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# Census Subdivision Boundary File, Reference Guide

2012



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## Standard symbols

The following symbols are used in Statistics Canada publications:

- |                |  |
|----------------|--|
| .              | not available for any reference period   |
| ..             | not available for a specific reference period  |
| ...            | not applicable   |
| 0              | true zero or a value rounded to zero   |
| 0 <sup>s</sup> | value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded |
| P              | preliminary  |
| r              | revised  |
| X              | suppressed to meet the confidentiality requirements of the <i>Statistics Act</i>                                   |
| E              | use with caution   |
| F              | too unreliable to be published   |
| *              | significantly different from reference category ( $p < 0.05$ )   |

## What's new?

- The 2012 Census Subdivision Boundary File is available in Lambert conformal conic projection. Previous editions of this product were Geographic (latitude/longitude).
- The 2012 Census Subdivision Boundary File portrays the boundaries of all 5,250 census subdivisions which combined cover all of Canada. The boundaries, names, and codes of census subdivisions reflect those in effect on January 1, 2012, the geographic reference date for this edition of the Census Subdivision Boundary File. Information about census subdivision changes that were effective on or before the January 1, 2012 geographic reference date must be received by Statistics Canada prior to March 1, 2012, in order to be processed in time for this edition of the file.
- The 2012 Census Subdivision Boundary File contains a boundary change affecting two census subdivisions (Barrie, CY [3543042] and Innisfil, T [3543017]) depicted within the 2011 Census Subdivision Boundary File. Their boundaries have been adjusted as a result of the 2011 Census Population and Dwelling Review process.

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## 1. About this guide

This reference guide is intended for users of the 2012 Census Subdivision Boundary File. The guide provides an overview of the file, the general methodology used in its creation, and important technical information.

This reference guide does not provide details on specific software packages that are available for use with the 2012 Census Subdivision Boundary File. Users are advised to contact the appropriate software vendor for information.

This data product is provided 'as-is,' and Statistics Canada makes no warranty, either express or implied, including but not limited to, warranties of merchantability and fitness for a particular purpose. In no event will Statistics Canada be liable for any direct, special, indirect, consequential or other damages, however caused.

## 2. Overview

The 2012 Census Subdivision Boundary File depicts the boundaries of all 5,250 census subdivisions which combined cover all of Canada and contains information such as unique identifiers (UIDs), names and types of the geographic area presented. As well, the UID, names and types (where applicable) are included for the following geographic levels:

- province or territory
- census division

The 2012 Census Subdivision Boundary File depicts the full extent of census subdivisions, including the coastal water area.

The Census Subdivision Boundary File is portrayed in Lambert conformal conic projection (North American Datum of 1983 [NAD83]). Previous editions of this product were Geographic (latitude/longitude). The Census Subdivision Boundary File is available as a national file.

### How to cite this guide

*Census Subdivision Boundary File, Reference Guide, 2012.* Statistics Canada Catalogue no. 92-162-G.

### How to cite this product

*Census Subdivision Boundary File, 2012.* Statistics Canada Catalogue no. 92-162-X.

## 3. About this product

### Purpose of the product

The purpose of the 2012 Census Subdivision Boundary File is to provide a framework for mapping and spatial analysis and to support Geographic Information System (GIS) applications used for land use and demographic studies, social, economic and market research.

The 2012 Census Subdivision Boundary File is positionally consistent with the 2012 Road Network File, which provides additional reference for mapping.

**Note:** It is recommended that the 2011 Census Boundary Files and Road Network File be used as a basis for the retrieval of 2011 Census data for user-defined areas. Users can define their custom areas based on the roads in the 2011 Census Road Network File. Roads within the 2011 Census Road Network File correspond to the 2011 Census geographic frame and therefore do not require additional boundary reconciliation work, which facilitates the geocoding process. For information on custom area creation and geocoding services, please contact the National Contact Centre at 1-800-263-1136 or [infostats@statcan.gc.ca](mailto:infostats@statcan.gc.ca).

### Definitions and concepts

A census subdivision is a municipality or an area treated as equivalent to a municipality for statistical purposes (for example, Indian reserves and unorganized territories). Municipal status is defined by laws in effect in each province and territory in Canada.

Geographic terms and concepts are briefly defined in the glossary (Appendix A). More details can be found in the 2011 Census Dictionary (Catalogue no. 98-301-X) and the 2011 Illustrated Glossary (Catalogue no. 92-195-X).

### Content

The 2012 Census Subdivision Boundary File contains the unique identifiers (UIDs), names and types of the geographic areas represented, as well as the UID, name and type (where applicable) of higher geographic levels including census divisions and provinces or territories.

**Note:** The boundaries, names, and codes of census subdivisions reflect those in effect on January 1, 2012, the geographic reference date for this edition of the Census Subdivision Boundary File. Information about census subdivision changes that were effective on or before the January 1, 2012 geographic reference date must be received by Statistics Canada prior to March 1, 2012, in order to be processed in time for this edition of the file.

The 2012 Census Subdivision Boundary File is available in English and French, in three formats: ArcGIS® (.shp), Geography Markup Language (.gml) and MapInfo® (.tab).

### General methodology

The National Geographic Database (NGD) is a joint Statistics Canada-Elections Canada initiative to develop and maintain a spatial database which serves the needs of both organizations. The focus of the NGD is the continual improvement of quality and currency of spatial coverage using updates from provinces, territories and local sources. The source files used for the creation of the boundary file reside on Statistics Canada's Spatial Data Infrastructure (SDI) which is derived directly from data stored on the NGD.

## **Creation of the 2012 Census Subdivision Boundary File**

The Census Subdivision Boundary File was created from the lowest level of geography maintained in the SDI. Primary data manipulation of the product file included preserving the geographic hierarchy of the attributes inherent within a geographic level. The census subdivision file was copied into a File Geo Database to facilitate geo-processing (e.g., joins, transforming and verification operations).

