Catalogue no. 92-175-G

2006 Agricultural Ecumene Census Division Boundary File: Reference Guide

Census year 2006

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Published by authority of the Minister responsible for Statistics Canada

June 2008

Catalogue no. 92-175-G
ISBN 978-0-662-45172-3

Frequency: Every five years

Ottawa

La version française de cette publication est disponible sur demande (nº 92-175-G au catalogue).

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

What's new?

- *2006 Standard Geographical Classification, Volume II: Reference Maps* are available free of charge from the Statistics Canada website as a complementary product to the 2006 Boundary Files.

Table of contents

1. About this guide

This reference guide is intended for users of the 2006 Agricultural Ecumene Census Division Boundary File. The guide provides an overview of the file, the general methodology used to create it, and important technical information for users.

Technical specifications in Section 5 include system requirements, installation instructions, record layouts, and item descriptions.

Geographic terms and concepts are briefly described in the glossary. More details can be found in the *2006 Census Dictionary* (Catalogue no. 92-566-XWE). Supplementary information is provided in the appendices.

This reference guide does not provide details on specific software packages that are available for use with the 2006 Boundary Files. Users are advised to contact the appropriate software vendor for information.

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2. Overview

2006 Agricultural Ecumene Census Division Boundary File

The 2006 Agricultural Ecumene Census Division Boundary File delineates Canada's agriculture ecumene. Ecumene, a word derived from the Greek root *oixos* meaning inhabited and *nenon* meaning space, is a term used by geographers to indicate 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 purposes.

The use of an agriculture ecumene facilitates the display of data. By effectively masking non-ecumene areas of Canada, it restricts the display of agriculture characteristics to those areas where agriculture activity is sufficiently concentrated.

The agricultural ecumene is based on dissemination areas selected according to three separate indicators of agricultural intensity. To ensure visibility for small-scale thematic mapping, the detailed boundaries of the large main ecumene pockets have been generalized while those of the relatively small, isolated ecumene pockets have been enlarged and generalized.

The Agricultural Ecumene Census Division Boundary File has three separate layers of information. The first layer contains the agricultural ecumene with integrated census division boundaries. The second layer contains the boundaries of all census divisions in Canada. The third layer contains the provincial/territorial boundaries. The second and third layers give users a choice of geographic detail when mapping the agricultural ecumene.

The ecumene boundary layer incorporates the Great Lakes, large inland lakes and the shoreline around Canada. A flag is used to distinguish between land and water polygons. Geographic coordinates are in latitude/longitude and are based on the North American Datum of 1983 (NAD83).

The Agricultural Ecumene Census Division Boundary File is available in ESRI® shapefile format and MapInfo® tab file format. The file may be downloaded free of charge from the Statistics Canada website (www.statcan.ca). See the technical specifications in section 5 for more details on record layouts and file formats.

Reference date

The geographic reference date is a date determined by Statistics Canada to finalize the geographic framework for which census data are collected, tabulated and reported. The reference date for the geographic area boundaries in digital and cartographic boundary files is January 1, 2006.

3. How to use this product

Purpose of the product

The agricultural ecumene allows users to thematically map data aggregated to the census division level, limiting the displayed data to those areas where agricultural activity is concentrated in Canada.

The ecumene concept is recommended for use in dot and choropleth maps. If an ecumene is not applied to dot maps, the requisite number of dots may be randomly spread over entire unit areas; this approach defeats the main attributes of dot mapping (i.e. showing correct location, extent and density of the dot symbols). One of the inherent limitations of choropleth maps is that the statistical distribution is assumed to be homogeneous or uniformly spread over each unit area, and is consequently represented by tones or colours covering the entire unit. Thus, an ecumene renders a more accurate depiction of the spatial distribution of data.

This product was created for the display of thematic data on national maps. Although the product was designed to display census division data, data may be displayed without census division boundaries as a flag is used to distinguish ecumene and non-ecumene polygons in the boundary layer.

General Methodology

The 2006 agricultural ecumene was created using spatial data from Geography Division's National Geographic Base. The National Geographic Base contains the boundaries of the 2006 dissemination areas (DAs). Agricultural data from the 2006 Census of Agriculture, aggregated to the dissemination area level, were used to derive the agricultural ecumene.

The dissemination areas included in the agricultural ecumene boundary layer were selected according to three separate, but complementary, indicators of agricultural intensity. The primary indicator was the ratio of total agricultural land to total DA land area. Agricultural land included all land in the DA devoted to crops (including Christmas trees), summerfallow, tame or seeded pasture, and natural land for pasture. This ratio was calculated for each DA within a province and the DAs sorted in descending order, starting with the largest ratio. DAs were selected for inclusion in the agricultural ecumene until the cumulative total area of the selected DAs exceeded a pre-determined percentage of the total agricultural land area for the province.

The second indicator of agricultural intensity was the ratio of total agricultural receipts to total DA land area. This is particularly important for DAs containing farms with large sales on a relatively small land base, such as greenhouses or feedlots. This ratio was also calculated for all DAs in a province and the DAs sorted in descending order. Using the same principle as for the previous indicator, DAs were selected for inclusion in the ecumene until the cumulative total area of the selected DAs exceeded a pre-determined percentage of the total agricultural land area for the province.

The third indicator was to include all DAs in a province that exceeded not only a specific agricultural land total but also a certain ratio of total agricultural land to total DA land area. The final list of selected DAs in a province consisted of all DAs meeting the criteria for one or more of the three indicators, and ensured that the ecumene reflected those areas of significant agricultural activity in a province.

