Catalogue no. 92-151

Geographic Attribute File, Reference Guide

Census year 2006

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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?

- The Geographic Attribute File is available for download from the Statistics Canada website.

- The Geographic Attribute File is once again available for the 2006 Census.

- Counts for two separate dwelling types are provided for the dissemination block. These two dwelling types are: total private dwellings and private dwellings occupied by usual residents. Dwelling counts were provided for total private dwellings in 2001.

New standard geographic areas

- The dissemination block (DB) is a new term for the 2006 Census. It was called 'block' in 2001.

- As of March 2003, census agglomerations (CAs) are no longer required to have an urban core population of 100,000 to be changed to the status of a census metropolitan area. Instead, a CA assumes the status of a census metropolitan area if it attains a total population of at least 100,000 of which 50,000 or more live in the urban core. This new rule effectively lowers the entry threshold.

- A major review of census subdivision (CSD) bilingual names was undertaken for the 2006 Census. This review results in six CSDs adopting bilingual names: Beaubassin East / Beaubassin-est (N.B.), Grand Falls / Grand-Sault (N.B.), French River / Rivière des Français (Ont.), Greater Sudbury / Grand Sudbury (Ont.), The Nation / La Nation (Ont.) and West Nipissing / Nipissing Ouest (Ont.). Furthermore, the number of CSD types increased from 46 in 2001 to 55 in 2006.

- For 2006, designated places (DPL) are required to respect census subdivision (CSD) boundaries. To ensure that DPLs created in 2001 or earlier respect 2006 CSD boundaries, DPLs straddling CSD boundaries were split to create independent DPLs. To maintain historical comparability and ease the transition into this new criterion, each new independent DPL keeps its existing name, with 'part' added to it, such as part A, part B, and is assigned its own unique code.

- The 2003 Representation Order of federal electoral districts (FED) replaces the 1996 Representation Order, increasing the number of FEDs from 301 to 308.

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1. About this guide

This reference guide provides an overview of the Geographic Attribute File product, including the general methodology used to create it.

The Overview section provides a summary of the data contents and the reference date of the product.

Section 3, Data quality, provides information for users to evaluate the suitability of the data for a particular application.

The record layout is available in Section 4, Technical specifications.

Supplementary information is provided in the appendices.

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2. Overview

Introduction

The Geographic Attribute File is a flat file containing all geographic data disseminated at the block level. This is based on the 2006 Census geographic reference information and includes population and dwelling count data for the dissemination block, which can be rolled up to all geographic levels. With the Geographic Attribute File, users can manipulate the data into multiple platforms and applications. From the block level the data can be derived so that users can obtain information for all geographic areas. The information available includes 2006 population counts, 2006 dwelling counts, land area, geographic codes, names and in some cases, types.

This version of the Geographic Attribute File contains data for the following standard census and geographic units:

- Canada (CAN)
- provinces / territories (PR)
- economic regions (ERs)
- census divisions (CDs)
- census consolidated subdivisions (CCSs)
- census subdivisions (CSDs)
- designated places (DPLs)
- federal electoral districts (FEDs) (based on the 2003 Representation Order)
- census metropolitan areas (CMAs) / census agglomerations (CAs) and non-census metropolitan areas / census agglomerations
- census tracts (CTs)
- urban areas (UAs)
- dissemination areas (DAs)
- dissemination blocks (DBs)

A detailed description of the two correspondence files can be found in the publication entitled *Correspondence Files, Reference Guide* in HTML format (Catalogue no. 92-156-GWE) or in PDF format (Catalogue no. 92-156-GIE). These guides are included with the Geographic Attribute File.

Reference date

Population and dwelling counts

The population and dwelling counts are generated from the 2006 Census of Population which was conducted on May 16, 2006.