The file was verified for spatial and attribute content, translated into French and English, and appropriately named according to the file naming convention (see section 4). Final data processing consisted of the conversion from the File Geo Database format, using FME® (Safe Software), into the following GIS file formats: ArcGIS® (.shp), Geography Markup Language (.gml) and MapInfo® (.tab).

The ArcGIS®, Geography Markup Language and MapInfo® files are compressed into WinZip® files (file extension .zip) and made available for download from the Internet.

## **Limitations**

The input data used to create the file was originally obtained from several sources having a wide range of scales. This boundary file will not be precise if plotted at a larger scale than the scale of the source material used in its creation. Maps created from the boundary file should not be used to determine the precise location of boundaries. This boundary file is not intended to serve as a legal or cadastral representation of the standard geographic areas.

The positional accuracy of the file does not support cadastral, surveying, digitizing or engineering applications.

## **Comparison to other products/versions**

Differences between the 2012 Census Subdivision Boundary File and previous versions of the census subdivision boundary file include:

- The 2012 Census Subdivision Boundary File is similar but not necessarily consistent with the suite of boundary files made available as a part of the 2011 Census geographic product line.
- The 2012 Census Subdivision Boundary File is portrayed in Lambert conformal conic projection. Previous editions of this product were Geographic (latitude/longitude).
- The 2012 Census Subdivision Boundary File contains a boundary change affecting two census subdivisions (Barrie, CY [3543042] and Innisfil, T [3543017]) previously depicted within the 2011 Census Subdivision Boundary File. Their boundaries have been adjusted as a result of the 2011 Census Population and Dwelling Review process.

## **Using with other products**

When considering using the 2012 Census Subdivision Boundary File, users should be aware of the compatibility of this file with those that are available from other sources. They may not be consistent with Statistics Canada files.



## **Reference date**

The geographic reference date is a date determined by Statistics Canada to finalize the geographic framework for which statistical data are collected, tabulated and reported. The geographic reference date for the 2012 Census Subdivision Boundary File is January 1, 2012.

The geographic areas (e.g., municipalities and equivalents referred to as census subdivisions, census divisions and provinces or territories) are those in effect on January 1, 2012, provided that Statistics Canada received information on changes by March 1, 2012.

## 4. Technical specifications

### Record layout and data descriptions

The following table identifies and briefly describes the selected attributes comprising the content of the 2012 Census Subdivision Boundary File.

**Table 4.1 2012 Census subdivision boundary file record layout**

Attribute name	Data type	Description
PRUID	Character (2)	Uniquely identifies a province or territory
PRNAME	Character (55)	Province or territory name
CDUID	Character (4)	Uniquely identifies a census division (composed of the 2-digit province or territory unique identifier followed by the 2-digit census division code)
CDNAME	Character (40)	Census division name
CDTYPE	Character (3)	Census division type
CSDUID	Character (7)	Uniquely identifies a census subdivision (composed of the 2-digit province or territory unique identifier followed by the 2-digit census division code and the 3-digit census subdivision code)
CSDNAME	Character (55)	Census subdivision name
CSDTYPE	Character (3)	Census subdivisions are classified according to designations adopted by provincial, territorial or federal authorities

### Attribute domain values

#### PRUID

Uniquely identifies a province or territory.

PRUID	Province or territory name
10	Newfoundland and Labrador/Terre-Neuve-et-Labrador
11	Prince Edward Island/Île-du-Prince-Édouard
12	Nova Scotia/Nouvelle-Écosse
13	New Brunswick/Nouveau-Brunswick
24	Quebec/Québec
35	Ontario
46	Manitoba
47	Saskatchewan
48	Alberta
59	British Columbia/Colombie-Britannique
60	Yukon
61	Northwest Territories/Territoires du Nord-Ouest
62	Nunavut

**CSDTYPE**

Census subdivisions are classified according to designations adopted by provincial, territorial or federal authorities. The following is a list of the types of census subdivisions.

<b>CSDTYPE</b>	<b>Description</b>	<b>CSDTYPE</b>	<b>Description</b>
C	City / Cité	RCR	Rural community / Communauté rurale
CC	Chartered community	RDA	Regional district electoral area
CG	Community government	RGM	Regional municipality
CN	Crown colony / Colonie de la couronne	RM	Rural municipality
COM	Community	RV	Resort village
CT	Canton (municipalité de)	S-É	Indian settlement / Établissement indien
CU	Cantons unis (municipalité de)	SA	Special area
CV	City / Ville	SC	Subdivision of county municipality /
CY	City	SÉ	Settlement / Établissement
DM	District municipality	SET	Settlement
HAM	Hamlet	SG	Self-government / Autonomie
ID	Improvement district	SM	Specialized municipality
IGD	Indian government district	SNO	Subdivision of unorganized / Subdivision
IM	Island municipality	SV	Summer village
IRI	Indian reserve / Réserve indienne	T	Town
LGD	Local government district	TC	Terres réservées aux Cris
LOT	Township and royalty	TI	Terre inuite
M	Municipality / Municipalité	TK	Terres réservées aux Naskapis
MD	Municipal district	TL	Teslin land
MÉ	Municipalité	TP	Township
MU	Municipality	TV	Town / Ville
NH	Northern hamlet	V	Ville
NL	Nisga'a land	VC	Village cri
NO	Unorganized / Non organisé	VK	Village naskapi
NV	Northern village	VL	Village
P	Parish / Paroisse (municipalité de)	VN	Village nordique
PE	Paroisse (municipalité de)		

**CDTYPE**

The following is a list of the types of census divisions.