This DA selection process was successful in all provinces except Newfoundland and Labrador. The poor results in this province were due primarily to a combination of many large DAs in the province and a limited and localized pattern of agricultural activity. As a result, the DA selection process was replaced with a procedure that identified and selected smaller areas of significant

agricultural activity within dissemination areas. The territories were not included in the delineation of the agricultural ecumene.

A base ecumene layer was created by integrating the selected DAs in nine provinces with the selected DA components in Newfoundland and Labrador. Every DA or DA component polygon was classified as either being an ecumene DA (meeting the agricultural activity criteria) or not being an ecumene DA. This base layer was divided into three component layers: main ecumene, other ecumene pockets (outside the main ecumene) and non-ecumene pockets (within the main ecumene). Five subsequent steps generalized the base layer into an agricultural ecumene boundary layer suitable for small-scale mapping of census division data.

First, small internal non-ecumene pockets and external ecumene pockets were eliminated. Second, the detailed boundaries of the remaining external ecumene pockets were smoothed (generalized) and enlarged to increase their visibility on small-scale maps. Third, the detailed boundaries of the large internal non-ecumene pockets and main ecumene were smoothed. Then, a generalized shoreline around Canada, the Great Lakes, and large inland lakes were incorporated into the ecumene. Finally, the 2006 census division boundaries were integrated into the ecumene boundary layer.

The census division boundary layer and the province/territory boundary layer were derived from the National Geographic Base. The hydrography (generalized shoreline, the Great Lakes, and large inland lakes) included in the ecumene boundary layer was also incorporated into these two boundary layers. The census division boundary layer was assigned census division names from the Query Base, a database maintained within Statistics Canada. The province/territory boundary layer was also assigned province/territory names from the same base.

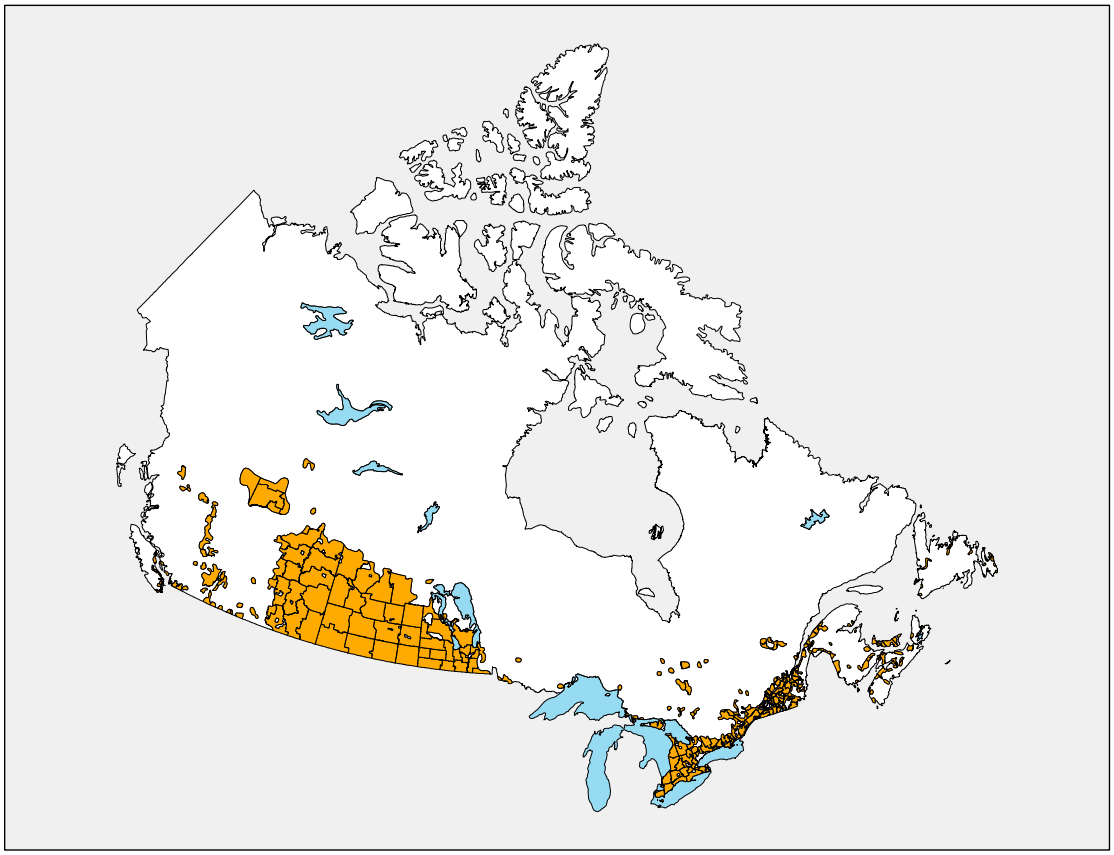
Content

This product contains three separate layers of information: the ecumene boundary layer, the census division boundary layer and the province/territory boundary layer.

1. **The agricultural ecumene boundary file**

   The ecumene boundary layer consists of a polygon layer. Polygons in the layer are classified as being part of the landmass or as water. Land polygons contain attributes classifying them as part of the ecumene or as an area not assigned to the ecumene. Each ecumene polygon has the following two attributes: a census division unique identifier code (CDuid) and a Census of Agriculture standard geographic area unique identifier code (AGuid).