Standard geographic areas

The geographic reference date for the 2006 Census is January 1, 2006. Names, boundaries and other attributes of geographic areas change frequently (for example, municipal amalgamations, annexations, name and status changes). Since the geographic framework is used for census data collection, the geographic reference date must be set sufficiently in advance of Census Day to permit all changes to be processed in time. Furthermore, notification of these changes is normally not received from the applicable federal and provincial authorities until after the changes have occurred. For these reasons, the census reports data according to the geographic areas that were in effect on January 1, 2006, provided the information on the changes was received by Statistics Canada by March 1, 2006. Since census data refer to conditions as they existed on Census Day (May 16, 2006), and the geographic framework is established according to the geographic areas in effect as of January 1, 2006, census data may be reported for geographic areas which have subsequently changed during this period.

3. 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 purpose and usage, as well as specific quality elements pertaining to lineage, positional accuracy, attribute accuracy, logical consistency and completeness. This information is provided to users for all spatial data products disseminated for the census.

The 2006 Geographic Attribute File is a flat ASCII table containing 2006 Census population and dwelling count data by geographic area. The 2006 population and dwelling counts, which include total private occupied dwelling counts and private dwellings occupied by usual residents counts and related data are provided for standard geographic.

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 or map products.

Geographic areas, their names and their types

Statistics Canada disseminates census data by standard geographic areas. These areas are either administrative or statistical.

Administrative areas are defined, with a few exceptions, by federal and provincial statutes. These include:

- Canada (CAN)
- provinces and territories (PR)
- federal electoral districts (FEDs) (2003 Representation Order)
- census divisions (CDs)
- census subdivisions (CSDs)
- designated places (DPLs)

Statistical areas are defined by Statistics Canada as part of the spatial frame used to collect and disseminate census data. These include:

- economic regions (ERs)
- census consolidated subdivisions (CCSs)
- census metropolitan areas (CMAs) and non-census metropolitan areas
- census agglomerations (CAs) and non-census agglomerations
- census tracts (CTs)
- urban areas (UAs)
- dissemination areas (DAs)
- dissemination blocks (DBs)

Geographic name data refer to the names given to standard geographic areas. Geographic names, however, are not given to all standard geographic areas. Named geographic areas include provinces and territories, economic regions, census divisions, census consolidated subdivisions, census subdivisions, census metropolitan areas and census agglomerations and non-census metropolitan areas/census agglomerations, designated places, urban areas and rural areas and federal electoral districts. Although census tracts do not have geographic names, they do have numeric names.

For provinces, territories and economic regions, the database contains both English and French names. The sources used for the names of the provinces and territories are the statutes of the respective provinces and territories.

The source of the geographic names of federal electoral districts is the 2003 Representation Order of the Chief Electoral Office, Elections Canada.

For those census divisions and census subdivisions that respect the administrative fabric within the provinces, the sources of the names (and census subdivision types) were the provincial governments. Statistics Canada receives input from the provincial governments concerning all boundary, name and type changes to their respective municipal structure. The census reflects the administrative structure within provinces that was in effect on the geographic reference date of January 1, 2006[1].

Where no provincial or territorial administrative areas exist, some census divisions and census subdivisions and their associated names (and census subdivision types) are created in consultation with provincial or territorial authorities. The names of Indian reserves and settlements are provided to Statistics Canada by Indian and Northern Affairs Canada.

For census consolidated subdivisions, names are derived from their component census subdivisions. The census consolidated subdivision's name coincides with the name of the largest census subdivision component in terms of land area.

The census metropolitan area or census agglomeration name is usually based on that of the largest urban centre(s) within the census metropolitan area or census agglomeration.

1. Due to operational constraints, Statistics Canada enforced a cut-off date of March 1, 2006 for the receipt of information concerning changes. This ensured that the changes would be instituted prior to Census Day, May 16, 2006.

Locality names are not considered part of the standard geographic hierarchy. The primary sources of Statistics Canada's locality names are:

- names reported by the census representatives during the past censuses;
- historical census subdivision records (name changes/dissolutions); and
- names approved by the provincial and territorial authorities [federally represented by the Geographic Names Data Base (GNDB)].

