4	Urban population of 20,000+ population, adjacent to a metro area
5	Urban population of 20,000+ population, not adjacent to a metro area
6	Urban population of 2,500 to 20,000 population, adjacent to a metro area
7	Urban population of 2,500 to 20,000 population, not adjacent to a metro area
8	Completely rural or less than 2,500 urban population, adjacent to a metro area
9	Completely rural or less than 2,500 urban population, not adjacent to a metro area

Adapted from: Butler and Beale, 1994. p. 2.

Researchers have encountered several challenges in trying to apply the Beale Codes in Canada. The first was to take into account the different settlement histories and political systems that have resulted in the different social and economic structures (Hawkins,

1995). The second was to choose a suitable territorial unit in Canada; preferably something equivalent to the US counties (Ehrensaft and Beeman, 1992). And third, the Beale Codes left out Hawaii and Alaska. For the Canadian context, consideration of the sparsely populated northern territories is important.

In 1990, Ehrensaft adapted the Beale Code system for "a Canadian non-metropolitan analysis" (du Plessis *et al.*, 2002, 12) (Table Five). The Census Division (CD) administrative territorial unit was chosen as the most appropriate and useful choice for Canada because of their consistency across the country (Ehrensaft and Beeman, 1992). As well, CDs are the second most stable geographic administrative area, and are both administrative and statistical territorial units (Statistics Canada, 2001). The use of CDs also facilitates comparative analysis with the United States. Finally, Canada's northern territories occupy too great of a land mass and natural resource, and play too important of a role within our society and economy, to be left out. Therefore, Ehrensaft added an eleventh category to Beale's original 10 that allocated all northern areas to a separate code (Hawkins, 1995).

In this initial Canada application, the land base was divided into both metropolitan and non-metropolitan regions. There are three groups of metropolitan regions:

- ***major metropolitan*** (urban population of 1 million or more),
- ***mid-sized metropolitan*** (250,000 to 999,999 urban population), and
- ***smaller metropolitan*** (urban populations of 50,000 to 249,999).

The non-metropolitan regions were again residual: comprised of all "those not forming all or part of metropolitan region" (du Plessis *et al.*, 2002, 14). The nonmetropolitan regions were also divided into three categories based on types of settlements:

- ***small nonmetroplitan*** city zone (urban population 20,000 to 49,999),
- ***small town*** zone (urban population 2,500 to 19,999), and
- ***predominantly rural*** (population less than 2,500).

The final zone is northern hinterland, based on northern location (Ehrensaft and Beeman, 1992).

There has been some criticism of the Beale Codes as applied in a Canadian context. One limitation concerns the way "accessibility is defined in terms of straight distances and does not incorporate the availability of transportation infrastructure, the cost of transport, nor does it include human aspects, such as the ability to pay for transport" (Armstrong, 1993 in Hawkins, 1995, 10). Some researchers have encountered difficulties in reconstructing Ehrensaft's classifications (du Plessis *et al.*, 2002), and data for some non-metropolitan areas have been suppressed because of confidentiality rules (i.e. small numbers of manufacturing plants). One solution to these difficulties has been to collapse the original 10 codes into six categories, plus a seventh for the northern hinterland (du Plessis *et al.*, 2004).

Table Five: "Beale Codes" as adapted for Canadian application

#	USA Code Description	Canadian Code Description
Major metro area (1)		
0	Central counties of large metro regions	CMA 1,000,000+
1	Fringe counties of large metro regions	CMA 1,000,000+
Mid-sized metro (2)		
2	Medium metropolitan	CMA 250,000 to 999,999
Smaller metro (3)		
3	Small metropolitan	CMA 50,000 to 249,000
Small nonmetro city zone (4)		
4	Nonmetro urbanized, adjacent to metro region	Urban population 20,000 to 49,999 (urban = settlements of 2,500+)
5	Nonmetro urbanized, not adjacent to metro region	Urban population 20,000 to 49,999
Small town zone (5)		
6	Nonmetro, less urbanized, adjacent to metro region	Urban population 2,500 to 19,999
7	Nonmetro, less urbanized, not adjacent to metro region	Urban population 2,500 to 19,999
Predominantly rural (6)		
8	Nonmetro, rural, adjacent to metro region	No places of 2,500+ population
9	Nonmetro, rural, not adjacent to metro region	No places of 2,500+ population
Northern hinterland (7)		
10	Northern hinterland	Census divisions, entirely or in part, above specific regional parallels*

* Newfoundland: 50th; Quebec and Ontario: 49th; Manitoba: 53rd; Saskatchewan, Alberta, and British Columbia: 54th; plus the Yukon and Northwest Territories (Nunavut).
Adapted from: Ehrensaft and Beeman 1992. p.200.

Summary of Beale Codes

Beale Codes have spurred the development and analysis of rural areas based on metropolitan and non-metropolitan descriptors, and whether they are adjacent or non-adjacent to larger centres. This provides an additional context for rural and small town places. Attempts have been made to apply the system in a Canadian context, refining the codes and unit of analysis to address a different settlement and historical context. The benefit of this classification is that the context of settlement is as important as the parameters of population size and density. If the Ehrensaft codes have not been entirely successful in their deployment across Canada, they have spurred the creation of the MIZ classification system.

United States Department of Agriculture, Economic Research Service

The USDA's Economic Research Service (USDA-ERS) has implemented elements of the US Census Bureau's definitions as well as those used in the Beale Codes. This section will briefly outline the parameters used in their rural-urban continuum, urban influence zones, and commuting zones. While all of these measures are very similar, they were developed at different times for different agencies.

Rural-Urban Continuum

The first USDA-ERS framework for 'rural' clearly uses the Beale Codes as a foundation. According to the USDA-ERS (2003e, para.1), the rural-urban continuum forms "a classification scheme that distinguishes metropolitan (metro) counties by the population size of their metro area, and nonmetropolitan (nonmetro) counties by degree of urbanization and adjacency to metro area or areas." There are nine categories altogether (Table Six), allowing researchers to break the data down into finer residential groupings. The 'building blocks' of Metropolitan Statistical Areas (MSAs) are used to designate the metro areas. Non-metro areas are established using size of urban population, functional adjacency, and commuter flows (USDA-ERS, 2003e). Because the Census changes the way urban and rural are measured over time, rural-urban continuum data from previous years is not comparable.