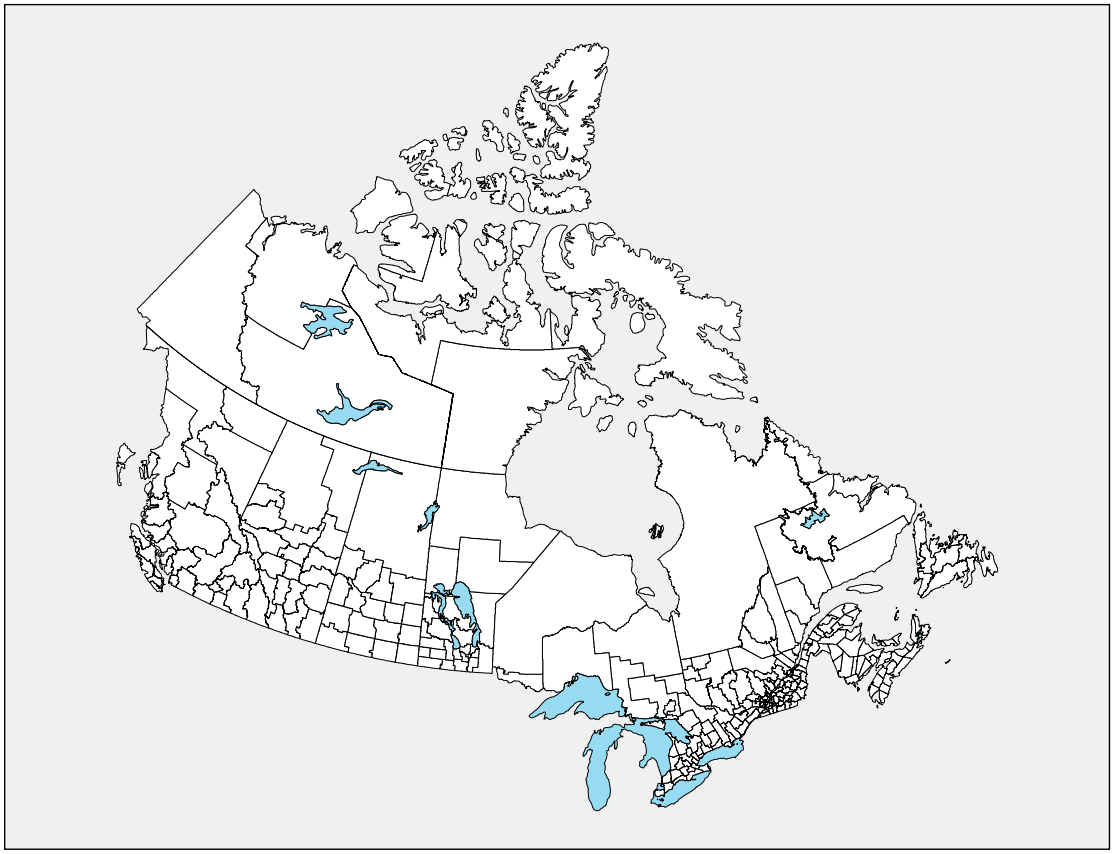
Figure 1
The agricultural ecumene boundary layer



2. The census division boundary file

The census division boundary layer consists of polygons classified as being part of the landmass or as water. Polygons representing every census division are included in this file. Each census division polygon contains its unique identification code (the CDuid) and name as an attribute. This layer is provided solely for mapping the boundaries of the census divisions in a map of the agricultural ecumene.

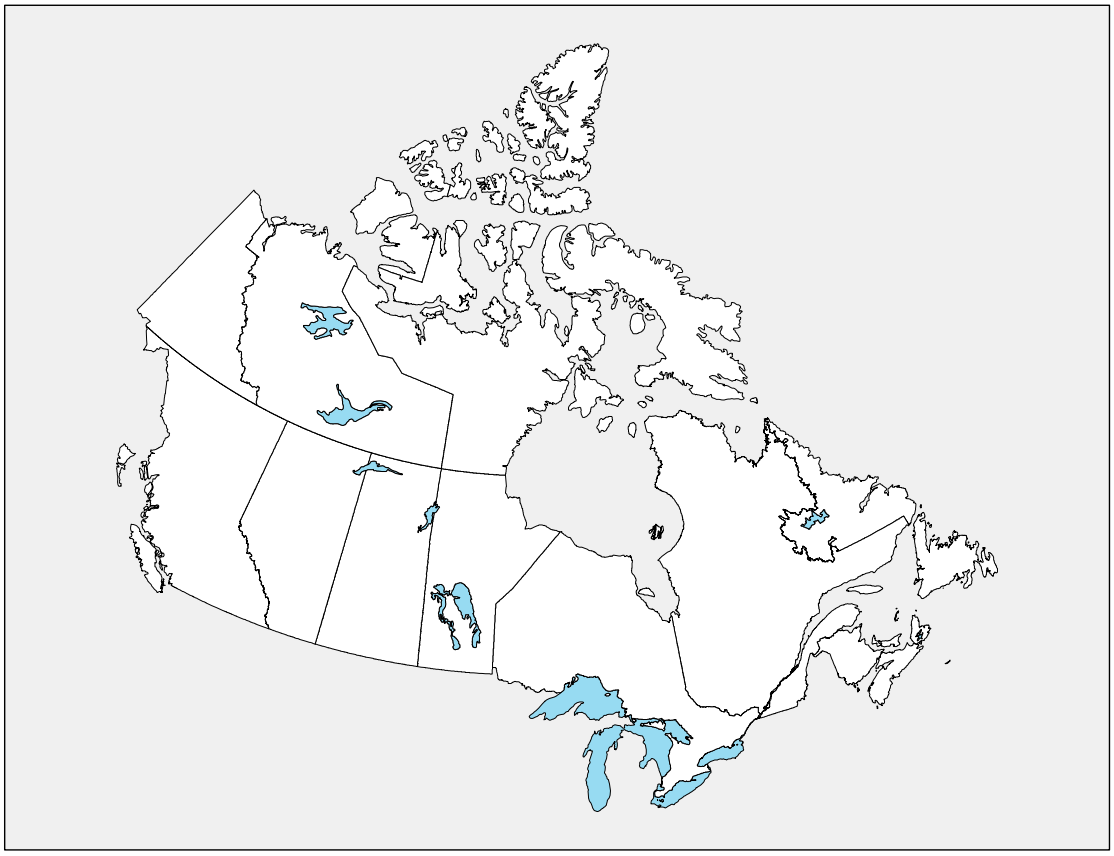
Figure 2
The census division boundary layer