Information on the delineation criteria for geographic areas as well as the sources of geographic names is provided in the *2006 Census Dictionary* (Catalogue no. 92-566-XWE).

Codes and unique identifiers

A geographic code is a unique number used to identify and access standard geographic areas for the purpose of data storage, retrieval and display.

The system of geographic codes for provinces and territories, census divisions and census subdivisions is the Standard Geographical Classification (SGC). This classification system is a hierarchical coding system that provides a unique identifier for each level of this hierarchy. This coding system is developed by Statistics Canada and approved by provincial authorities.

For a census consolidated subdivision, the code is derived from the component census subdivisions. The census consolidated subdivision's code coincides with its largest census subdivision component in terms of land area.

The source of the geographic codes of federal electoral districts is the 2003 Representation Order of the Chief Electoral Office, Elections Canada.

All other codes are developed by Statistics Canada.

In the Geographic Attribute File, the unique identifier (uid) is a concatenation of geographic codes that uniquely identify standard geographic areas in Canada. For example, each dissemination area (DA) is assigned a four-digit code that is unique within a census division (CD). In order to uniquely identify each DA in Canada, the four-digit DA code must be preceded by the two-digit province code (PR) and the two-digit CD code. This concatenated code (PR + CD + DA) is called the DAuid.

The unique identifier is established by Statistics Canada.

2006 Census population and 2006 Census private dwellings

The population and dwelling count data were derived from the 2006 Census. Population counts are determined according to the "de jure" method. This means that people are enumerated at their usual place of residence, regardless of where they may have been on Census Day, May 16, 2006.

See the section on Completeness for details of the population and dwelling count data.

See Appendix B for notes on the quality of the 2006 Census data.

2006 Census land area

Land area is the area in square kilometres of the land-based portions of standard geographic areas.

The land area measurements are provided for the sole purpose of calculating population density.

Incompletely enumerated Indian reserve flag for 2006

On some Indian reserves and Indian settlements in the 2006 Census, enumeration was not permitted or was interrupted before it could be completed. Moreover, for some Indian reserves and Indian settlements, the quality of the enumeration was considered inadequate. These geographic areas (a total of 22) are called incompletely enumerated Indian reserves and Indian settlements.

Data for 2006 are therefore not available for the incompletely enumerated reserves and settlements, and are not included in tabulations. Data for geographic areas containing one or more of these reserves and settlements are therefore noted accordingly. While for higher-level geographic areas (Canada, provinces, census metropolitan areas and census agglomerations) the impact of the missing data is very small, the impact can be significant for smaller areas, where the affected reserves and settlements account for a higher proportion of the population.

Positional data

The Geographic Attribute File contains co-ordinates for the dissemination area (DA), weighted by population data. These representative points constitute a single x,y co-ordinate for each dissemination area. In the Geographic Attribute File the representative points are available in both Lambert projection and latitude/longitude.

Positional accuracy

Positional accuracy refers to the absolute and relative accuracy of the positions of geographic features. Absolute accuracy is the closeness of the co-ordinate 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 only positional data in the Geographic Attribute File are dissemination area representative points. All representative points are generated using ArcGIS® software (version 9) in conjunction with their respective cartographic boundary file. The most detailed dissemination hydrography in the cartographic boundary file is used. The points are initially calculated and stored based on the Lambert conformal conic projection; they are also transformed to latitude/longitude coordinates.

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).

Geographic names, types and codes were checked against the ORACLE Query base. All geographic entities relate to the dissemination block level. The relationships between all codes were checked by rolling up each geographic code and comparing them back to the ORACLE Query base. The following is a description of each of the relationships within the Geographic Attribute File:

Dissemination block	respect	Dissemination area
Dissemination block	respect	Designated place
Dissemination block	respect	Census subdivision
Dissemination block	respect	Census consolidated subdivision
Dissemination block	respect	Census division
Dissemination block	respect	Federal electoral district
Dissemination block	respect	Census tract
Dissemination block	respect	Economic region
Dissemination block	respect	Census tract
Dissemination block	respect	Census metropolitan area / Census agglomeration
Dissemination block	respect	Statistical Area Classification
Dissemination block	respect	Urban area
Dissemination block	respect	Province / Territory
Dissemination area	respect	Census subdivision
Dissemination area	respect	Census consolidated subdivision
Dissemination area	respect	Census division
Dissemination area	respect	Economic region
Dissemination area	respect	Census tract
Dissemination area	respect	Census metropolitan area / Census agglomeration
Dissemination area	respect	Province / Territory
Designated place	respect	Census subdivision
Designated place	respect	Census division
Designated place	respect	Province / Territory
Census subdivision	respect	Census consolidated subdivision
Census subdivision	respect	Census division
Census subdivision	respect	Economic region
Census subdivision	respect	Census metropolitan area / Census agglomeration
Census subdivision	respect	Province / Territory
Census consolidated subdivision	respect	Census division
Census consolidated subdivision	respect	Province / Territory
Census division	respect	Province / Territory
Economic region	respect	Province / Territory

Federal electoral district	respect	Province / Territory
Census tract	respect	Census metropolitan area / Census agglomeration
Census tract	respect	Province / Territory
Urban area	respect	Census metropolitan area / Census agglomeration

Numeric fields were exported and checked for accuracy. Data which are displayed as 'blank' in the Geographic Attribute File are exported as zero ('0'). This should be considered when using data from the population and dwelling count fields in the Geographic Attribute File.

Blank fields are displayed when population and dwelling count data are suppressed at the dissemination block level due to incompletely enumerated Indian reserves and Indian settlements or suppression rules. Population counts for Indian reserve refusal CSDs are not included in any of the census counts, therefore the zero (blank) population at the CSD, DA and block level is consistent with the rest of the counts on the ORACLE Query Base.

Name data were also exported and checked for accuracy.

Logical consistency

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

Internal consistency

Consistency between the data at the various geographic levels was checked. These included checks to ensure that lower level counts could be summed to obtain higher level counts.

2006 Census land area

Land area data for the standard geographic areas reflect the boundaries in effect on January 1, 2006 (the geographic reference date for the 2006 Census of Canada).

The data are derived from the Spatial Data Infrastructure (SDI), including selected water polygon layers. The Lambert conformal conic projection is transformed to the Albers equal-area conic projection, since the property of equal area is indispensable for calculating land area. The same projection parameters (two standard parallels, central meridian and latitude of projection origin) are used for each province or territory.

Land area is calculated using ArcGIS® software. There is a two-stage aggregation procedure. First, the data are calculated and stored in square kilometres at the basic block (BB) level to eight decimal places, and then aggregated to the dissemination block (DB) level and rounded to four decimal places. Second, the DB data are individually aggregated to each higher level standard geographic area.

Users should note that even when the boundaries of standard geographic areas did not change between the 2001 and 2006 Censuses, the land areas may differ due to geometry shifts. The shifts are caused by a change in the underlying database architecture and by improvements in the absolute positional accuracy of some of the roads.

Population and dwelling counts data

The 2006 Population and Dwelling Counts were tested to ensure that they could be summed up to a common higher geographic level. There were no errors found.

A detailed description of intercensal changes made to the geographic areas can be found in the publication entitled *Standard Geographical Classification, 2006, Volume I* (Catalogue no. 12-571-XIE, XWE).

Hierarchy of geographic areas

The Geographic Attribute File table shows urban areas as parts of provinces. There were five exceptions for the 2006 Census where urban areas cross provincial boundaries. These are:

- Campbellton (New Brunswick/Quebec)
- Hawkesbury (Quebec/Ontario)
- Ottawa - Gatineau (Quebec/Ontario)
- Flin Flon (Manitoba/Saskatchewan)
- Lloydminster (Saskatchewan/Alberta)

The urban area data are shown correctly in the Geographic Attribute File. For example, if a list of the urban areas in Manitoba is queried, only the Manitoba portion of the population of Flin Flon will be shown on that list. (If the selection of urban areas for a province is done by code then both the province code and the secondary province code should be considered.)