<b>CDTYPE</b>	<b>Description</b>
CDR	Census division / Division de recensement
CT	County / Comté
CTY	County
DIS	District
DM	District municipality
MRC	Municipalité régionale de comté
RD	Regional district
REG	Region
RM	Regional municipality
TÉ	Territoire équivalent
TER	Territory / Territoire
UC	United counties

## Software formats

The 2012 Census Subdivision Boundary File is available for download from the Statistics Canada website in the following formats:

- ArcGIS® format  
File extension: .shp
- Geography Markup Language (GML) 3.1.1  
File extension: .gml
- MapInfo® format  
File extension: .tab

This reference guide does not provide details on specific software packages that are available for use with the 2012 Census Subdivision Boundary File. Users are advised to contact the appropriate software vendor for information.

## File extension and accented character information

The ArcGIS®, Geography Markup Language and MapInfo® files are compressed into WinZip® files (file extension .zip).

An XML schema file (.xsd) is included to describe and validate the structure and content of the .gml files.

The 2012 Census Subdivision Boundary File contains attributes with accented characters. They were successfully tested on desktop versions of ArcGIS® 9.3.1 and MapInfo® 11.0.1.

## Geographic representation

The 2012 Census Subdivision Boundary File is available from the Statistics Canada website in the following geographic representation:

Projection: Lambert conformal conic  
False easting: 6200000.000000  
False northing: 3000000.000000  
Central meridian: -91.866667  
Standard parallel 1: 49.000000  
Standard parallel 2: 77.000000  
Latitude of origin: 63.390675  
Linear unit: metre (1.000000)

Datum: North American 1983 (NAD83)  
Prime meridian: Greenwich  
Angular unit: Degree  
Spheroid: GRS 1980

The North American Datum of 1983 (NAD83) is an adjustment of the 1927 datum (NAD27) that reflects the higher accuracy of geodetic surveying.

Users of the 2012 Census Subdivision Boundary File can transform the file into the representation that best satisfies their needs, knowing of the effects these representations have on angles, areas,

distances and direction. Users have the option to choose the best projection in concert with display objectives.

## File naming convention

Spatial product file names follow a file naming convention. The file projection, geographic level, geographic coverage, file type, geographic reference date, file format and language are embedded within the file name. Standardizing the names of the files facilitates the storage of compressed files, all having the extension .zip.

Each file name is 13 characters in length. All alphabetic characters are in lower case to maintain consistency.

**First character:** projection of file

l        projection of file is Lambert conformal conic

**Next three characters:** primary geographic level of file

csd     census subdivision

**Next three numbers:** geographic code of coverage

000     Canada

**Next character:** file type

a        digital boundary file

**Next two numbers:** geographic reference date

The geographic reference date is a date determined by Statistics Canada to finalize the geographic framework for which statistical data are collected, tabulated and reported. The geographic reference date for the 2012 Census Subdivision Boundary File is January 1, 2012.

12       geographic reference date is 2012

**Next character:** file format

a        ArcGIS® (.shp)  
g        Geography Markup Language (.gml)  
m        MapInfo® (.tab)

**Final two characters:** language

\_e       English  
\_f       French

## 5. Data quality

Spatial data quality elements provide information on the fitness-for-use of a spatial database by describing why, when and how the data are created, and how accurate the data are. The quality elements include an overview reporting on the lineage, positional accuracy, attribute accuracy, logical consistency and completeness. This information is provided to users for all spatial data products disseminated.

### Lineage

Lineage describes the history of the spatial data, including descriptions of the source material from which the data were derived, and the methods of derivation. It also contains the dates of the source material, and all transformations involved in producing the final digital files.

The National Geographic Database (NGD) is a joint Statistics Canada-Elections Canada initiative to develop and maintain a spatial database which serves the needs of both organizations. The focus of the NGD is the continual improvement of quality and currency of spatial coverage using updates from provinces, territories and local sources. The source files used for the creation of the 2012 Census Subdivision Boundary File reside on Statistics Canada's Spatial Data Infrastructure (SDI) which is derived directly from data stored on the NGD.

The Census Subdivision Boundary File was created from the lowest level of geography maintained in the SDI. Primary data manipulation of the product file included preserving the geographic hierarchy of the attributes inherent within a geographic level. The census subdivision spatial file was copied into a File Geo Database to facilitate geo-processing (e.g., joins, transforming and verification operations).

The file was verified for spatial and attribute content, translated into French and English, and appropriately named according to the file naming convention. The standard geographic area unique identifier, name, type, and the relationships among the various geographic levels are found in the SDI.

Final data processing consisted of the conversion from the File Geo Database format, using FME<sup>®</sup> (Safe Software), into the following GIS file formats: ArcGIS<sup>®</sup> (.shp), Geography Markup Language (.gml) and MapInfo<sup>®</sup> (.tab).

### Positional accuracy

Positional accuracy refers to the absolute and relative accuracy of the positions of geographic features. Absolute accuracy is the closeness of the coordinate values in a dataset to values accepted as or being true. Relative accuracy is the closeness of the relative positions of features to their respective relative positions accepted as or being true. Descriptions of positional accuracy include the quality of the final file or product after all transformations.

The Spatial Data Infrastructure is not Global Positioning Systems (GPS)-compliant. However, every possible attempt is made to ensure that the standard geographic area boundaries maintained in the Spatial Data Infrastructure respect the limits of the administrative entities that they represent (e.g., census division and census subdivision) or on which they are based (e.g., census metropolitan area or census agglomeration). The positional accuracy of these limits is dependent upon source materials used by Statistics Canada to identify the location of limits. In addition, due to the importance placed on relative positional accuracy, the positional accuracy of other geographic data (e.g., road network data and hydrographic data) that are stored within the Spatial Data Infrastructure is considered when positioning the limits of the standard geographic areas.

## **Attribute accuracy**

Attribute accuracy refers to the accuracy of the quantitative and qualitative information attached to each feature (e.g., census subdivision unique identifier, name, type).