Table Six: USDA's Rural-Urban Continuum Codes

#	Code
Metro Counties	
1	Counties in metro areas of 1 million population or more
2	Counties in metro areas of 250,000 to 1 million population
3	Counties in metro areas of fewer than 250,000 population
Nonmetro counties	
4	Urban population of 20,000 or more, adjacent to a metro area
5	Urban population of 20,000 or more, not adjacent to a metro area
6	Urban population of 2,500 to 19,999, adjacent to a metro area
7	Urban population of 2,500 to 19,999, not adjacent to a metro area
8	Completely rural or less than 2,500 urban population, adjacent to a metro area
9	Completely rural or less than 2,500 urban population, not adjacent to a metro area

Adapted from USDA-ERS, 2003e

Urban Influence Zones

Both the Bureau and the Office of Management and Budget have elaborated on the concept of non-metropolitan to include the divisions of micropolitan areas and noncore counties (USDA-ERS, 2003a and 2003c). This delineation provides a way to further explore the diversity found in nonmetro (rural) America (USDA-ERS, 2003b). A micropolitan area is centred on urban clusters of 10,000 or more persons, and all remaining counties are considered noncore. Metro areas are now defined for all Urbanized Areas (UAs) regardless of the total area population.

These parameters are implemented by the USDA-ERS to produce and update their urban influence codes (Table Seven). The codes use the parameters of population concentration (core), metropolitan and non-metropolitan (now subdivided into micropolitan and noncore), as well as adjacency and non-adjacency to a core. The differences in parameters between 1993 and 2003 applications are listed in Table Seven. Cores range from large and small metro and non-metro areas. The idea of urban influence codes is to take into account an area's geographic context; meaning that "access to larger economies…enables a smaller economy to connect to national and international market places" (USDA-ERS, 2003f, para.1). The parameters of population size, urban population, and access to larger communities are important factors regarding county level research and data. This links with the concept of tracking commuting flow in order to establish interaction with small and large economies and centres.

Table Seven: Urban Influence Codes, 1993 and 2003

#	1993 Code	2003 Code
1	Large-in a metro area with at least 1 million residents	Large-in a metro area with at least 1 million residents or more
2	Small-in a metro area with fewer than 1 million residents	Small-in a metro area with fewer than 1 million residents or more
3	Adjacent to a large metro area and contains a city of at least 10,000 residents	Micropolitan area adjacent to a large metro area
4	Adjacent to a large metro area and does not have a city of at least 10,000 residents	Noncore adjacent to a large metro area
5	Adjacent to a small metro area and contains a city of at least 10,000 residents	Micropolitan adjacent to a small metro area
6	Adjacent to a small metro area and does not have a city of at least 10,000 residents	Noncore adjacent to a small metro with town of at least 2,500 residents
7	Not adjacent to a metro area and contains a city of at least 10,000 residents	Noncore adjacent to a small metro and does not contain a town of at least 2,500 residents
8	Not adjacent to a metro area and contains a town of 2,500-9,999	Micropolitan not adjacent to a metro area
9	Not adjacent to a metro area and does not contain a town of at least 2,500 residents	Noncore adjacent to a micro area and contains a town of 2,500 to 9,999 residents
10		Noncore adjacent to a micro area and does not contain a town of at least 2,500 residents
11		Noncore not adjacent to a metro/micro area and contains a town of at least 2,500 or more residents
12		Noncore not adjacent to a metro/micro area and does not contain a town of at least 2,500 residents

Commuting Zones

The Office of Management and Budget announced its official metro status in June 2003, using population and commuting data from the 2000 Census of Population (USDA-ERS, 2003f). Prior to this, there had been discussion and research on the limitations of previous parameters, and the value of using commuting data to better define and categorize both metropolitan and non-metropolitan settlements (Morrill *et al.*, 1999).

The parameters for commuting area are similar to Statistics Canada's MIZ classification system. The other standards established by the US Census Bureau and Office of Management and Budget have been rearranged and added to, making them too complex and unworkable. As well, the county as the unit of analysis is too large to recognize details in the relationships between communities (Morrill *et al.*, 1999). Thus, a different unit (census tracts) is needed in order to show the socio-economic integration between communities.

Table Eight: Rural-Urban Commuting Areas

Area	Primary	High	Low	Core population
Metropolitan Area	1	2	3	50,000 or more
Large town	4	5	6	10,000 to 49,999
Small town	7	8	9	2,500 to 9,999
Rural area*	10			Less than 2,500

* Rural areas by definition do not have urban cores (population 2,500 or more) or associated high or low commuting areas.
Adapted from: Morrill *et al.*, 1999, pp.733 and USDA, ERS 2003g.

The parameters of commuting areas include metropolitan and nonmetropolitan connections, and use different commuting flows to establish levels of integration (Figure Four). Unlike the Canadian CMA/CA categories, reverse commuter flow is not included (Morrill *et al.*, 1999). There are four different commuting cores (Table Eight and Figure

Four):

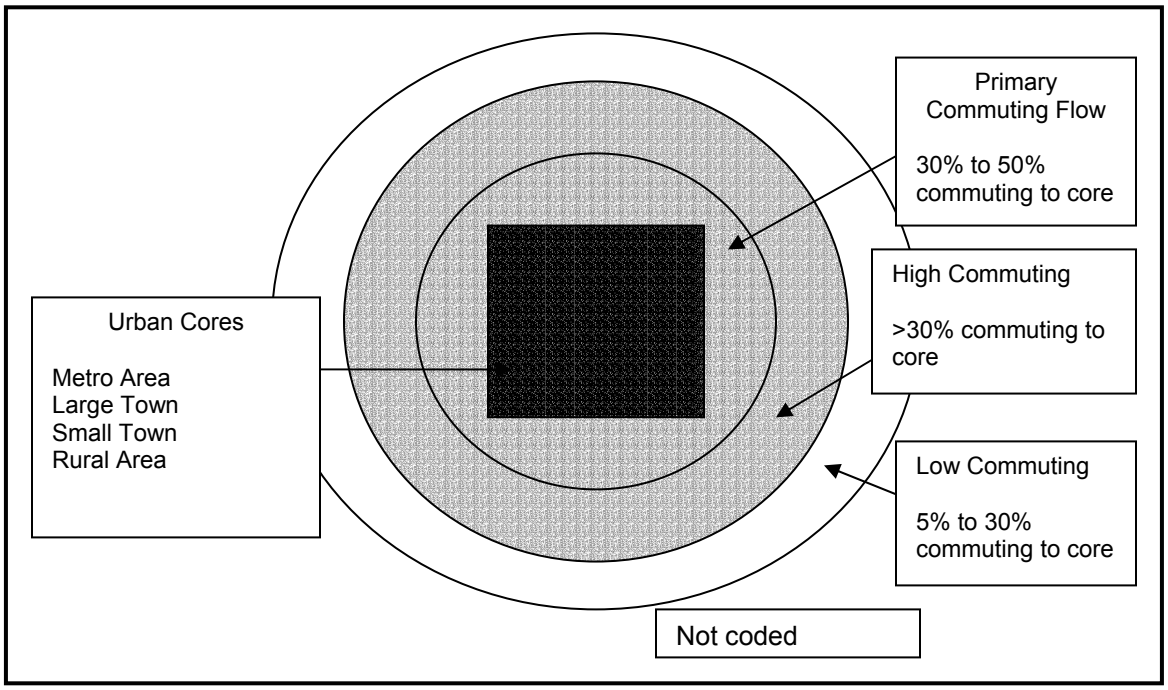
- metropolitan area,
- large town,
- small town, and
- rural area (like CMAs and CAs),