3. The province/territory boundary file

The province/territory boundary layer consists of polygons classified as being part of the landmass or as water. Polygons representing every province/territory are included in this file. Each province/territory polygon contains its unique identification code (the PRuid) and name as an attribute. This boundary layer is provided solely for mapping the boundaries of the provinces and territories in a map of the agricultural ecumene.

Figure 3
The province/territory boundary layer



Limitations

The agricultural ecumene boundary layer incorporating the shoreline around Canada has been generalized to be suitable for cartographic display at a small scale (1:20,000,000 to 1:25,000,000). The position of the boundaries and shorelines are not compatible with Geography Division's Cartographic Boundary Files, Road Network Files or Road Network and Geographic Attribute Files. Similarly, the product does not support cadastral, surveying or engineering applications.

Comparison with other products

Due to the extensive generalization and the use of a different generalized coastline, the 2006 Agricultural Ecumene Census Division Boundary File is not compatible with other 2006 Census Boundary File products or other spatial files.

Comparison to the 2001 Agricultural Ecumene

The 2006 Agricultural Ecumene Census Division Boundary File is derived in the same fashion as the 2001 agricultural ecumene, using the dissemination area.

The census division boundaries within the 2006 Agricultural Ecumene Census Division Boundary File are updated to reflect boundary changes and are not compatible with the census division boundaries contained in the 2001 Agricultural Ecumene Census Division Boundary File.

4. 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 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.

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 geographic area boundaries, names, codes, and the relationships among the various geographic levels are found on Statistics Canada's Spatial Data Infrastructure. The data for administrative areas are updated using information from provincial and territorial sources. The data for statistical areas are updated using the results of the previous census and input from users.

The province/territory boundary layer was identical to that used in 2001, including the inland water file. It was derived from the generalized census division layer by aggregating shared province/territory identifiers. This spatial file was then linked to the attribute data from the Query Base.

The census division boundary layer was created by clipping the 2006 census division boundary file derived from the National Geographic Base with the dissolved generalized province/territory boundary file above and the inland water file also used in 2001. The resulting layer was cleaned of slivers and was then linked with attribute data from the Query Base.

The base ecumene layer was created by integrating those 2006 dissemination areas (DAs) selected for their significant agricultural activity in nine provinces with the DA components selected in Newfoundland and Labrador (see the General Methodology subsection for DA selection criteria). Every DA or DA component polygon was classified as either being an ecumene DA (meeting the agricultural activity criteria) or not being an ecumene DA.

The base ecumene layer was divided into three component layers: main ecumene, other ecumene pockets (outside the main ecumene) and non-ecumene pockets (within the main ecumene). Different generalization criteria were applied to each of these component layers in order to create a product for small-scale mapping. The final criteria were determined after testing and mapping several options.

External ecumene pockets under 2,000 hectares were removed and those of 2,000 or more hectares were enlarged to increase their visibility on small-scale maps. Neighbouring pockets were then grouped together to create larger and even more visible ecumene pockets.

Internal non-ecumene pockets under 15,000 hectares were removed and those of 15,000 or more hectares were generalized, but not enlarged.

After the internal non-ecumene and external ecumene pockets were dealt with, the main ecumene was generalized manually for small-scale display. These three component layers and the separately treated Newfoundland and Labrador polygons were then reintegrated to produce a generalized layer.

The 2006 census division boundary file developed above was intersected with the resulting generalized ecumene, keeping the census division unique identifier as the basic attribute. In the ecumene/CD file polygons outside of ecumene were coded as LAND and WATER respectively.

The inland water file was created by selecting water features from the National Geographic Database's hydrographic reference layers. These reference data were sourced from the National Topographic Data Base (1:50,000 and 1:250,000) and the Digital Chart of the World (1:1,000,000). Each feature was assigned a rank based on its size and/or cultural importance. The largest and most important features have lower rank values. Only those features with the lowest rank are included with the ecumene boundary files.

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 boundaries are derived from the Spatial Data Infrastructure. The data in the Spatial Data Infrastructure are stored in double precision. This precision allows features that are next to each other on the ground to be placed in the correct position on the map, relative to each other, without overlap. However, the absolute positional accuracy of the features in the database varies depending on the source of the features.

The Spatial Data Infrastructure is not Global Positioning Systems (GPS)-compliant. However, every possible attempt is made to ensure that the 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 geographic areas.

While the boundaries were originally derived from the National Geographic Base, they have been greatly generalized (particularly on the shorelines and the boundary of Canada) and are not positionally consistent with data on the base.

Attribute accuracy

Attribute accuracy refers to the accuracy of the quantitative and qualitative information attached to each feature (such as population for an urban area, street name, census subdivision name and code).

As noted under Lineage, the attributes (names, types and codes) for all geographic areas displayed on the maps are sourced from the Spatial Data Infrastructure. The names and types for administrative geographic areas have been updated from the 2001 Census using source materials from provincial and territorial authorities.