As noted under Lineage, the attributes (names, types and unique identifiers) for all standard geographic areas are sourced from Statistics Canada's Spatial Data Infrastructure. The names and types of standard geographic areas have been updated using source materials from provincial, territorial and federal authorities.

The attribute data associated with the polygons in the 2012 Census Subdivision Boundary File were verified against data in the Spatial Data Infrastructure and found to accurately reflect data stored in the SDI.

## **Logical consistency**

Logical consistency describes the fidelity of relationships encoded in the data structure of the digital spatial data.

The 2012 Census Subdivision Boundary File was verified against data in the Spatial Data Infrastructure and found to be logically consistent.

## **Consistency with other products**

Topology checks were performed with the 2012 Road Network File and the 2012 Census Subdivision Boundary File to measure the degree of integration amongst these products. The results indicated the degree of integration was within the default tolerance parameters as defined below.

Tolerance: 0.005714285714286 metres  
Resolution: 0.002857142857143 metres

## **Completeness**

Completeness refers to the degree to which geographic features, their attributes and their relationships are included or omitted in a dataset.

The 2012 Census Subdivision Boundary File contains the complete set of standard geographic areas for this level of the geographic hierarchy. Users should be aware that individual census subdivisions may consist of two or more geographic parts.

## Appendix A Glossary

### **Adjusted counts**

'Adjusted counts' refer to previous census population and dwelling counts that were adjusted (i.e., recomputed) to reflect current census boundaries, when a boundary change occurs between the two censuses.

### **Block-face**

A block-face is one side of a street between two consecutive features intersecting that street. The features can be other streets or boundaries of standard geographic areas.

Block-faces are used for generating block-face representative points, which in turn are used for geocoding and census data extraction when the street and address information are available.

### **Census agricultural region**

Census agricultural regions (CARs) are composed of groups of adjacent census divisions. In Saskatchewan, census agricultural regions are made up of groups of adjacent census consolidated subdivisions, but these groups do not necessarily respect census division boundaries.

### **Census consolidated subdivision**

A census consolidated subdivision (CCS) is a group of adjacent census subdivisions. Generally, the smaller, more densely-populated census subdivisions (towns, villages, etc.) are combined with the surrounding, larger, more rural census subdivision, in order to create a geographic level between the census subdivision and the census division.

### **Census division**

Census division (CD) is the general term for provincially legislated areas (such as county, *municipalité régionale de comté* and regional district) or their equivalents. Census divisions are intermediate geographic areas between the province/territory level and the municipality (census subdivision).

### **Census metropolitan area and census agglomeration**

A census metropolitan area (CMA) or a census agglomeration (CA) is formed by one or more adjacent municipalities centred on a population centre (known as the core). A CMA must have a total population of at least 100,000 of which 50,000 or more must live in the core. A CA must have a core population of at least 10,000. To be included in the CMA or CA, other adjacent municipalities must have a high degree of integration with the core, as measured by commuting flows derived from previous census place of work data.

If the population of the core of a CA declines below 10,000, the CA is retired. However, once an area becomes a CMA, it is retained as a CMA even if its total population declines below 100,000 or the population of its core falls below 50,000. Small population centres with a population count of less than 10,000 are called fringe. All areas inside the CMA or CA that are not population centres are rural areas.

When a CA has a core of at least 50,000, it is subdivided into census tracts. Census tracts are maintained for the CA even if the population of the core subsequently falls below 50,000. All CMAs are subdivided into census tracts.



**Census metropolitan influenced zone**

The census metropolitan influenced zone (MIZ) is a concept that geographically differentiates the area of Canada outside census metropolitan areas (CMAs) and census agglomerations (CAs). Census subdivisions (CSDs) within provinces that are outside CMAs and CAs are assigned to one of four categories according to the degree of influence (strong, moderate, weak or no influence) that the CMAs or CAs have on them. CSDs within the territories that are outside CAs are assigned to a separate category.

Census subdivisions within provinces are assigned to a MIZ category based on the percentage of their resident employed labour force that commutes to work in the core(s) of CMAs or CAs. CSDs with the same degree of influence tend to be clustered. They form zones around CMAs and CAs that progress through the categories from 'strong' to 'no' influence as distance from the CMAs and CAs increases. As many CSDs in the territories are very large and sparsely populated, the commuting flow of the resident employed labour force is unstable. For this reason, CSDs in the territories that are outside CAs are assigned to a separate category that is not based on their commuting flows.

**Census subdivision**

Census subdivision (CSD) is the general term for municipalities (as determined by provincial/territorial legislation) or areas treated as municipal equivalents for statistical purposes (e.g., Indian reserves, Indian settlements and unorganized territories).

**Census tract**

Census tracts (CTs) are small, relatively stable geographic areas that usually have a population between 2,500 and 8,000 persons. They are located in census metropolitan areas and in census agglomerations that had a core population of 50,000 or more in the previous census.

A committee of local specialists (for example, planners, health and social workers, and educators) initially delineates census tracts in conjunction with Statistics Canada. Once a census metropolitan area (CMA) or census agglomeration (CA) has been subdivided into census tracts, the census tracts are maintained even if the core population subsequently declines below 50,000.

**Coordinate system**

A coordinate system is a reference system based on mathematical rules for specifying positions (locations) on the surface of the earth. The coordinate values can be spherical (latitude and longitude) using angular units of measure such as degrees, minutes and seconds or planar (Lambert conformal conic) using linear units such as metres.

Cartographic boundary files, digital boundary files, representative points and road network files are disseminated in Lambert conformal conic projection.

**Core, fringe and rural area**

The terms 'core,' 'fringe' and 'rural area' replace the terms 'urban core,' 'urban fringe' and 'rural fringe' for the 2011 Census. These terms distinguish between population centres (POPCTRs) and rural areas (RAs) within a census metropolitan area (CMA) or census agglomeration (CA).