with different population counts and divided into metropolitan and nonmetropolitan commuting centres (USDA-ERS, 2003d, 2003g). Metropolitan area cores "are a census tract equivalent to the census-defined urbanized area. For nonmetro cities and towns, the core similarly includes census tracts with more than 20 percent of the population in places that [are]…either an incorporated town or an unincorporated (census designated) place" (USDA-ERS, 2003g, para.3). Commuting flows are measured into an urbanized area, large town, or small town core (USDA ERS 2003g, para.4). There are three commuting flow thresholds:

- primary (30% to 50%),
- high (30% +), and
- low (5% to 30%).

These parameters result in 10 codes for rural-urban commuting (Table Eight).

Figure Four: USA: Rural and Urban Commuting Areas



Adapted from: Morrill *et al.* (1999). Metropolitan, Urban, and Rural Commuting Areas: Toward a Better Depiction of the United States Settlement System. pp.735

Organization on Economic Cooperation and Development and ICRRC Definitions

The Organization on Economic Cooperation and Development (OECD) has developed a rural indicators project to increase the understanding of rural conditions through the collection of internationally comparable data (du Plessis *et al.*, 2002; ICRRC, 1995), in conjunction with the federal Interdepartmental Committee on Rural and Remote Canada (ICRRC) (Hawkins, 1995). A review of past definitions by the OECD concluded that rural is not defined well as a residual of the urban, population size on its own is not a suitable parameter for defining rural, and not using commonly applied definitions produces inconsistent results (OECD, 1994). The new territorial scheme uses classifications on both a local and region level "for the collection and presentation of sub-national data at the international level" (OECD, 1994, 20). The local level "consists of small, though not necessarily the smallest possible basic administrative or statistical units" (OECD, 1994, 20). For the regional level, "geographic building blocks are larger administrative units or functional zones … [with an] emphasis on functional relations and on the wider context in which rural development take place" (OECD, 1994, 20).

According to the OECD, local communities are defined using basic administrative units or small statistical areas that can be classified as either urban or rural (OECD, 1996). To classify urban versus rural, the OECD uses the benchmark of population density. Rural communities have 150 inhabitants per square kilometer or less (du Plessis *et al.*, 2002; ICRRC, 1995). This is applied in Canada at the Census Consolidated Subdivision (CCS) level. As previously defined, these geographic areas include "individuals living in the countryside, towns and small cities (inside and outside the commuting zone of larger

urban centres)" (du Plessis *et al.*, 2002, 11). Therefore, any CCS with a population density below 150 inhabitants per square kilometer is classified as a rural community according to the OECD (OECD, 1994).

In order to capture the broader rural development context, regions are classified as larger administrative units (du Plessis *et al.*, 2002). To further delineate rural regions, three types are distinguished based on the portion of population living in rural communities. This acts as a proxy for the degree of rurality at the regional level (OECD, 1994; OECD, 1996). Predominantly rural regions are regions where more than 50% of the population lives in a rural community (Table Nine). Significantly rural regions have between 15% and 50% of the population living in rural communities and tend to contain small cities. And, finally, predominantly urban regions have less than 15% of the population living in a rural community and contain Canada's largest cities (Du Plessis *et al.* 2002, 12; Hawkins 1995, 9; ICRRC 1995, 3). Each of these three kinds of regions can contain both rural and urban communities to a differing degree (OECD 1996, 98).

Table Nine: OECD's Urban and Rural Regions

Regional Label	
Predominantly rural regions	more than 50% of the population lives in a rural community
Significantly rural regions	between 15% and 50% of population lives in rural communities and tends to contain small cities
Predominantly urban regions	less than 15% of the population live in a rural community and contains large cities

Adapted from OECD, 1996

Regarding rural and remote regions, data is presented for three types of 'rural and remote' using a format similar to the Beale Codes (Ehrensaft and Beeman, 1992; ICRRC, 1995). Metro-adjacent sub-regions, non-adjacent sub-regions, and northern hinterland sub-regions are implemented to "recognize the diversity of 'rural and remote'" (ICRRC, 1995, 3). The OECD has standardized regional classifications for Canada into the following five categories:

- agglomerated,
- intermediate,
- rural, metro-adjacent,
- rural, non-metro adjacent, and
- rural north (ICRRC 1995, 5).

Hawkins (1995, 9) argues that this classification "is still limited by the requirement of using political boundaries to define a spatial distribution". This concern is echoed by the ICRRC (1995, 3), which states that: "Local and regional boundaries can have a significant impact on some variables, and changes in CCS and CD boundaries and in population distribution over time can alter their community and regional classification." Despite these concerns, there is the advantage of focusing on what is rural, rather than a definition of rural as anything 'not urban'. We can also build on these spatial concerns. First, we can address boundary setting by combining administrative and territorial statistical units, then we can explore geographic relations characteristics such as low or no MIZ interactions, we can set upper thresholds on places (such as 2,500 or 5,000 people) in order to delimit 'small', and we can set the absolute changes experienced

within individual places into a larger context by evaluating CSD changes with the larger CD within which they are found.

