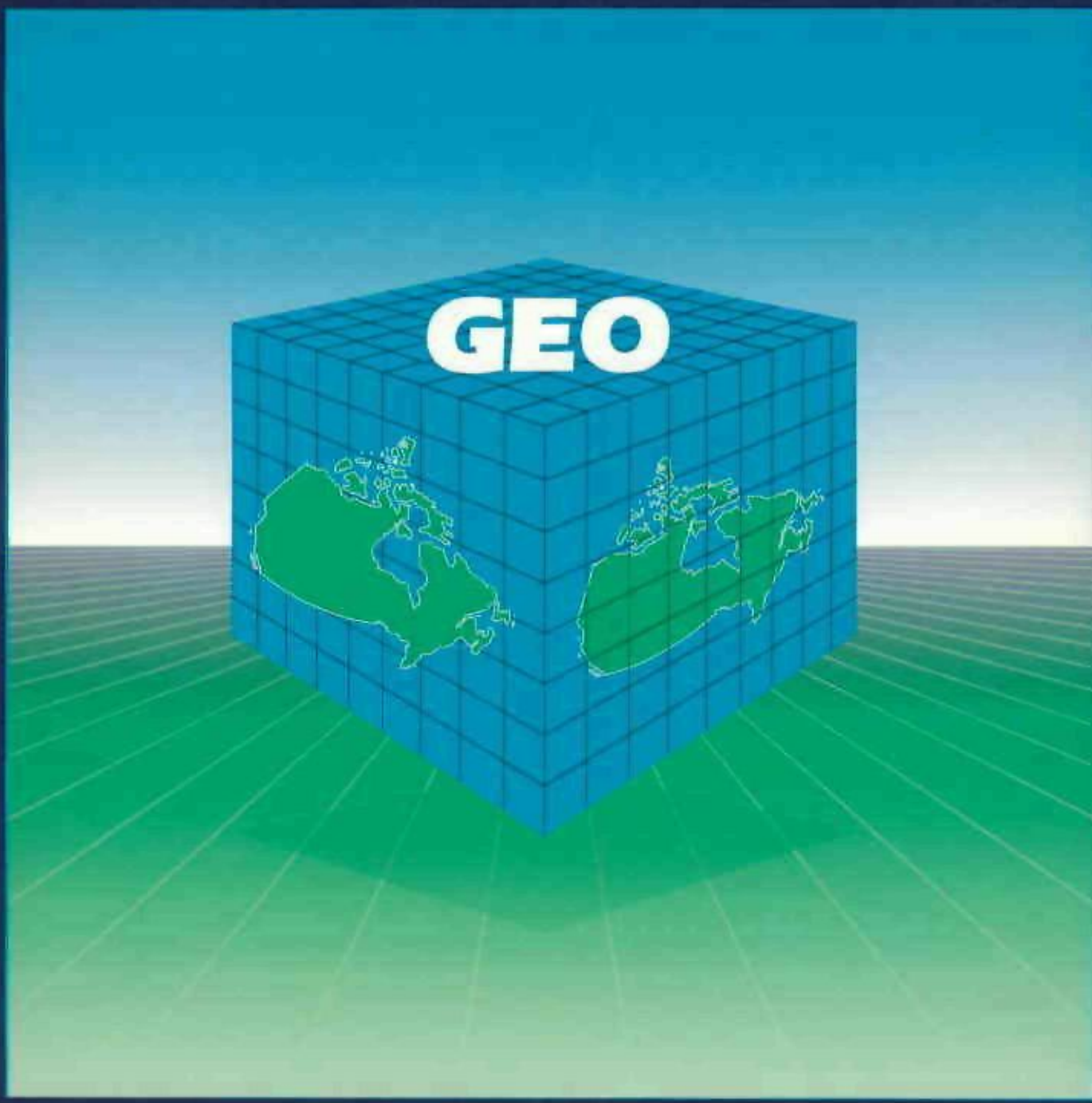
GEO

User Guide
Census Metropolitan Areas, Census Agglomerations and Census Tracts Reference Map Series



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Introduction

This reference map series shows the names and boundaries of census metropolitan areas (CMAs), census agglomerations (CAs) and census tracts (CTs). In addition, census subdivisions (CSDs) and CMA/CA parts (urbanized core, urban fringe and rural fringe) are depicted. Where applicable, primary census metropolitan areas (PCMAs) and primary census agglomerations (PCAs) are also identified on the maps.

The series also contains a map of Canada displaying all the census metropolitan areas and census agglomerations.