A CMA or CA can have two types of cores: the core and the secondary core. The core is the population centre with the highest population, around which a CMA or a CA is delineated. The core must have a population (based on the previous census) of at least 50,000 persons in the case of a CMA, or at least 10,000 persons in the case of a CA.

The secondary core is a population centre within a CMA that has at least 10,000 persons and was the core of a CA that has been merged with an adjacent CMA.

The term 'fringe' includes all population centres within a CMA or CA that have less than 10,000 persons and are not contiguous with the core or secondary core.

All territory within a CMA or CA that is not classified as a core or fringe is classified as rural area.

**Datum**

A datum is a geodetic reference system which includes an ellipsoid and an origin against which the latitude and longitude of all other points on the earth's surface are referenced. A datum may often be associated with a particular ellipsoid (mathematical reference model of the earth).

**Designated place**

A designated place (DPL) is normally a small community or settlement that does not meet the criteria established by Statistics Canada to be a census subdivision (an area with municipal status) or a population centre.

Designated places are created by provinces and territories, in cooperation with Statistics Canada, to provide data for submunicipal areas.

**Dissemination area**

A dissemination area (DA) is a small, relatively stable geographic unit composed of one or more adjacent dissemination blocks. It is the smallest standard geographic area for which all census data are disseminated. DAs cover all the territory of Canada.

**Dissemination block**

A dissemination block (DB) is an area bounded on all sides by roads and/or boundaries of standard geographic areas. The dissemination block is the smallest geographic area for which population and dwelling counts are disseminated. Dissemination blocks cover all the territory of Canada.

**Economic region**

An economic region (ER) is a grouping of complete census divisions (CDs) (with one exception in Ontario) created as a standard geographic unit for analysis of regional economic activity.

**Ecumene**

Ecumene is a term used by geographers to mean inhabited land. It generally refers to land where people have made their permanent home, and to all work areas that are considered occupied and used for agricultural or any other economic purpose. Thus, there can be various types of ecumenes, each having its own unique characteristics (population ecumene, agricultural ecumene, industrial ecumene, etc.).

**Federal electoral district**

A federal electoral district (FED) is an area represented by a member of the House of Commons. The federal electoral district boundaries used for the 2011 Census are based on the 2003 Representation Order.

**Geocoding**

Geocoding is the process of assigning geographic identifiers (codes or x,y coordinates) to map features and data records. The resulting geocodes permit data to be linked geographically to a place on the earth.

Households, postal codes<sup>OM</sup> and place of work data are linked to block-face representative points (coordinates) when the street and address information is available; otherwise, they are linked to dissemination block (DB) representative points. In some cases, postal codes<sup>OM</sup> and place of work data are linked to dissemination area (DA) representative points when they cannot be linked to DBs. As well, place of work data are linked to census subdivision representative points when the data cannot be linked to DAs.

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OM: Postal code is an official mark of Canada Post Corporation.

### **Geographic code**

A geographic code is a numerical identifier assigned to a geographic area. The code is used to identify and access standard geographic areas for the purposes of data storage, retrieval and display.

### **Geographic reference date**

The geographic reference date is a date determined by Statistics Canada for the purpose of finalizing the geographic framework for which census data will be collected, tabulated and reported. For the 2011 Census, the geographic reference date is January 1, 2011.

### **Geographical region of Canada**

The geographical regions of Canada are groupings of provinces and territories established for the purpose of statistical reporting. The six geographical regions of Canada are: Atlantic, Quebec, Ontario, Prairies, British Columbia and Territories.

### **Land area**

Land area is the area in square kilometres of the land-based portions of standard geographic areas. Land area data are unofficial and are provided for the sole purpose of calculating population density.

### **Map projection**

A map projection is the process of transforming and representing positions from the earth's three-dimensional curved surface to a two-dimensional (flat) surface. The process is accomplished by a direct geometric projection or by a mathematically derived transformation.

The Lambert conformal conic map projection is widely used for general maps of Canada at small scales and is the most common map projection used at Statistics Canada.

### **National Geographic Database**

The National Geographic Database (NGD) is a shared database between Statistics Canada and Elections Canada. The database contains roads, road names and address ranges. It also includes separate reference layers containing physical and cultural features, such as hydrography and hydrographic names, railroads and power transmission lines.

### **Place name**

'Place name' refers to selected names of active and retired geographic areas as well as names from the Canadian Geographical Names Data Base. Place names include names of census subdivisions (municipalities), designated places and population centres, as well as the names of some local places.

### **Population centre**

A population centre (POPCTR) has a population of at least 1,000 and a population density of 400 persons or more per square kilometre, based on the current census population count. All areas outside population centres are classified as rural areas. Taken together, population centres and rural areas cover all of Canada.

Population centres are classified into three groups, depending on the size of their population:

- small population centres, with a population between 1,000 and 29,999
- medium population centres, with a population between 30,000 and 99,999
- large urban population centres, with a population of 100,000 or more

Population centre population includes all population living in the cores, secondary cores and fringes of census metropolitan areas (CMAs) and census agglomerations (CAs), as well as the population living in population centres outside CMAs and CAs.

### **Population density**

Population density is the number of persons per square kilometre.

**Postal code<sup>OM</sup>**

The postal code<sup>OM</sup> is a six-character code defined and maintained by Canada Post Corporation for the purpose of sorting and delivering mail.

**Province or territory**

'Province' and 'territory' refer to the major political units of Canada. From a statistical point of view, province and territory are basic areas for which data are tabulated. Canada is divided into 10 provinces and 3 territories.

**Reference map**

A reference map shows the location of the geographic areas for which census data are tabulated and disseminated. The maps display the boundaries, names and unique identifiers of standard geographic areas, as well as major cultural and physical features, such as roads, railroads, coastlines, rivers and lakes.

**Representative point**

A representative point is a coordinate point that represents a line or a polygon. The point is centrally located along the line, and centrally located or population weighted in the polygon.