The attribute data associated with the polygons in the boundary files were independently verified against the data in the Spatial Data Infrastructure and found to be accurate.

Logical consistency

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

In each boundary file, all geographic areas have been verified to have a unique identifier that is valid for the 2006 Census.

Boundaries found in this product are consistent with those found in other spatial products produced as part of the suite of 2006 Census products.

The hydrographic data files were specially created for the boundary files to enable thematic mapping at a national scale.

The land area for geographic areas present in GeoSuite may not be consistent with that computed from the cartographic boundary files. This is because the water features used in the creation of the cartographic boundary files are based on a set of hydrographic features that was created for thematic mapping.

Topological consistency

Topological consistency describes the correctness of the explicitly encoded topological characteristics of a dataset.

This product was checked to ensure that the polygons were consistent with the geographic units being represented. Very small polygons and slivers (resulting from the integration of different layers of information) were removed.

Consistency with other products

Due to extensive generalization, the boundaries in the various files of this product are not consistent with the 2006 Census Cartographic Boundary Files, the 2006 Census Road Network File or the 2006 Census Road Network and Geographic Attribute File.

Completeness

Completeness refers to the degree to which geographic features, their attributes and their relationships are included or omitted in a dataset. It also includes information on selection criteria, definitions used, and other relevant mapping rules.

Each boundary file contains the complete set of geographic areas for that level of the geographic hierarchy.

In the agricultural ecumene boundary layer, at least one ecumene pocket exists for 246 of the 288 census divisions in Canada. Of the remaining 42 census divisions, only 4 had no farms in the 2006 Census of Agriculture. Each ecumene polygon has the following two attributes: a census division unique identifier code (CDuid) and a Census of Agriculture standard geographic area unique identifier code (AGuid).

5. Technical specifications

Software formats

Boundary Files for the 2006 Census are available for download from the Statistics Canada website in the following formats:

- ESRI® format version 9.0
  File extension: .shp

- MapInfo® format version 7.0
  File extension: .tab

Installation instructions

The ESRI® and MapInfo® files are compressed into WinZip® files (file extension .zip).

Some of the 2006 Boundary Files contain attributes with accented characters. These characters can be seen in UNIX and Windows® versions of ESRI® and MapInfo®. They were tested on desktop versions of ArcGIS® 9.2 and MapInfo® 7.0, 8.0 and 8.5.

Geographic representation

The 2006 Boundary Files are available on the Statistics Canada website in the following geographic representation:

Datum:	NAD 83
Coordinates:	Latitude/Longitude

To ensure calculations are relevant (e.g., to calculate land area), it is recommended that the latitude/longitude coordinates be transformed to an appropriate map projection.

Record layouts

1. Province and Territory

The Province and Territory Boundary File contains the boundaries of all 10 provinces and three territories. 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.

Table 5.1
Record layouts — ESRI® (.shp) and MapInfo® (.tab) files

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ESRI®
Shape	Geometry	Specific to ESRI®
PRUID	char (2)	Uniquely identifies a province or territory
PRNAME	char (100)	Province or territory name
PRENAME	char (100)	Province or territory name in English
PRFNAME	char (100)	Province or territory name in French
PREABBR	char (10)	English abbreviation of the province or territory name
PRFABBR	char (10)	French abbreviation of the province or territory name
WATER	Integer (1)	Value of “1” for water and “0” for land

2. Census division

The Census Division Boundary File contains the boundaries of all 288 census divisions. A census division is an administrative area which is a component of the Standard Geographical Classification and is comprised of census subdivisions. Census division 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 or territorial level and the municipality (census subdivision).

Table 5.2
Record layouts — ESRI® (.shp) and MapInfo® (.tab) files

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ESRI®
Shape	Geometry	Specific to ESRI®
CDUID	char (4)	Uniquely identifies a census division (composed of the 2-digit province/territory code and the 2-digit census division code)
CDNAME	char (100)	Census division name
CDTYPE	char (3)	Census division type (see Domain)
PRUID	char (2)	Uniquely identifies a province or territory
PRNAME	char (100)	Province or territory name
WATER	Integer (1)	Value of “1” for water and “0” for land

Domain

CDTYPE is a three-character field indicating the census division type.

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

3. Agricultural ecumene

The agricultural ecumene boundary file contains polygons for each ecumene and non-ecumene pocket in Canada.

Table 5.3
Record layouts — ESRI® (.shp) and MapInfo® (.tab) files

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ESRI®
Shape	Geometry	Specific to ESRI®
CDUID	char (4)	Uniquely identifies a census division (composed of the 2-digit province/territory code and the 2-digit census division code)
CDNAME	char (100)	Census division name
CDTYPE	char (3)	Census division type (see Domain)
PRUID	char (2)	Uniquely identifies a province or territory
PRNAME	char (100)	Province or territory name
AGUID	char (9)	Uniquely identifies any of the standard geographic areas disseminated by the Census of Agriculture (composed of the 2-digit province or territory code, the 2-digit census agricultural region code, the 2-digit census division code and the 3-digit census consolidated subdivision code).
ECUMENE	integer (1)	Value of “0” for ecumene land, value of “1” for water and value of “2” for non-ecumene land.

Glossary

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.

Cartographic boundary files
Cartographic boundary files (CBFs) contain the boundaries of standard geographic areas together with the shoreline around Canada. Selected inland lakes and rivers are available as a supplementary layer.

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 urban 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 large urban area (known as the urban core). A CMA must have a total population of at least 100,000 of which 50,000 or more must live in the urban core. A CA must have an urban 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 central urban area, as measured by commuting flows derived from census place of work data.