Formerly published as two separate map series, the CMA/CA and CT reference maps are combined into one map series for the 1991 Census.

How to Use the Product

The maps are designed to enable users to identify the general location and limits of the geographic areas reported in 1991 Census data publications. The maps should not be used for digitizing purposes nor to determine the precise location of boundaries. They are not intended to serve as a detailed legal or cadastral representation of the geographic areas.

Data Quality

The purpose of a data quality statement is to provide detailed information for users to evaluate the fitness of the data or product for a particular use. Five fundamental components for a quality statement are: lineage, positional accuracy, attribute accuracy, logical consistency and completeness.

Lineage

Lineage comprises descriptions of the source material from which the data were derived and the methods of derivation, including the dates of the source material and all transformations involved in producing the final digital files and map products.

Source Material

CSD names, types and boundaries are those that were in effect on January 1, 1991 (the geographic reference date of the 1991 Census). Where notification from provincial or territorial authorities was not received or was received after March 1991, the name, type and/or limits of CSDs may not correspond with those recognized by provincial or territorial authorities.

The background base map information was obtained from 1:50,000 and 1:250,000 National Topographic System (NTS) maps produced by Energy, Mines and Resources Canada (EMR). The map projection is Transverse Mercator. New compilation scales ranging from 1:20,000 to 1:1,600,000 were generated; the maps were photographically reduced for publication (1:25,000 to 1:2,000,000).

For the Canada CMA/CA map, the digital base map information was obtained from EMR's National Atlas Information Service (NAIS). The map projection is Lambert Conformal Conic, with standard parallels at 49°N and 77°N; the central meridian is at 95°W.

The 1991 Census Geographic Data Base (CGDB) was used to link CTs, urban areas, and CSD components to a CMA/CA and PCMA/PCA. This data base contains attribute information for all standard geographical areas, including the relationships or linkages between these areas.

Method of Derivation

The boundaries on the existing 1986 CMA/CA and CT reference maps were updated using 1991 boundaries. The CT and CSD boundaries were updated from various source documents, including municipal town plans and the enumeration area (EA) map series, which were used to identify boundary changes between 1986 and 1991. The source documents were reduced to working compilation scales and the updates were traced manually onto the existing artwork. The urban area boundaries were updated using the 1991 EA digital boundary file; updates were manually traced onto the compilation maps. New CAs which did not exist in 1986 were created using the methods just described.

All CT, urban area and CSD linkages to each CMA/CA and PCMA/PCA were determined from the Census Geographic Data Base (CGDB). Refer to the *1991 CGDB Data Quality Statement* (available from the Geography Division).

Positional Accuracy

Positional accuracy is the difference between the "true" position of a feature in the real world and the "estimated" position stored in the digital file or other product.

Positional accuracy depends on the quality of the source material used (EMR topographic maps), as well as the manual drafting of the base map features and boundaries, including urban area boundaries.

The urban area boundaries were generated from the 1991 EA digital boundary file. Refer to the *1991 EA Boundary File Data Quality Statement* (available from the Geography Division).

The map showing the location of CMAs/CAs across Canada was produced using point symbols. The point symbol was initially located at the "label point" (an ARC/INFO®-generated point generally located in the central portion of a polygon). Many symbols, however, were repositioned to more accurately portray the urban centre's adjacency to major hydrographic features and the Trans-Canada highway.

Attribute Accuracy

Attribute accuracy refers to the accuracy of the non-positional information attached to each feature.

The 1991 Census Geographic Data Base (CGDB) was used to generate the following information: names of CMAs/CAs, PCMAs/PCAs, CTs and urban areas; CSD names and types; and the identification of CMA/CA parts (urbanized core, urban fringe, rural fringe). This information was then manually positioned on the map. Refer to the *1991 CGDB Data Quality Statement* (available from the Geography Division).

Each province and territory approves the names of its CSDs, whereas physical features such as lakes and rivers have official names approved by the Canadian Permanent Committee on Geographical Names (CPCGN). These maps show the names approved by the CPCGN and the provincial and territorial authorities.

Names of geographical entities having "pan-Canadian" significance have also been established by the CPCGN (such as names of provinces, territories, major islands and major bodies of water), and are shown in both official languages.

Logical Consistency

Logical consistency describes the fidelity of relationships encoded in the data structure of the digital spatial data (i.e. how well elements of the data structure follow the rules imposed on them).

The urban area, CT, CSD, PCMA/PCA and CMA/CA boundaries were visually checked for closure.