The Geographic Attribute File table hierarchy shows census metropolitan areas and census agglomerations as parts of provinces. There were four exceptions for the 2006 Census where census metropolitan areas and census agglomerations cross provincial boundaries. These are:

- Campbellton (New Brunswick/Quebec)
- Hawkesbury (Quebec/Ontario)
- Ottawa - Gatineau (Quebec/Ontario)
- Lloydminster (Saskatchewan/Alberta)

The census metropolitan area and census agglomeration data are shown correctly in the Geographic Attribute File. For example, if a list of the census metropolitan areas and census agglomerations in New Brunswick is queried, only the New Brunswick portion of the population of Campbellton will be shown on that list. (If the selection of census metropolitan areas and census agglomerations for a province is done by code then both the province code and the secondary province code should be considered.)

Consistency with other products

The population and dwelling counts in the Geographic Attribute File are consistent with those shown in the publication *A National Overview* (Catalogue no. 92-200-XPB). They are also consistent with those which have been disseminated by GeoSuite.

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.

Appendix C indicates the number of geographic units by province and territory. These numbers were checked on the Geographic Attribute File table. The Geographic Attribute File contains the correct number of geographic areas.

The completeness of the specific data in GeoSuite is provided below.

Population and dwelling counts

The 2006 Census population counts for a particular area represent the number of Canadians whose usual place of residence is in that area, regardless of where they happened to be on Census Day. Also included are any Canadians staying in a dwelling in that area on Census Day and having no usual place of residence elsewhere in Canada, as well as those considered "non-permanent residents". In most areas, there is little difference between the number of usual residents and the number of people staying in the area on Census Day. For certain places, however, such as tourist or vacation areas, or those including large work camps, the number of people staying in the area at any particular time could significantly exceed the number of usual residents shown here. The population counts include Canadians living in other countries, but do not include foreign residents living in Canada (the "foreign residents" category does not include "non-permanent residents"). Given these differences, users are advised not to interpret population counts as being the number of people living in the reported dwellings.

For the 2006 Census, a private dwelling is defined as:

> A set of living quarters designed for or converted for human habitation in which a person or group of persons reside or could reside. In addition, a private dwelling must have a source of heat or power and must be an enclosed space that provides shelter from the elements, as evidenced by complete and enclosed walls and roof and by doors and windows that provide protection from wind, rain and snow.

Ordinary private dwellings are subdivided into two categories: total private dwellings and private dwellings occupied by usual residents.

Some Indian settlements and Indian reserves were incompletely enumerated during the 2006 Census. These reserves and settlements are identified in the Geographic Attribute File with a 2006 Indian reserve refusal flag.

The 2006 population and dwelling counts of any geographic area with a 2006 incompletely enumerated Indian reserve refusal flag appears as a blank.

Because of the missing data, users are cautioned that for the affected geographic areas, comparisons (e.g., percentage change) between 2001 and 2006 are not exact. While for higher level geographic areas (Canada, provinces, census metropolitan areas and census agglomerations) the impact of the missing data is very small, the impact can be significant for smaller areas where the affected reserves and settlements account for a higher proportion of the population.

Census subdivision type

Appendix D indicates the number of census subdivision types by province and territory. These numbers were checked on the Geographic Attribute File. The Geographic Attribute File contains the correct number of the census subdivision types.

4. Technical specifications

System requirements and record layout

The Geographic Attribute File requires at least 1 MB of RAM for storage.

The following record layout provides a list of the 43 fields included in the Geographic Attribute File. The record layout is divided as follows: field name, field type (i.e., numeric or alphanumeric), field position and description.