Representative points are generated for block-faces, as well as for selected geographic areas – province/territory (PR), federal electoral district (FED), economic region (ER), census division (CD), census metropolitan area/census agglomeration (CMA/CA), census subdivision (CSD), population centre (POPCTR), designated place (DPL), census tract (CT), dissemination area (DA) and dissemination block (DB).

Households, postal codes<sup>OM</sup> and place of work data are linked to block-face representative points (coordinates) when the street and address information is available; otherwise, they are linked to dissemination block (DB) representative points. In some cases, postal codes and place of work data are linked to dissemination area (DA) representative points when they cannot be linked to DBs. As well, place of work data are linked to census subdivision (CSD) representative points when the data cannot be linked to DAs.

**Rural area**

Rural areas (RAs) include all territory lying outside population centres (POPCTRs). Taken together, population centres and rural areas cover all of Canada.

Rural population includes all population living in rural areas of census metropolitan areas (CMAs) and census agglomerations (CAs), as well as population living in rural areas outside CMAs and CAs.

**Spatial Data Infrastructure**

The Spatial Data Infrastructure (SDI) is an internal maintenance database that is not disseminated outside of Statistics Canada. It contains roads, road names and address ranges from the National Geographic Database (NGD), as well as boundary arcs of standard geographic areas that do not follow roads, all in one integrated line layer. The database also includes a related polygon layer consisting of basic blocks (BB; basic blocks are the smallest polygon units in the database, and are formed by the intersection of all roads and the arcs of geographic areas that do not follow roads), boundary layers of standard geographic areas, and derived attribute tables, as well as reference layers containing physical and cultural features (such as hydrography, railroads and power transmission lines) from the NGD.

The SDI supports a wide range of census operations, such as the maintenance and delineation of the boundaries of standard geographic areas (including the automated delineation of dissemination blocks and population centres) and geocoding. The SDI is also the source for generating many geography products for the 2011 Census, such as cartographic boundary files and road network files.

**Spatial data quality elements**

Spatial data quality elements provide information on the fitness for use of a spatial database by describing why, when and how the data are created, and how accurate the data are. The elements include an overview describing the purpose and usage, as well as specific quality elements reporting on the lineage, positional accuracy, attribute accuracy, logical consistency and completeness. This information is provided to users for all spatial data products disseminated for the census.

**Standard Geographical Classification**

The Standard Geographical Classification (SGC) 2011 is Statistics Canada's main classification of geographic areas in Canada. It is designed to classify statistical information by geographic areas. The classification consists of four levels: geographical regions of Canada, provinces and territories, census divisions (such as counties and regional municipalities) and census subdivisions (such as municipalities). The four geographic levels are hierarchically related; a seven-digit code is used to show this relationship.

**Statistical Area Classification**

The Statistical Area Classification (SAC) groups census subdivisions according to whether they are a component of a census metropolitan area, a census agglomeration or a census metropolitan influenced zone (MIZ). The MIZ classifies all CSDs in provinces and territories that are outside census metropolitan areas and census agglomerations.

The Statistical Area Classification is a variant of the Standard Geographical Classification (SGC). Census subdivisions (CSDs) form the lowest level of the classification variant. The next level consists of individual census metropolitan areas (CMAs), census agglomerations (CAs) and census metropolitan influenced zones (MIZs). The highest level consists of three categories that cover all of the land mass of Canada:

- census metropolitan areas
- census agglomerations
- outside census metropolitan areas and census agglomerations.

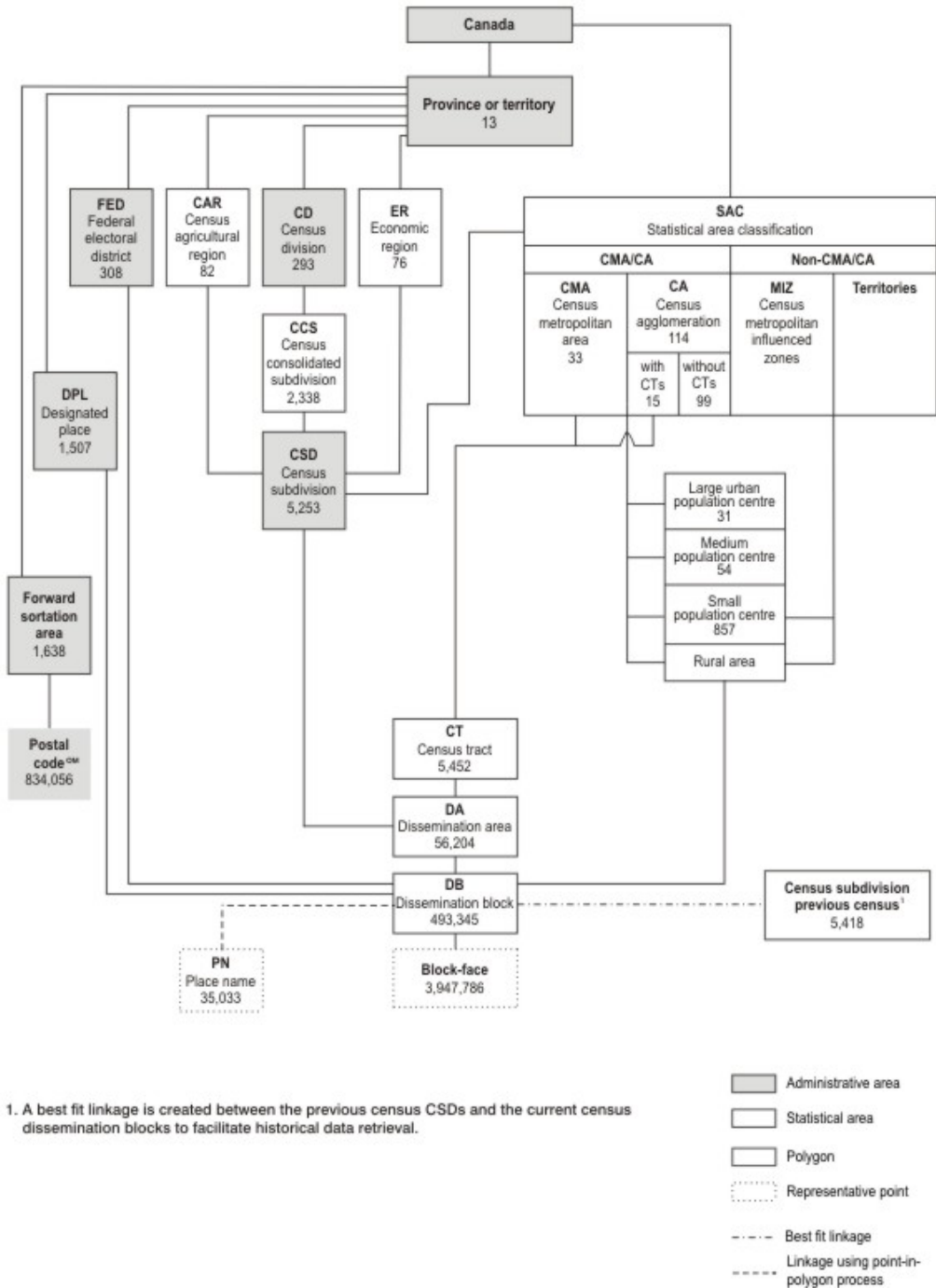
The SAC provides unique numeric identification (codes) for these hierarchically-related geographic areas. It was established for the purpose of reporting statistics.