Completeness

Completeness expresses the degree to which geographic entities (features) are captured according to the data capture specifications. It also includes information about selection criteria, definitions used and other relevant mapping rules.

This series contains 100% of the CMAs/CAs/CTs found on the CGDB. Only a subset of base map features typically shown on EMR topographic maps is displayed on the individual CMA/CA/CT reference maps. Shorelines, major rivers, lakes, islands, roads, railroads and other relevant features are shown; minor features are shown if they coincide with a boundary.

The base map features selected for display on the Canada CMA/CA map include shorelines, major rivers and lakes, and the Trans-Canada highway.

Other Related Products

The products listed below present information related to this reference map series. Please consult the *1991 Census Catalogue* (Catalogue 92-302E) for more information on these and other census products and services.

92-319	Reference Map Series:	Census Divisions and Census Subdivisions
92-320	Reference Map Series:	Census Metropolitan Areas, Census Agglomerations and Census Tracts
Not catalogued	Reference Map:	Federal Electoral Districts (available on request only)
Not catalogued	Reference Maps:	Enumeration Areas (available on request only)

To Obtain More Information

Further questions concerning products and services should be directed to one of the following Statistics Canada Regional Reference Centres:

St. John's	(709) 772-4073	Winnipeg	(204) 983-4020
Halifax	(902) 426-5331	Regina	(306) 780-5405
Montréal	(514) 283-5725	Edmonton	(403) 495-3027
Ottawa	(613) 951-8116	Calgary	(403) 292-6717
Toronto	(416) 973-6586	Vancouver	(604) 666-3691

A toll-free number is provided in all provinces and territories, for users who reside outside the local dialing area of any of the Regional Reference Centres:

Newfoundland and Labrador	1-800-563-4255
Nova Scotia, New Brunswick and Prince Edward Island	1-800-565-7192
Quebec	1-800-361-2831
Ontario	1-800-263-1136
Manitoba	1-800-542-3404
Saskatchewan	1-800-667-7164
Alberta	1-800-282-3907
Southern Alberta	1-800-472-9708
British Columbia (South and Central)	1-800-663-1551
Yukon and Northern B.C. (area served by NORTHWESTEL Inc.)	Zenith 08913
Northwest Territories (area served by NORTHWESTEL Inc.)	Call collect 403-495-3028
Telecommunications Device for the Hearing Impaired	1-800-363-7629

Appendix

Definitions

The definitions of geographic terms and census concepts are presented here in summary form only. Please refer to the *1991 Census Dictionary* (Catalogue 92-301E) for the full definitions.

Census Agglomeration (CA): The general concept of a CA is one of a large urban area, together with adjacent urban and rural areas which have a high degree of economic and social integration with that urban area.

A CA is delineated around an urban area (called the urbanized core and having a population of at least 10,000, based on the previous census). Once a CA attains an urbanized core population of at least 100,000, based on the previous census, it becomes a census metropolitan area (CMA).

Census Division (CD): Refers to the general term applying to geographic areas established by provincial laws which are intermediate geographic areas between the census subdivision and the province (e.g. divisions, counties, regional districts, regional municipalities and seven other types of geographic areas made up of groups of census subdivisions).

In Newfoundland, Manitoba, Saskatchewan and Alberta, provincial law does not provide for these administrative geographic areas. Therefore, CDs have been created by Statistics Canada in co-operation with these provinces.

Census Metropolitan Area (CMA): The general concept of a CMA is one of a very large urban area, together with adjacent urban and rural areas which have a high degree of economic and social integration with that urban area.

A CMA is delineated around an urban area (called the urbanized core and having a population of at least 100,000, based on the previous census). Once an area becomes a CMA, it is retained in the program even if its population subsequently declines.

Smaller urban areas, centred on urbanized cores of a population of at least 10,000, are included in the census agglomeration (CA) program.

Census Metropolitan Area/Census Agglomeration Component: Refers to the census subdivisions (CSDs) which form the building blocks of a CMA, CA, primary census metropolitan area (PCMA) or primary census agglomeration (PCA).

Census Metropolitan Area/Census Agglomeration Parts: The concept of CMA/CA parts distinguishes between central and peripheral urban and rural areas within a CMA or CA. There are three CMA/CA parts:

Urbanized core: A large urban area around which a CMA or a CA is delineated. The urbanized core must have a population (based on the previous census) of at least 100,000 in the case of a CMA, or between 10,000 and 99,999 in the case of a CA;

Urban fringe: An urban area within a CMA or CA, but outside the urbanized core;

Rural fringe: All territory within a CMA or CA lying outside urban areas.