Summary of OECD Definitions

The parameters for rural as described by the OECD have been put together so that individual OECD member countries could compile comparable data. Thus, rural and non-rural regions were delineated based on population density and the portion of population living in rural settlements. Canada, through the ICRRC, has implemented these criteria when undertaking research for the OECD. Two important items emerge form the OECD work. First, is the need to focus on small, but that for some policy areas such as housing markets, this focus need not extend to the smallest of units as the data become too unreliable for effective use. Second, regional integration and context is also critically important.

Summary of Definitions of Rural and Small

Units to define rural can be considered as "a *geographical concept,* a location with identifiable boundaries on a map, or whether it is a *social representation***,** a community of interest, a culture and way of life" (du Plessis *et al.*, 2002, 6). These definitions can be treated as geographical areas or geographical variables (Mendelson, 2001). As illustrated, each definition of rural matters as there are different parameters for each definition, and difference units of analysis are used to gather information about rural. du Plessis *et al.* (2001) outline three main reasons why the definition matters, using

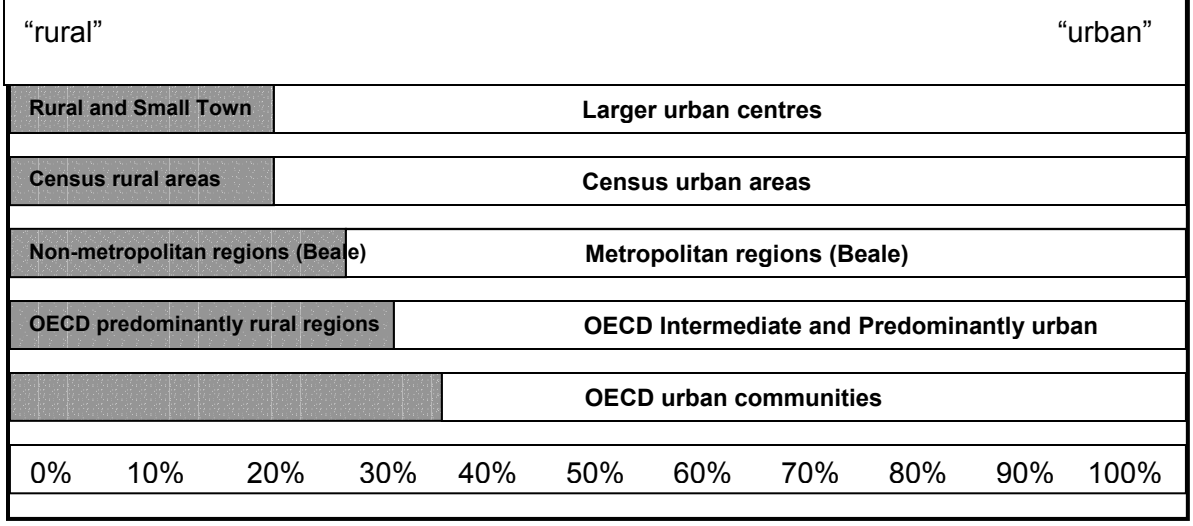
Canada as an example:

1) the size of the rural population varies nationally and provincially (Figure Five and Table Ten) where, for example, while Ontario captures 28.2 percent of the Canadian rural population enumerated under the Census Rural Areas definition (ranking it first in among provinces/territories), it captures only 20.7 percent of the Canadian rural population as enumerated under the Beale Non-Metropolitan Regions definition (ranking it second among provinces/territories);

2) the different definitions result in overlap and non-overlap in rural population (Table Eleven) where, for example (reading down the first column), the 'rural' population captured under the Census Rural Areas definition overlaps with only 68 percent of the rural population captured under the Rural and Small Town definition, 54 percent of the rural population captured under the OECD Rural Communities definition, 51 percent of the rural population captured under the OECD Predominantly Rural Regions definition, and 53 percent of the rural population captured under the Non-Metropolitan (Beale) Regions definition; and

3) the different definitions of rural generate not only in different counts as to the number of 'rural' people, and as to which people are 'counted in' under each of these definitions (see overlap issues above), they also result in different values for the various characteristics of rural that interest policy analysts and decision-makers (i.e. employment rate, average income of economic families, incidence of low income, old age dependency ratio, child dependency ration, place of work of employed persons, persons with some post-secondary education, and experienced labour force in manufacturing industries all differ with different definitions of what is rural) (Table Twelve).

Figure Five: Distribution of Canada's "Rural" Population



Adapted from: du Plessis *et al.* (2001). Definitions of Rural. pp.18.

Table Ten: Rank of Canada's Rural Population for Each Definition of Rural, 1996 Census Data

Province/ Territory	Census Rural Areas		Rural and Small Town		OECD Rural Comm's		OECD Predom. Rural		Non-Metro. (Beale)	
	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank
Ont	28.2	1	25.1	1	28.3	1	23.8	1	20.7	2
Que	24.2	2	24.9	2	19.7	2	19.1	2	25.9	1
BC	10.5	3	9.1	4	13.6	3	17.5	3	14.3	3
Alta	8.5	4	10.7	3	11.8	4	10.0	4	7.6	4
NS	6.5	5	5.5	8	6.2	5	6.3	5	5.8	7
NB	5.9	6	5.6	7	5.4	7	6.3	5	4.4	8
Sask	5.6	7	6.7	5	5.5	6	5.9	6	6.9	5
Man	4.8	8	5.7	6	4.4	8	5.4	7	6.3	6
Nfld/Lab	3.8	9	4.8	9	3.5	9	3.3	8	3.9	9
PEI	1.2	10	1.0	10	0.8	10	1.5	9	0.8	10
NWT	0.3	11	0.3	12	0.4	11	0.4	10	0.5	11
Nvt	0.3	11	0.4	11	0.2	13	0.3	11	0.3	13
Yk	0.2	12	0.1	13	0.3	12	0.3	11	0.4	12
Canada	**100.0**		**100.0**		**100.0**		**100.0**		**100.0**	

Adapted from: du Plessis *et al.* (2001).pp.19.

Table Eleven: Overlap of Alternative Definitions of 'Rural', 1996 Census Data

AREA	Census Rural Areas	Rural and Small Town	OECD Rural Communities	OECD Predom. Rural	Non-Metropolitan (Beale)
Census Rural Areas	100	68	92	72	64
Rural and Small Town	68	100	99.6	86	80
OECD Rural Communities	54	58	100	78	65
OECD Predominantly Rural	51	60	95	100	79
Non-Metropolitan (Beale)	53	66	92	92	100

Adapted from: du Plessis *et al.* (2001).