Table 4.1 Geographic Attribute File - record layout

Attribute name	Description	Field type	Size	Position
DBuid	Uniquely identifies a dissemination block (composed of the 2-digit province/territory code, the 2-digit census division code, the 4-digit dissemination area code, and the 2-digit dissemination block code).	Char	10	1
DBpop2006	The 2006 Census dissemination block population	Num	8	11
DBtdwell2006	The 2006 Census dissemination block total private dwellings	Num	8	19
DBurdwell2006	The 2006 Census private dwellings occupied by usual residents	Num	8	27
DBarea	The 2006 Census dissemination block land area.	Num	13.4	35
DB_ir2006	The 2001 Census Indian reserve refusal flag	Char	1	48
DAuid	Uniquely identifies a dissemination area (composed of the 2-digit province/territory code, the 2-digit census division code, and the 4-digit dissemination area code).	Char	8	49
DAlamx	The dissemination area representative point x coordinate in Lambert format.	Num	18.8	57
DAlamy	The dissemination area representative point y coordinate in Lambert format.	Num	18.8	75
DAlat	The latitude in decimal degrees of the dissemination area representative point.	Num	10.6	93
DAlong	The longitude in decimal degrees of the dissemination area representative point.	Num	12.6	103
PRuid	Uniquely identifies a province or territory.	Char	2	115
PRname	The province or territory name.	Char	51	117
PRename	The province or territory name in English.	Char	25	168
PRfname	The province or territory name in French.	Char	25	193
PReabbr	The English abbreviation of the province or territory name.	Char	10	218
PRfabbr	The French abbreviation of the province or territory name.	Char	10	228

Table 4.1 Geographic Attribute File - record layout (continued)

Attribute name	Description	Field type	Size	Position
FEDuid	Uniquely identifies a federal electoral district (composed of the 2-digit province/territory code and the 3-digit federal electoral district code).	Char	5	238
FEDname	Federal electoral district name.	Char	83	243
ERuid	Uniquely identifies an economic region (composed of the 2-digit province/territory code and the 2-digit economic region code).	Char	4	326
ERname	The economic region name.	Char	87	330
CDuid	Uniquely identifies a census division (composed of the 2-digit province/territory code and the 2-digit census division code).	Char	4	417
CDname	The census division name.	Char	31	421
CDtype	The type of census division (see Domain).	Char	3	452
CSDuid	Uniquely identifies a census subdivision (composed of 2-digit province/territory code, 2-digit census division code and 3-digit census subdivision code).	Char	7	455
CSDname	The name provided by federal or provincial/territorial authorities.	Char	51	462
CSDtype	Census subdivisions are classified into 55 types according to designations adopted by provincial/territorial or federal authorities (see Appendix D).	Char	3	513
SACtype	The Statistical Area Classification groups census subdivisions according to whether they are a component of a census metropolitan area, a census agglomeration, or a census metropolitan area or a census agglomeration influenced zone (see Domain in this section).	Char	1	516
SACcode	The Statistical Area Classification code.	Char	3	517
CCSuid	Uniquely identifies a census consolidated subdivision (composed of the 2-digit province/territory code and the 2-digit census division code and the 3 digit census consolidated subdivision code).	Char	7	520
CCSname	The name of the census consolidated subdivision.	Char	51	527
DPLuid	Uniquely identifies a designated place (composed of the 2-digit province/territory code and the 4-digit designated place code).	Char	6	578
DPLname	Designated place name.	Char	80	584
DPLtype	Designated place type.	Char	3	664
CMAuid	Uniquely identifies the provincial parts of a census metropolitan area or census agglomeration.	Char	5	667

Table 4.1 Geographic Attribute File - record layout (continued)

Attribute name	Description	Field type	Size	Position
CMAname	The name of the census metropolitan area or census agglomeration.	Char	83	672
CMAtype	A one-character field identifying whether the unit is a census metropolitan area or a census agglomeration (see Domain).	Char	1	755
CTuid	Uniquely identifies a census tract (composed of the 3-digit census metropolitan area/census agglomeration code followed by the 7-character CTNAME).	Char	10.2	756
CTcode	The census tract code.	Char	4	766
CTname	The name of the census tract.	Char	7.2	770
UAuid	Uniquely identifies the provincial parts of each urban area (composed of the 2-digit province/territory code and the 4-digit urban area code).	Char	6	777
UAname	Urban area name.	Char	77	783

Domain

CDtype

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

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

SACtype:

The Statistical Area Classification groups census subdivisions according to whether they are a component of a census metropolitan area, a census agglomeration, a census **m**etropolitan area and census agglomeration **i**nfluenced **z**one (strong MIZ, moderate MIZ, weak MIZ or no MIZ), or the territories (Yukon Territory, Northwest Territories and Nunavut). The Statistical Area Classification is used for data dissemination purposes.