Census Subdivision (CSD): Refers to the general term applying to municipalities (as determined by provincial legislation) or their equivalent, e.g. Indian reserves, Indian settlements and unorganized territories.

In Newfoundland, Nova Scotia and British Columbia, the term also describes geographic areas that have been created by Statistics Canada in co-operation with the provinces as equivalents for municipalities.

Census Subdivision Type: The type indicates the municipal status of a census subdivision. CSDs are classified into various types, according to official designations adopted by provincial or federal authorities. The following list indicates all CSD types and their abbreviations:

BOR	Borough
C	City - Cité
CM	County (municipality)
COM	Community
CT	Canton (municipalité de)
CU	Cantons unis (municipalité de)
DM	District municipality
HAM	Hamlet
ID	Improvement district
IGD	Indian government district
LGD	Local government district
LOT	Township and royalty
MD	Municipal district
NH	Northern hamlet
NV	Northern village
P	Paroisse (municipalité de)
PAR	Parish
R	Indian reserve - Réserve indienne
RM	Rural municipality
RV	Resort village
SA	Special area
SCM	Subdivision of county municipality
SD	Sans désignation (municipalité)
S-E	Indian settlement - Établissement indien
SET	Settlement
SRD	Subdivision of regional district
SUN	Subdivision of unorganized
SV	Summer village
T	Town
TP	Township
TR	Terres réservées
UNO	Unorganized - Non organisé
V	Ville
VC	Village cri
VK	Village naskapi
VL	Village
VN	Village nordique

Census Tract (CT): The general concept of a CT is that of a permanent, small urban neighbourhood-like or rural community-like area established in large urban-centred regions with the help of local specialists interested in urban and social science research.

Census tracts are delineated jointly by a local committee and Statistics Canada. The population must be between 2,500 and 8,000, with a preferred average of 4,000 persons (except for those CTs in central business districts, in other major commercial and industrial zones, or in peripheral rural or urban areas that may have either a lower or higher population). Also, when first delineated or subsequently subdivided, CTs must be as socio-economically homogeneous and compact in shape as possible.

All CMAs and CAs in Canada containing a CSD having a population of 50,000 or more at the previous census are eligible for a census tract program.

Geographic Area: Refers to geographic areas delineated or employed for the collection, compilation, analysis and dissemination of census data.

Primary Census Metropolitan Area (PCMA) and Primary Census Agglomeration (PCA): The PCMA or PCA concept recognizes the fact that adjacent CMAs and CAs are socially and economically integrated within a larger consolidated CMA or CA.

Adjacent CMAs and CAs are consolidated into a single CMA or CA if the total commuting interchange between the two is equal to at least 35% of the employed labour force living in the smaller CMA or CA, based on the previous census. The original CMAs or CAs are known as PCMA or PCA subregions of the CMA or CA.

Province: Refers to the major political division of Canada. From a statistical point of view, it is a basic unit for which data are tabulated and cross-classified.

Reference Maps: Reference maps are maps which show the locations and boundaries of the geographic areas for which census data are tabulated and published. The main information depicted on reference maps includes the boundaries, names and codes of census geographic areas, and major cultural and physical features such as roads, railways, rivers and lakes.

Rural Area: The general concept of a rural area is that of a sparsely populated area. Statistics Canada defines rural areas as those areas of Canada lying outside urban areas.

Standard Geographical Classification (SGC): The SGC is Statistics Canada's official classification of geographic areas in Canada. The SGC provides unique numeric identification for three types of geographic areas: provinces and territories; census divisions; and census subdivisions.

The three geographic areas are hierarchically related. CSDs aggregate to CDs, which in turn aggregate to a province or territory. This relationship is reflected in the seven-digit code:

Province/territory	Census division	Census subdivision
XX	XX	XXX
2 digits	2 digits	3 digits

Territory: Refers to two major political divisions of Canada, namely Yukon Territory and Northwest Territories. From a statistical point of view, these territories are equivalent to provinces, i.e. a basic unit for which data are tabulated and cross-classified.

Urban Area (UA): The general concept of a UA is that of an area containing a dense concentration of population.

Statistics Canada defines an urban area as an area which has attained a population concentration of at least 1,000, and a population density of at least 400 per square kilometre, based on the previous census. Urban areas separated by gaps of less than two kilometres are combined to form a single urban area.

All territory lying outside urban areas is considered rural. Taken together, urban and rural areas cover all of Canada.