Table Twelve: Sample socio-economic characteristics of 'rural'

List of indicators	Census 'rural areas'	Rural and Small Town	OECD 'Rural Communities'	OECD 'Predom. Rural Regions'	Non-Metropolitan Regions (Beale)	Postal Code 'Rural'	Canada Total
Private household population	6,298,350	6,274,320	10,845,435	8,911,415	7,581,970	6,444,475	28,390,685
Percent male	51.1	50.4	50.1	50.0	50.1	50.6	
Percent female	48.9	49.6	49.9	50.0	49.9	49.4	49.2
							50.8
Total 'rural population' as a percent of Canada total	22.2	22.1	38.2	31.4	26.7	22.7	
Employment rate, ages 25-54 (percent)	74.9	73.7	75.7	74.8	74.2	73.9	76.7
Average income of economic families (dollars)	50,424	47,002	50,889	48,879	47,989	48,130	55,986
Incidence of low income (percent)	13.1	15.7	15.1	16.3	16.5	15.1	19.7
Old age dependency ratio (population 65+ years of age as percent of population 15 to 64 years of age)	16.2	19.3	17.8	18.8	18.7	18.2	16.9
Child dependency ratio	34.4	34.4	34.0	33.7	33.5	34.6	30.6

(population under 15 years of age as percent of population 15 to 64 years of age)							
Place of work of employed persons, ages 25-54							
	14.8	13.4	10.6	10.5	10.8	13.2	7.4
percent working at home	56.2	45.4	45.5	39.6	40.7	50.8	43.9
percent residing / working in a different CSD	18.7	15.5	15.1	15.2	15.4	18.5	16.8
percent residing / working in a different CD							
Percent of persons, ages 25-54, with some post-secondary education	52.8	51.1	55.2	54.4	52.6	51.8	61.8
Percent of experienced labour force in manufacturing industries	13.7	14.3	13.7	13.3	14.3	14.1	14.3

Adapted from: du Plessis *et al.* (2004).

Part Two: Evaluation of Pros and Cons and Recommendation

The adoption of a place-based policy or regulation approach has been advocated by the OECD as one way to provide flexible responses to the complex range of rural and small town places being impacted by the changes brought on through social, political, and economic restructuring. We know that the outcomes of change and restructuring vary tremendously across rural Canada. To address this, it is necessary to have a definitional framework which effectively differentiates rural places by criteria important to the public policy issues at hand. To date, however, efforts at defining rural and small town Canada within a place-based public policy approach have been limited.

When moving to consider choices in the definitional framework to be employed in a place-based policy process, it is worth revisiting the argument by du Plessis *et al.* (2004) that it is important to know ***why you need to know*** about rural places and then to select a definitional framework that provides data appropriate to informing that need. This report outlines various options and frameworks for defining rural and small town places and discusses their relative usefulness for addressing housing issues. Key housing context issues can be considered to include:

- sufficient population size to as to have a developed housing market,
- local government organized territory (CSDs) in order to provide a foundation for basic data collection and linkages to the building blocks used by Statistics Canada definitions, and a
- regional context to capture a functioning housing market through the pressures organized within commuter influenced labour markets.

The definitions used to describe rural and small town communities outlined in this literature review employ a range of parameters in order to draw together various geographical boundaries and relationships. The common goal among these diverse approaches is to provide ways of building a better understanding of rural areas, their diversity, characteristics, and conditions. For the most part, the definitions use similar types of parameters, but employ differing thresholds or levels for each of these parameters depending on the country context. For example, many of the definitions use population counts as a parameter, with different choices for the boundaries of what is considered metropolitan or non-metropolitan.

Statistics Canada uses a set of general building blocks in order to facilitate nationally comparable data for both administrative and statistical territorial areas. While some of these are very small (the area a census enumerator walks on a route) these building blocks must be of sufficient size as to usefully capture housing market dynamics. Using CSDs as the building block within the RST definition provides a solid foundation for capturing functional housing markets. The emphasis within the RST definition on labour market commuting equates well with the regional structure of housing markets, which also fluctuate with the relative health of that labour market. A third key element comes with the addition of the MIZ classification. Analysts in both Canada and the US have long struggled with the vast size of their countries and the need to differentiate the relative level of influences rural areas receive from large metropolitan areas. The 4 tier MIZ system provides a way to differentiate RST units across this metro-adjacent to

remote continuum. Much progress has been made from the starting point where rural places were defined simply as the residual not counted within urban Canada.

In the US, population analysts have also struggled with most of the same issues confronting Canada. The USDA-ERS, for example, has worked on ways to provide more detailed information about rural and urban places, to better illustrate the relationships and integration of rural and urban places, and to provide more ways to describe the complexity within and between those rural and urban places. The adoption of counties as one of the basic statistical building blocks provides a relatively stable structure for comparison over time. This is similar to the use of CSDs in the Canadian context. Experiments with ways to recognize the degree of economic and social integration within regions, and the degree of influences rural regions receive from Urban Areas / Metropolitan Areas / Metropolitan Statistical Areas, has led to the creation of mechanisms such as the Beale Codes. In turn, these have been adapted to Canada by researchers such as Ehrensaft. Together, these US and Canadian experiments formed the impetus for creation of Canada's MIZ classification system. The need for a nationwide system, which builds upon regionally integrated economic units, and which recognizes the diversity that ranges from metro-adjacent to remote rural locales, all match the types of census geography challenges faced in Canada. Rationales for public policy choices in the US also match those argued in this report as important in the selection of a statistical framework suited to place-based policy analysis and tracking.

In addition to the US, the OECD has been very active in the identification of territorial based data frameworks and sets of indicators that will 1) facilitate international communication and comparison of rural conditions and trends, and 2) support place-based policy, regulation, and program development and monitoring. The OCED also recognizes that 1) rural development is complex and multi-sectoral, 2) rural indicators are needed not just to increase understanding of rural conditions but also to evaluate change over time, and that 3) common definitional frameworks can assist with knowledge transfer between member states on questions of rural change and development. As a result, they have spent considerable time developing definitional frameworks to meet these objectives. Their rural classification system recognized the need to for stable building blocks, grouped into functional regional relationships, and set within contexts ranging from near-metropolitan territories to very remote territories. This matches well with the suggestions noted above about the use of CSDs within RST Canada differentiated by the MIZ classification system.