If the population of the urban 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 urban core falls below 50,000. The urban areas in the CMA or CA that are not contiguous to the urban core are called the urban fringe. Rural areas in the CMA or CA are called the rural fringe.

When a CA has an urban 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 urban core subsequently falls below 50,000. All CMAs are subdivided into census tracts.

Census metropolitan area and census agglomeration influenced zone
The census **m**etropolitan area and census agglomeration **i**nfluenced **z**one (MIZ) is a concept that geographically differentiates the area of Canada outside census metropolitan areas (CMAs) and census agglomerations (CAs). Census subdivisions 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 and/or CAs have on them.

Census subdivisions (CSDs) are assigned to a MIZ category based on the percentage of their resident employed labour force that has a place of work in the urban 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.

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 of 2,500 to 8,000. They are located in census metropolitan areas and in census agglomerations with an urban 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 urban core population subsequently declines below 50,000.

Datum
A datum is a geodetic reference system that specifies the size and shape of the earth, and the base point from which the latitude and longitude of all other points on the earth’s surface are referenced.

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 an urban area.

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

Digital boundary files
Digital boundary files (DBFs) portray the boundaries used for 2006 Census collection and, therefore, often extend as straight lines into bodies of water.

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 their 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 2006 Census are based on the 2003 Representation Order.

Geocoding
Geocoding is the process of assigning geographic identifiers (codes) to map features and data records. The resulting geocodes permit data to be linked geographically.

Households, postal codes and place of work data are linked to block-face representative points 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 representative points when the data cannot be linked to DAs.

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 2006 Census, the geographic reference date is January 1, 2006.

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.

Locality
'Locality' (LOC) refers to the historical place names of former census subdivisions (municipalities), former designated places and former urban areas, as well as to the names of other entities, such as neighbourhoods, post offices, communities and unincorporated places.

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.

The NGD was created in 1997 as a joint Statistics Canada/Elections Canada initiative to develop and maintain a national road network file serving the needs of both organizations. The active building of the NGD – that is, integrating the files from Statistics Canada, Elections Canada and Natural Resources Canada – occurred from 1998 to 2000. Thereafter, Statistics Canada and Elections Canada reconciled their digital boundary holdings to the new database's road network geometry so that operational products could be derived.

Since 2001, the focus of the NGD has been on intensive data quality improvements, especially regarding the quality and currency of its road network coverage. There has been considerable expansion of road names and civic addresses ranges, as well as the addition of hydrographic names. Priorities were determined by Statistics Canada and Elections Canada, enabling the NGD to meet the joint operational needs of both agencies in support of census and electoral activities.

Place name
'Place name' refers to the set of names that includes current census subdivisions (municipalities), current designated places and current urban areas, as well as the names of localities.

Population density
Population density is the number of persons per square kilometre.

Postal code
The postal code 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 three 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 codes 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 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, dissemination blocks, dissemination areas, census subdivisions, urban areas and designated places.

Households, postal codes and place of work data are linked to block-face representative points 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 representative points when the data cannot be linked to DAs.

Road network file
The road network file (RNF) contains roads, road names, address ranges and road ranks for the entire country. Most commonly, address ranges are dwelling-based and are mainly available in the large urban centres of Canada.

Rural area
Rural areas include all territory lying outside urban areas. Taken together, urban and rural areas cover all of Canada.

Rural population includes all population living in the rural fringes 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), formerly known as the National Geographic Base (NGB), 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, dissemination areas and urban areas), and geocoding. The SDI is also the source for generating many geography products for the 2006 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) is Statistics Canada's official classification for three types of geographic areas: provinces and territories, census divisions (CDs) and census subdivisions (CSDs). The SGC provides unique numeric identification (codes) for these hierarchically related geographic areas.

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

Urban area
An urban area has a minimum population concentration of 1,000 persons and a population density of at least 400 persons per square kilometre, based on the current census population count. All territory outside urban areas is classified as rural. Taken together, urban and rural areas cover all of Canada.

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

Urban core, urban fringe and rural fringe
'Urban core, urban fringe and rural fringe' distinguish between central and peripheral urban and rural areas within a census metropolitan area (CMA) or census agglomeration (CA).

'Urban core' is a large urban area around which a CMA or a CA is delineated. The urban 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 urban core of a CA that has been merged with an adjacent CMA or larger CA is called the 'secondary urban core'.

'Urban fringe' includes all small urban areas within a CMA or CA that are not contiguous with the urban core of the CMA or CA.

'Rural fringe' is all territory within a CMA or CA not classified as an urban core or an urban fringe.