**Thematic map**

A thematic map shows the spatial distribution of one or more specific data themes for selected geographic areas. The map may be qualitative in nature (e.g., predominant farm types) or quantitative (e.g., percentage population change).

## Appendix B Hierarchy of standard geographic units for dissemination, 2011 Census

Figure B.1 Hierarchy of standard geographic units for dissemination, 2011 Census



Sources: Statistics Canada, 2011 Census of Population; Canada Post Corporation, May 2011.

## Appendix C Geographic units by province and territory, 2011 Census

Table C.1 Geographic units by province and territory, 2011 Census

Geographic unit	Canada 2006	Canada 2011	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.
Federal electoral district (2003 Representation Order)	308	308	7	4	11	10	75	106	14	14	28	36	1	1	1
Economic region	76	76	4	1	5	5	17	11	8	6	8	8	1	1	1
Census agricultural region	82	82	3	3	5	4	14	5	12	20	8	8	0	0	0
Census division	288	293	11	3	18	15	98	49	23	18	19	29	1	6	3
Census consolidated subdivision	2,341	2,338	89	68	43	151	1,005	316	126	300	77	153	1	6	3
Census subdivision (CSD)	5,418	5,253	376	113	99	273	1,285	574	287	959	435	743	37	41	31
CSD dissolutions (Jan. 2, 2006 to Jan. 1, 2011)	221	...	3	0	1	6	13	13	13	26	19	126	0	1	0
CSD incorporations (Jan. 2, 2006 to Jan. 1, 2011)	...	56	2	0	0	3	4	2	3	1	1	33	2	5	0
Designated place	1,289	1,507	183	0	65	167	106	114	97	194	261	319	1	0	0
Census metropolitan area	33	33	1	0	1	2	6 <sup>1</sup>	15 <sup>1</sup>	1	2	2	4	0	0	0
Census agglomeration (CA)	111	114	3	2	4	5 <sup>1</sup>	25 <sup>1</sup>	28 <sup>1</sup>	4	7 <sup>1</sup>	16 <sup>1</sup>	21	1	1	0
CA with census tracts	15	15	0	0	0	1	3	4	0	0	3	4	0	0	0
CA without census tracts	96	99	3	2	4	4 <sup>1</sup>	22 <sup>1</sup>	24 <sup>1</sup>	4	7 <sup>1</sup>	13 <sup>1</sup>	17	1	1	0
Census tract	5,076	5,452	47	0	93	102	1,371	2,273	173	109	573	711	0	0	0
Small population centre (1,000 to 29,999)	811	857	29	6	35	30 <sup>1</sup>	224 <sup>1</sup>	237 <sup>1</sup>	42 <sup>1</sup>	59 <sup>1</sup>	101 <sup>1</sup>	87	1	3	7
Medium population centre (30,000 to 99,999)	54	54	0	1	1	2	13	19	1	2	6	9	0	0	0
Large urban population centre (100,000 or more)	29	31	1	0	1	1	6 <sup>1</sup>	14 <sup>1</sup>	1	2	2	4	0	0	0
Place name	21,411	35,033	1,836	709	3,138	2,679	6,985	8,091	1,839	2,687	3,117	3,528	195	153	76
Dissemination area	54,626	56,204	1,071	293	1,645	1,454	13,622	19,964	2,179	2,467	5,711	7,582	68	98	50
Dissemination block	478,831	493,345	8,732	3,573	15,842	15,415	109,455	132,777	30,471	51,610	66,332	55,529	1,359	1,492	758
Block-face	3,739,041	3,947,786	81,868	27,050	155,484	135,411	842,992	1,003,813	201,005	362,238	525,180	577,975	13,036	15,612	6,122
Forward sortation area	1,625	1,638	35	7	77	111	418	526	64	48	153	190	3	3	3
Postal code <sup>OM</sup>	805,640	834,056	10,878	3,316	27,852	58,617	212,162	276,844	24,568	21,923	80,948	115,435	968	516	29

... not applicable

1. Census metropolitan areas, census agglomerations, large urban population centres and small population centres crossing provincial boundaries are counted in both provinces, and, therefore, do not add up to the national total.