The purpose of this project is to provide CMHC with background information on the delineation of different 'rurals' across Canada as part of an effort to better inform debates about place-based information and decision-making. Based on this material, we can make five recommendations.

- First, that CSDs (or their territorial equivalents in unorganized areas) form the building blocks for data collection mechanisms aimed at housing issues. These units provide relative stability to facilitate comparison over time and are large enough to escape the

idiosyncrasies that may crop up in very small housing 'markets'. They also address the challenge of finding a data unit that bridges administrative (municipal incorporated versus unincorporated places) and territorial units.

- Second, it is also recommended that these individual CSDs be considered within the context of their respective CDs. As noted above, Canada, the US, and the OECD recognize the need to situate individual places within functional regional contexts. Comparison of local economic trajectories relative to those recorded for the larger CDs does this. Its focus on integrated regional labour markets also links well to the organization of housing markets. As noted by both the US Census Bureau and the USDA, a local economy and its labor market is not delimited by a county line, but by interrelationships between buyers and sellers of labour. To understand the diversity of nonmetropolitan places, we need a geographic framework that better captures local and regional economic and labor force activities.

- Third, it is recommended that CSDs (and equivalents) be further differentiated according to the MIZ classification system. In Canada, the US, and the OECD, attempts have been made to address the diversity and regional context of rural areas through estimating levels of urban or metropolitan influence. Adding MIZ information provides a way of capturing size and regional context diversity. We will be using the "no" and "weak" MIZ categories to identify economic trajectories for rural and small town places well removed from metropolitan influence.

- Fourth, that all data units comprised of Indian reserve and similar federal reserve lands be excluded on the basis that they have unique property tenure and housing market characteristics that limit comparisons.

- Fifth, that a lower population threshold of 50 be imposed on the data to exclude all places too small to have a functional housing market. Also, that two upper population thresholds be imposed. The first is 2,500 while the second is 5,000. The US Census Bureau and the USDA both use the 2,500 cut off as important for delimiting small towns, while Statistics Canada uses 5,000 as a low end cut off for reporting data on urban places. By using these two cut off points, we will be able to distinguish two community clusters based on population size.

References

Barnes, T.J. (1996) External shocks: regional implications of an open staple economy. In Canada and the global economy: the geography of structural and technological change, ed. J.N.H. Britton. Montreal and Kingston: McGill-Queen's University Press, 48-68.

Bollman, R.D. and B. Biggs. (1992) Rural and Small Town Canada: An Overview. In Rural and Small Town Canada, ed, R. Bollman.Toronto: Thompson Educational Publishing, Inc., 3-44.

Butler, M.A. and Beale, C.L. (1994) Rural-Urban Continuum Codes for Metro and Nonmetro Counties, 1993. Washington, DC: USDA, ERS.

du Plessis, V., Beshiri, R., Bollman, R., and Clemenson, H. (2004) Definitions of rural, In Building for Success: Explorations of Rural Community and Rural Development, eds. G. Halseth and R. Halseth. Rural Development Institute, Brandon University.

_____. (2002, December) Definitions of "Rural". Agriculture and Rural Working Paper Series Working Paper No. 61. Agriculture Division, Statistics Canada.

_____. (2001, November) Definitions of "Rural". Rural and Small Town Canada Analysis Bulletin, Vol. 3 (3). Rural and Agriculture Division, Statistics Canada.

Ehrensaft, P. and J. Beeman. (1992) Distance and Diversity in nonmetropolitan economies. In Rural and Small Town Canada, ed. R. Bollman. Toronto: Thompson Educational Publishing, Inc., 195-224.

Freshwater, D. (2004) Delusions of grandeur: The search for a vibrant rural America, In Building for Success: Explorations of Rural Community and Rural Development, eds., G. Halseth and R. Halseth. Rural Development Institute, Brandon University.

Hawkins, L. (1995) Mapping the Diversity of Rural Economies A preliminary Typology of Rural Canada. Agriculture Division, Statistics Canada.

Hayter, R. (2000) Flexible Crossroads: The restructuring of British Columbia's forest economy. Vancouver, BC: UBC Press.

Interdepartmental Committee on Rural and Remote Canada (ICRRC). (1995) Rural Canada: A Profile. Ottawa: Government of Canada.

McNiven, C.; H. Puderer; and D. Janes. (2000, January) Census Metropolitan Area and Census Agglomeration Influenced Zones (MIZ): A Description of the Methodology. Geography Working Paper Series No. 2000-2. Geography Division, Statistics Canada.

McNiven, C. and H. Puderer. (2000) Delineation of Canada's North: An Examination of the North-South Relationship in Canada. Geography Working Paper Series No. 2000-3. Geography Division Statistics Canada.

Mendelson, R. (2001, March) Geographic Structures as Census Variables: Using Geography to Analyse Social and Economic Processes. Geography Working Paper Series No. 2001-1. Geography Division Statistics Canada.

Morrill, R.; J. Cromartie and G. Hart. (1999) Metropolitan, Urban, and Rural Commuting Areas: Toward a Better Description of the United States Settlement System. Urban Geography, 20 (8), pp. 727-748.

Organisation for Economic Co-operation and Development (OECD) (1996) Better Policies for Rural Development. Paris: OECD.

_____. (1994) Creating Rural Indicators for Shaping Territorial Policy. Paris: OECD.

Page, M. and R. Belshiri. (2003, December) Rural economic diversification – A community and regional approach. Rural and Small Town Canada Analysis Bulletin, 4 (7).

Rambeau, S. and K. Todd. (2000, January) Census Metropolitan Area and Census Agglomeration Influenced Zones (MIZ) with Census Data. Geography Working Paper Series No. 2000-1. Geography Division, Statistics Canada.

Statistics Canada. (2001) 2001 Census Dictionary. Statistics Canada.