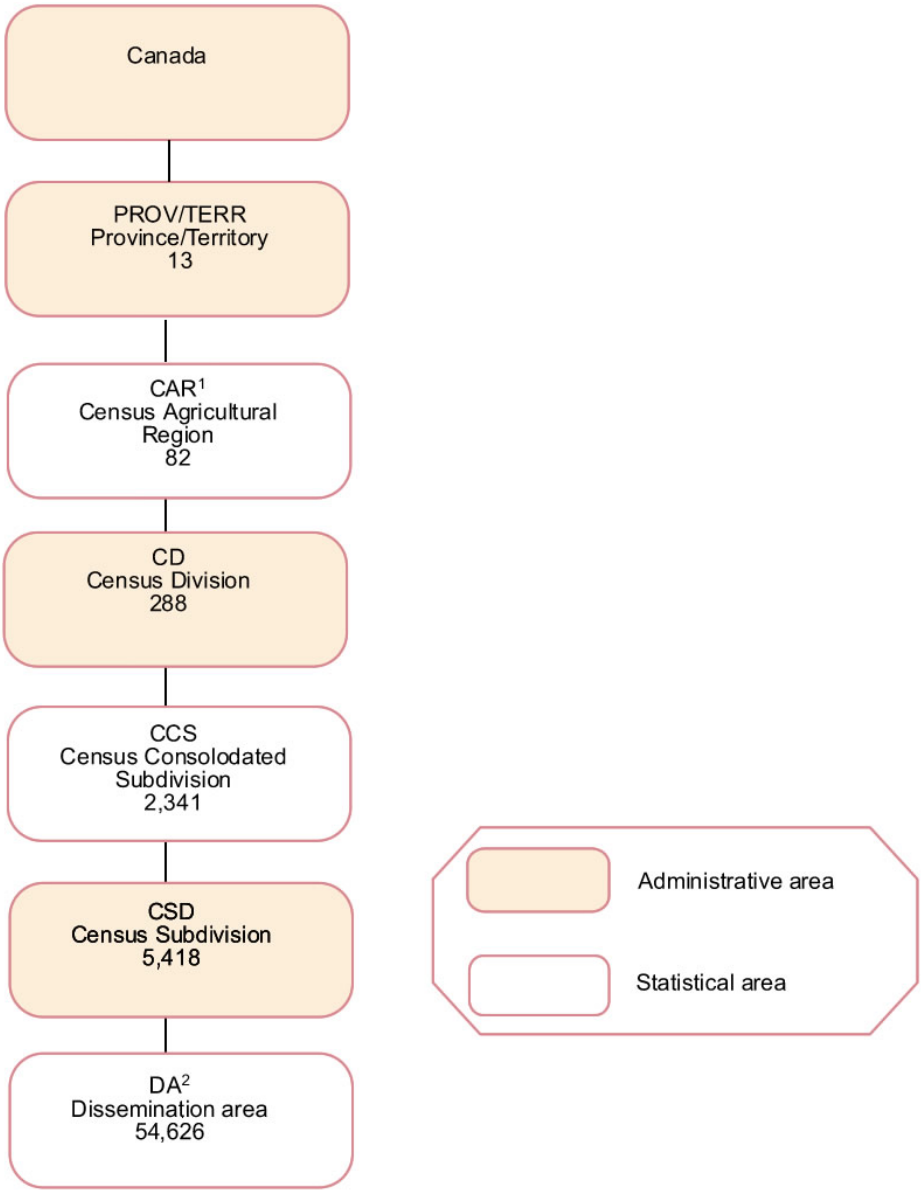
Urban population size group
The term 'urban population size group' refers to the classification used in standard tabulations where urban areas are distributed according to the following predetermined size groups, based on the current census population.

1,000	to	2,499
2,500	to	4,999
5,000	to	9,999
10,000	to	24,999
25,000	to	49,999
50,000	to	99,999
100,000	to	499,999
500,000	and over	

Tabulations are not limited to these predetermined population size groups; the census database has the capability of tabulating data according to any user-defined population size group.

Appendix A
Hierarchy of standard geographic units for dissemination, 2006 Census of Agriculture

Figure A.1
Hierarchy of standard geographic units for dissemination, 2006 Census of Agriculture



1. Census agricultural regions in Saskatchewan are composed of census consolidated subdivisions.
2. Only 13,368 dissemination areas are agricultual, containing one or more farms.

Source: Statistics Canada, 2006 Census.

Appendix B
Geographic units by province and territory, 2006 Census

Table B.1
Geographic units by province and territory, 2006 Census

Geographic unit	Canada 2001	Canada 2006	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)	301[1]	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	288	11	3	18	15	98	49	23	18	19	28	1	2	3
Census consolidated subdivision	2,446	2,341	89	68	43	151	1,008	316	127	300	77	156	1	2	3
Census subdivision (CSD)	5,600	5,418	377	113	100	276	1,294	585	297	984	453	836	35	37	31
CSD dissolutions (January 2, 2001 to January 1, 2006)	340	...	9	0	0	0	282	5	7	29	4	4	0	0	0
CSD incorporations (January 2, 2001 to January 1, 2006)	...	158	5	0	2	1	100	4	6	11	5	24	0	0	0
Designated place	1,261	1,289	182	0	49	167	83	88	58	159	262	240	1	0	0
Census metropolitan area	27	33	1	0	1	2	6[2]	15[2]	1	2	2	4	0	0	0
Census agglomeration (CA)	113	111	3	2	4	5[2]	26[2]	28[2]	3	7[2]	12[2]	22	1	1	0
CA with census tracts	16	15	0	0	0	1	3	4	0	0	3	4	0	0	0
CA without census tracts	94	96	3	2	4	4[2]	23[2]	24[2]	3	7[2]	9[2]	18	1	1	0
Census tract	4,798	5,076	46	0	88	99	1,289	2,136	168	105	491	654	0	0	0
Urban area	913	895	32	7	36	32[2]	226[2]	260[2]	38[2]	58[2]	107[2]	95	1	3	5
Locality	52,291	52,558	2,445	964	3,924	3,450	12,617	10,905	2,349	3,898	3,472	7,708	363	173	290
Dissemination area	52,993	54,626	1,062	292	1,633	1,439	13,408	19,177	2,152	2,431	5,357	7,471	78	84	42
Dissemination area with farms	13,095	13,368	257	193	595	578	2,970	3,851	650	1,131	1,527	1,616	27	14	0
Dissemination block	478,707	478,831	8,199	3,251	14,656	14,864	108,751	126,244	30,421	51,729	65,071	52,808	1,261	967	609
Block-face	3,764,232	3,739,041	78,376	26,190	154,564	132,873	835,458	942,567	198,063	361,069	507,859	473,418	11,888	11,620	5,096
Forward sortation area	1,595	1,625	35	7	76	110	415	522	64	48	150	189	3	3	3
Postal code	758,658	805,640	10,378	3,157	25,313	57,355	202,972	269,676	23,943	21,541	76,924	112,904	942	506	29

… not applicable

1. Federal electoral districts (1996 Representation Order).
2. Census metropolitan areas, census agglomerations and urban areas crossing provincial boundaries are counted in both provinces, and, therefore, do not add up to the national total.