**Sources:** Statistics Canada, 2011 Census of Population; Canada Post Corporation, May 2011.

## Appendix D Census subdivision types by province and territory, as of January 1, 2012

Table D.1 Census subdivision types by province and territory, as of January 1, 2012

Census subdivision type		Canada	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.
		5,250	372	113	99	273	1,285	574	287	959	436	743	37	41	31
C	City / Cité	6	...	...	...	4	...	2	...	...	...	...	...	...	...
CC	Chartered community	3	...	...	...	...	...	...	...	...	...	...	...	3	...
CG	Community government	4	...	...	...	...	...	...	...	...	...	...	...	4	...
CN	Crown colony / Colonie de la couronne	1	...	...	...	...	...	...	...	1	...	...	...	...	...
COM	Community	33	...	33	...	...	...	...	...	...	...	...	...	...	...
CT	Canton (municipalité de)	44	...	...	...	...	44	...	...	...	...	...	...	...	...
CU	Cantons unis (municipalité de)	2	...	...	...	...	2	...	...	...	...	...	...	...	...
CV	City / Ville	2	...	...	...	...	...	2	...	...	...	...	...	...	...
CY	City	149	3	2	...	4	...	46	9	16	17	49	1	1	1
DM	District municipality	52	...	...	...	...	...	...	...	...	...	52	...	...	...
HAM	Hamlet	37	...	...	...	...	...	...	...	...	...	...	2	11	24
ID	Improvement district	8	...	...	...	...	...	...	...	...	8	...	...	...	...
IGD	Indian government district	2	...	...	...	...	...	...	...	...	...	2	...	...	...
IM	Island municipality	1	...	...	...	...	...	...	...	...	...	1	...	...	...
IRI	Indian reserve / Réserve indienne	961	3	4	25	18	27	139	75	168	81	419	...	2	...
LGD	Local government district	2	...	...	...	...	...	...	2	...	...	...	...	...	...
LOT	Township and royalty	67	...	67	...	...	...	...	...	...	...	...	...	...	...
M	Municipality / Municipalité	3	...	...	...	...	...	3	...	...	...	...	...	...	...
MD	Municipal district	76	...	...	12	...	...	...	...	...	64	...	...	...	...
MU	Municipality	55	...	...	...	...	...	55	...	...	...	...	...	...	...
MÉ	Municipalité	631	...	...	...	...	631	...	...	...	...	...	...	...	...
NH	Northern hamlet	11	...	...	...	...	...	...	...	11	...	...	...	...	...
NL	Nisga'a land	1	...	...	...	...	...	...	...	...	...	1	...	...	...
NO	Unorganized / Non organisé	137	...	...	...	...	96	16	10	2	...	...	4	6	3
NV	Northern village	11	...	...	...	...	...	...	...	11	...	...	...	...	...
P	Parish / Paroisse (municipalité de)	150	...	...	...	150	...	...	...	...	...	...	...	...	...
PE	Paroisse (municipalité de)	168	...	...	...	...	168	...	...	...	...	...	...	...	...
RCR	Rural community / Communauté rurale	4	...	...	...	4	...	...	...	...	...	...	...	...	...
RDA	Regional district electoral area	158	...	...	...	...	...	...	...	...	...	158	...	...	...
RG	Region	0	...	...	...	...	...	...	...	...	...	...	...	...	...



**Table D.1 Census subdivision types by province and territory, as of January 1, 2012 (continued)**

Census subdivision type		Canada	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.
RGM	Regional municipality	4	...	...	3	...	...	...	...	...	...	1	...	...	...
RM	Rural municipality	413	...	...	...	...	...	...	117	296	...	...	...	...	...
RV	Resort village	40	...	...	...	...	...	...	...	40	...	...	...	...	...
S-É	Indian settlement / Établissement indien	28	...	...	...	...	6	5	4	1	4	3	5	...	...
SA	Special area	3	...	...	...	...	...	...	...	...	3	...	...	...	...
SC	Subdivision of county municipality / Subdivision municipalité de comté	28	...	...	28	...	...	...	...	...	...	...	...	...	...
SET	Settlement	12	...	...	...	...	...	...	...	...	...	...	...	9	3
SG	Self-government / Autonomie gouvernementale	4	...	...	...	...	...	...	...	...	...	...	4	...	...
SM	Specialized municipality	5	...	...	...	...	...	...	...	...	5	...	...	...	...
SNO	Subdivision of unorganized / Subdivision non organisée	92	92	...	...	...	...	...	...	...	...	...	...	...	...
SV	Summer village	51	...	...	...	...	...	...	...	...	51	...	...	...	...
SÉ	Settlement / Établissement	13	...	...	...	...	...	...	...	...	...	...	13	...	...
T	Town	740	274	7	31	13	...	88	51	147	108	14	3	4	...
TC	Terres réservées aux Cris	8	...	...	...	...	8	...	...	...	...	...	...	...	...
TI	Terre inuite	12	...	...	...	...	12	...	...	...	...	...	...	...	...
TK	Terres réservées aux Naskapis	1	...	...	...	...	1	...	...	...	...	...	...	...	...
TL	Teslin land	1	...	...	...	...	...	...	...	...	...	...	1	...	...
TP	Township	206	...	...	...	...	...	206	...	...	...	...	...	...	...
TV	Town / Ville	15	...	...	...	14	...	1	...	...	...	...	...	...	...
V	Ville	222	...	...	...	...	222	...	...	...	...	...	...	...	...
VC	Village cri	8	...	...	...	...	8	...	...	...	...	...	...	...	...
VK	Village naskapi	1	...	...	...	...	1	...	...	...	...	...	...	...	...
VL	Village	550	...	...	...	66	45	11	19	266	95	43	4	1	...
VN	Village nordique	14	...	...	...	...	14	...	...	...	...	...	...	...	...

... not applicable

Source: Statistics Canada, 2012.