United States Census Bureau. (2000) Appendix A: Census 2000 Geographic Terms and Concepts. Census 2000. www.census.gov/geo/www/tiger/glossary2.pdf

United States Department of Agriculture, Economic Research Service (USDA, ERS). (2003a) What is Rural. www.ers.usda.gov/Briefing/Rurality/WhatisRural/index.htm

_____. (2003b). Measuring rurality: new definitions in 2003. www.ers.usda.gov/Briefing/Rurality/Newdefinitions/

_____. (2003c). Measuring rurality: what is a micropolitan area?. www.ers.usda.gov/Briefing/Rurality/MicropolitanAreas/

_____. (2003d). Measuring rurality: commuting zones and labor market areas. www.ers.usda.gov/briefing/rurality/LMACZ/

_____. (2003e). Measuring rurality: rural-urban continuum codes. www.ers.usda.gov/Briefing/Rurality/ruralurbcon/

_____. (2003f). Measuring rurality: urban influence codes.

www.ers.usda.gov/Briefing/Rurality/urbaninf/

_____. (2003g). Measuring rurality: rural-urban commuting area codes.

_____. (2003h, February). Profiles – Calvin Beale. Amber Waves.
www.ers.usda.gov/AmberWaves/Feb03/profiles/beale.htm

Yeates, M. (1990) The North American City, Fourth Edition. New York: Harper and Row, Publishers.

Summary Tables of Parameters Used in Definitions

Statistics Canada

	Statistics Canada - General						
◊							
Parameter/Characteristic	URBAN	RURAL	SGC	ER	CD	CCS	CSD
Administrative Territorial Unit			◊	◊	◊		◊
Statistical Territorial Unit	◊	◊				◊	
Local	◊	◊					◊
Regional				◊	◊	◊	
Municipality							◊
First Nations Reservation/Settlement							◊
Unorganized Territory							◊
Regional District (or equivalent unit)					◊		
Territory			◊		◊		
Province			◊				
Census Division (CD)			◊	◊	◊		
Census Consolidated Subdivision (CCS)						◊	
Census Subdivision (CSD)			◊			◊	◊
Census Metropolitan Area (CMA)							
Census Agglomeration (CA)							
Non-CMA/CA							
Distance							
Land Base							
Temperature							
Population Concentration (Urban Core)							
Population Count	◊	◊					
Population >100,000							
Population <100,000							
Population 9,999 to 99,999							
Population <10,000							
Population >1,000	◊	◊					
Population Density	◊	◊					
Population Density >400 persons/sq.km.	◊	◊					
Commuter Flow							
Commuter Flow >50% (CSD to Core)							
Commuter Flow >25% (Core to CSD)							
Commuter Flow >30%							
Commuter Flow 5% to 30%							
Commuter Flow 0% to 5%							
Commuter Flow 0% or suppressed							

Statistics Canada - General					
◊					
				NON-	
Parameter/Characteristic	SAC	CMA	CA	CMA/CA	RST
Administrative Territorial Unit					
Statistical Territorial Unit	◊	◊	◊	◊	◊
Local					
Regional	◊	◊	◊	◊	◊
Municipality					
First Nations Reservation/Settlement					
Unorganized Territory					
Regional District (or equivalent unit)					
Territory	◊				
Province					
Census Division (CD)					
Census Consolidated Subdivision (CCS)					
Census Subdivision (CSD)					
Census Metropolitan Area (CMA)	◊				
Census Agglomeration (CA)	◊				
Non-CMA/CA	◊				◊
Distance					
Land Base					
Temperature					
Population Concentration (Urban Core)		◊	◊	◊	◊
Population Count		◊	◊	◊	◊
Population >100,000		◊			
Population <100,000					
Population 9,999 to 99,999			◊		
Population <10,000				◊	◊
Population >1,000					
Population Density					
Population Density >400 persons/sq.km.					
Commuter Flow					◊
Commuter Flow >50% (CSD to Core)		◊	◊		
Commuter Flow >25% (Core to CSD)		◊	◊		
Commuter Flow >30%					
Commuter Flow 5% to 30%					
Commuter Flow 0% to 5%					
Commuter Flow 0% or suppressed					

Statistics Canada - NonCMA							
◊							
		Strong	Moderate	Weak	No Infl.		
Parameter/Characteristic	MIZ	MIZ	MIZ	MIZ	MIZ	South	North
Administrative Territorial Unit							
Statistical Territorial Unit	◊	◊	◊	◊	◊		
Local							
Regional	◊	◊	◊	◊	◊		
Municipality							
First Nations Reservation/Settlement							
Unorganized Territory							
Regional District (or equivalent unit)							
Territory							
Province							
Census Division (CD)							
Census Consolidated Subdivision (CCS)							
Census Subdivision (CSD)						◊	◊
Census Metropolitan Area (CMA)							
Census Agglomeration (CA)							
Non-CMA/CA	◊	◊	◊	◊	◊		
Distance							◊
Land Base						◊	◊
Temperature						◊	◊
Population Concentration (Urban Core)	◊	◊	◊	◊	◊		
Population Count	◊	◊	◊	◊	◊	◊	◊
Population >100,000						◊	
Population <100,000							◊
Population 9,999 to 99,999							
Population <10,000	◊	◊					
Population >1,000							
Population Density							
Population Density >400 persons/sq.km.							
Commuter Flow	◊	◊	◊	◊	◊		
Commuter Flow >50% (CSD to Core)							
Commuter Flow >25% (Core to CSD)							
Commuter Flow >30%	◊	◊					
Commuter Flow 5% to 30%	◊		◊				
Commuter Flow 0% to 5%	◊			◊			
Commuter Flow 0% or suppressed	◊				◊		

United States Census Bureau Parameters

	US Census Bureau				
◊					
Parameter/Characteristic	**UC**	**UA**	**Urban**	**Rural**	**County**
Administrative Area					◊
Statistical Area					◊
Local					
Regional					
Urban	◊	◊	◊		◊
Rural			◊	◊	◊
Urban Cluster (UC)					
Urban Area (UA)			◊		
County			◊	◊	◊
Metropolitan Area (MA)					
Population Concentration					
Population >50,000					
Population >100,000					
Population Settlement					
Metropolitan			◊	◊	◊
Non-metropolitan			◊	◊	◊
Population Count	◊	◊			
Population >1,000,000					
Population >100,000		◊			
Population >50,000		◊			
Population <50,000	◊				
Population >2,500	◊		◊		
Population <2,500				◊	
Population Growth					
Population Density	◊	◊	◊		
Population Density >500 persons/sq.km.	◊	◊	◊		
Population Density >1,000 persons/sq.km.	◊	◊	◊		
Commuting Flow					