Sources: Statistics Canada, 2006 Census; Canada Post Corporation, May 2006.

Appendix C
Spatial file naming conventions

For the 2006 Census, spatial product file names for files disseminated to clients follow a spatial file naming convention. The geographic area and code, file type, geographic reference date, software type and language will be embedded within the name. Standardizing the names of the files should facilitate the storage of compressed files, all having the extension .zip.

Each file name is 13 characters in length, which meets the requirements of ESRI®'s and MapInfo®'s limitations for file name sizes. All alphabetic characters are in lower case to maintain consistency.

First character: projection of file

g if projection is Geographic (latitude/longitude)
l if projection is Lambert conformal conic

Next three characters: primary geographic area of file

Table C.1
Spatial file naming conventions — geographic area of file

Geographic area/product	English file	French file
National/provincial	pr_	pr_
Federal electoral district	fed	cef
Economic region	er_	re_
Census division	cd_	dr_
Census subdivision	csd	sdr
Census agricultural region	car	rar
Census consolidated subdivision	ccs	sru
Census metropolitan area/census agglomeration	cma	rmr
Census tract	ct_	sr_
Urban area	ua_	ru_
Designated place	dpl	ld_
Dissemination area	da_	ad_
Dissemination block	db_	id_
Population ecumene	ecu	eco
Population ecumene national/provincial	epr	epr
Population ecumene census division	ecd	edr
Agricultural ecumene	eca	eca
Road network file	rnf	frr
Road network and geographic attribute file	rgf	frg
International boundary files (part of mainland U.S.A. and Alaska as well as Greenland)	int	int
Supporting hydrography (Great Lakes, St. Lawrence River, oceans, etc.)	hy_	hy_

Next three numbers: geographic code of coverage

Table C.2
Spatial file naming conventions — geographic code of coverage

National, provincial and territorial coverages	
000	Canada
010	Newfoundland and Labrador
011	Prince Edward Island
012	Nova Scotia
013	New Brunswick
024	Quebec
035	Ontario
046	Manitoba
047	Saskatchewan
048	Alberta
059	British Columbia
060	Yukon Territory
061	Northwest Territories
062	Nunavut

Next character: file type

- a if digital boundary file, detailed coverage for large-scale mapping excluding hydrographic coverage
- b if cartographic boundary file, detailed coverage for small-scale mapping
- c if detailed interior lakes hydrographic coverage (polygon)
- d if detailed interior rivers hydrographic coverage (line)
- e ecumene
- f if detailed interior lakes hydrographic coverage – closure lines (line)
- g cartographic boundary file, generalized for desktop mapping
- h additional cartographic international boundary coverage and hydrographic coverage of Great Lakes, St. Lawrence River and surrounding oceans
- l if detailed interior islands (part of hydrographic coverage [polygon])
- r road network files (RNFs)

Following two numbers: 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 2006 Census, the geographic reference date is January 1, 2006.

- 05 if geographic reference date is 2005
- 06 if geographic reference date is 2006

Next character: file format

a	ESRI® shapefile (.shp)
m	MapInfo® TAB file (.tab)

Final two characters: language

_e	English
_f	French

Example of the use of the file naming conventions

The 2006 Agriculture Ecumene Census Division Boundary File with English attributes in MapInfo® format: geca000e06m_e.zip.

Appendix D
Unique identifiers consistent with other geography products

Unique identifiers are codes that uniquely identify a geographic area within Canada. Data from different files (but for the same geographic area) can be joined or related based on the unique identifier. For example, the data in GeoSuite can be mapped on the Census Subdivision Boundary Files using the CSDUID as the field by which the two data sets can be related.

Table D.1
Unique identifiers consistent with other geography products

Geographic area	Unique identifier	Code composition
Province/Territory	PRUID	2-digit province code
Federal electoral district	FEDUID	(2-digit province code) and (3-digit federal electoral district code)
Census metropolitan area/Census agglomeration	CMAUID	3-digit census metropolitan area/census agglomeration code Where there are no census metropolitan areas/census agglomerations, this code is NULL.
Census tract	CTUID	(3-digit census metropolitan area/census agglomeration code) and (7-character census tract name) Where there are no census tracts, this code is NULL.
Urban area	UAUID	4-digit urban area code Where there are no urban areas, this code is NULL.
Economic region	ERUID	(2-digit province code) and (2-digit economic region code)
Census division	CDUID	(2-digit province code) and (2-digit census division code)
Census subdivision	CSDUID	(2-digit province code) and (2-digit census division code) and (3-digit census subdivision code)
Census agricultural region	CARUID	(2-digit province code) and (2-digit census agricultural region code)
Census consolidated subdivision	CCSUID	(2-digit province code) and (2-digit census division code) and (3-digit census consolidated subdivision code)
Designated place	DPLUID	(2-digit province code) and (4-digit designated place code) Where there are no designated places, this code is NULL.
Dissemination area	DAUID	(2-digit province code) and (2-digit census division code) and (4-digit dissemination area code)
Dissemination block	DBUID	(2-digit province code) and (2-digit census division code) and (4-digit dissemination area code) and (2-digit dissemination block code)