	US Census Bureau			
◊				
Parameter/Characteristic	**MCD**	**MA**	**MSA**	**CMSA**
Administrative Area	◊			
Statistical Area	◊	◊	◊	◊
Local				
Regional				
Urban	◊	◊	◊	◊
Rural	◊	◊	◊	◊
Urban Cluster (UC)				
Urban Area (UA)		◊		
County		◊	◊	◊
Metropolitan Area (MA)		◊	◊	◊
Population Concentration		◊	◊	◊
Population >50,000		◊		
Population >100,000				
Population Settlement		◊	◊	◊
Metropolitan		◊	◊	◊
Non-metropolitan			◊	
Population Count		◊		◊
Population >1,000,000				◊
Population >100,000		◊		
Population >50,000		◊		
Population <50,000				
Population >2,500				
Population <2,500				
Population Growth		◊		
Population Density				
Population Density >500 persons/sq.km.				
Population Density >1,000 persons/sq.km.				
Commuting Flow		◊	◊	◊

Beale Codes

	Beale Codes (USA)			
	Non-Metropolitan Regions			
Parameter/Characteristic	Sm. City	Sm. Town	Pred. R.	Northern H.
Administrative Territorial Unit	◊	◊	◊	◊
Statistical Territorial Unit				
Local				
Regional	◊	◊	◊	◊
County	◊	◊	◊	◊
Metropolitan Area (MA)	◊	◊	◊	◊
Census Division (CD)				
Census Metropolitan Area (CMA)				
Population Concentration (Urban Core)				
Population Settlement (Types)				
Adjacent	◊	◊	◊	
Non-Adjacent	◊	◊	◊	
Metropolitan				
Non-metropolitan	◊	◊	◊	◊
Population Count				
Population >1,000,000				
Population 250,000 to 999,999				
Population 50,000 to 249,999				
Population 20,000 to 49,999	◊			
Population 10,000 to 50,000				
Population 2,500 to 19,999		◊		
Population <10,000				
Population >2,500				
Population <2,500			◊	

	Canadian Beale Code Application						
				Small	Small		
	Major Metr	Mid-sized	Smaller	Non-metro	Town	Predomin.	Northern
		Metro	Metro	city zone	Zone	Rural	Hinterland
Parameter/Characteristic							
Administrative Territorial Unit							
Statistical Territorial Unit	◊	◊	◊	◊	◊	◊	◊
Local							
Regional	◊	◊	◊	◊	◊	◊	◊
County							
Metropolitan Area (MA)							
Census Division (CD)	◊	◊	◊	◊	◊	◊	◊
Census Metropolitan Area (CMA)	◊	◊	◊				
Population Concentration (Urban Core)	◊	◊	◊				
Population Settlement (Types)							
Adjacent							
Non-Adjacent							
Metropolitan	◊	◊	◊				
Non-metropolitan				◊	◊	◊	◊
Population Count	◊						
Population >1,000,000	◊						
Population 250,000 to 999,999		◊					
Population 50,000 to 249,999			◊				
Population 20,000 to 49,999				◊			
Population 10,000 to 50,000							
Population 2,500 to 19,999					◊		
Population <10,000							
Population >2,500							
Population <2,500						◊	

United States Departments of Agriculture, Economic Research Service Parameters

	ERS/USDA					
	Urban Influence				Rural-Urban	
		Non-Metro	Micro-		Continuum	
Parameter/Characteristic	Metro	(previous)	politan	Noncore	Metro	Non-Metro
Administrative Territorial Unit	◊	◊	◊	◊	◊	◊
Statistical Territorial Unit						
Local						
Regional						
County (US Version)	◊	◊	◊	◊	◊	◊
Census Tract						
Urbanized Area (UA)						
Population Concentration (Urban Core	◊		◊	◊		
Adjacent			◊	◊		◊
Non-Adjacent			◊	◊		◊
Metropolitan					◊	
Non-metropolitan						◊
Population Count			◊		◊	◊
Population >1,000,000					◊	
Population 250,000 to 1,000,000					◊	
Populatio <250,000					◊	
Population >50,000						
Population 10,000 to 49,999						
Population >20,000						◊
Population 2,500 to 19,999						◊
Population >10,000			◊			
Population <2,500						◊
Commuter Flow	◊	◊	◊	◊	◊	◊
Commuter Flow 30% to 50%						
Commuter Flow >30%						
Commuter Flow 5% to 30%						

	ERS/USDA					
	Commuting Zone					
	Metro	Large	Large	Small	Small	Rural
Parameter/Characteristic	Core (UA)	Core	Town	Core	Town	Areas
Administrative Territorial Unit						
Statistical Territorial Unit	◊	◊	◊	◊	◊	◊
Local						
Regional						
County (US Version)						
Census Tract	◊	◊	◊	◊	◊	◊
Urbanized Area (UA)	◊	◊				◊
Population Concentration (Core)	◊	◊	◊	◊	◊	◊
Adjacent						
Non-Adjacent						
Metropolitan	◊					
Non-metropolitan						
Population Count	◊	◊	◊	◊	◊	◊
Population >1,000,000						
Population 250,000 to 1,000,000						
Populatio <250,000						
Population >50,000	◊					
Population 10,000 to 49,999	◊	◊	◊			
Population >20,000						
Population 2,500 to 9,999	◊			◊	◊	
Population >10,000						
Population <2,500	◊					◊
Commuter Flow	◊	◊	◊	◊	◊	◊
Commuter Flow 30% to 50%	◊	◊		◊		◊
Commuter Flow >30%	◊		◊		◊	
Commuter Flow 5% to 30%	◊		◊		◊	◊

Organisation for Economic Co-operation and Development

	Organization on Economic Co-operation and Development				
			Predom.	Significantly	Predom.
Parameter/Characteristic	URBAN	RURAL	Rural	Rural	Urban
Administrative Territorial Unit					
Statistical Territorial Unit	◊	◊	◊	◊	◊
Local	◊	◊			
Regional			◊	◊	◊
Census Consolidated Subdivision (CCS	◊	◊	◊	◊	◊
Population Count	◊	◊	◊	◊	◊
Rural Population >50%					
Rural Population 15-50%					
Rural Population <15%					
Population Density	◊	◊	◊	◊	◊
Population Density >150 persons/sq.kr	◊				◊
Population Density <150 persons/sq.km.		◊	◊	◊	