The values for Statistical Area Classification are:

1 Census subdivision within census metropolitan area
2 Census subdivision within census agglomeration with at least one census tract
3 Census subdivision within census agglomeration having no census tracts
4 Census subdivision outside of census metropolitan area/census agglomeration area having strong metropolitan influence
5 Census subdivision outside of census metropolitan area/census agglomeration area having moderate metropolitan influence
6 Census subdivision outside of census metropolitan area/census agglomeration area having weak metropolitan influence
7 Census subdivision outside of census metropolitan area/census agglomeration area having no metropolitan influence
8 Census subdivision within a territory

CMAtype:

The types associated with the census metropolitan areas/census agglomerations are: census metropolitan area is a B, census agglomeration with no census tracts, D and census agglomeration with census tracts is K.

Appendix A: Glossary

Adjusted counts
'Adjusted counts' refer to previous census population and dwelling counts that were adjusted (i.e., recompiled) 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.

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 census metropolitan area must have a total population of at least 100,000 of which 50,000 or more must live in the urban core. A census agglomeration must have an urban core population of at least 10,000. To be included in the census metropolitan area or census agglomeration, 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 census metropolitan area, it is retained as a census metropolitan area 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 census metropolitan area or census agglomeration that are not contiguous to the urban core are called the urban fringe. Rural areas in the census metropolitan area or census agglomeration 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 census metropolitan areas 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 and census agglomerations. Census subdivisions outside census metropolitan areas and census agglomerations are assigned to one of four categories according to the degree of influence (strong, moderate, weak or no influence) that the census metropolitan areas and/or census agglomerations 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 census metropolitan areas and census agglomerations. CSDs with the same degree of influence tend to be clustered. They form zones around census metropolitan areas and census agglomerations that progress through the categories from 'strong' to 'no' influence as distance from the census metropolitan areas and census agglomerations 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 or census agglomeration has been subdivided into census tracts, the census tracts are maintained even if the urban 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) or planar (such as Universal Transverse Mercator).

Cartographic boundary files, digital boundary files, representative points and road network files are disseminated in latitude/longitude coordinates.

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 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 and census agglomerations, as well as population living in rural areas outside census metropolitan areas and census agglomerations.

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.

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, a census **m**etropolitan area and census agglomeration **i**nfluenced **z**one (strong MIZ, moderate MIZ, weak MIZ or no MIZ), or the territories (Yukon Territory, Northwest Territories and Nunavut). The SAC is used for data dissemination purposes.

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 B: Data quality, sampling and weighting, confidentiality and random rounding

General

The 2006 Census was a large and complex undertaking and, while considerable effort was taken to ensure high standards throughout all collection and processing operations, the resulting estimates are inevitably subject to a certain degree of error. Users of census data should be aware that such error exists, and should have some appreciation of its main components, so that they can assess the usefulness of census data for their purposes and the risks involved in basing conclusions or decisions on these data.

Errors can arise at virtually every stage of the census process, from the preparation of materials through data processing, including the listing of dwellings and the collection of data. Some errors occur at random, and when the individual responses are aggregated for a sufficiently large group, such errors tend to cancel out. For errors of this nature, the larger the group, the more accurate the corresponding estimate. It is for this reason that users are advised to be cautious when using small area estimates. There are some errors, however, which might occur more systematically, and which result in "biased" estimates. Because the bias from such errors is persistent no matter how large the group for which responses are aggregated, and because bias is particularly difficult to measure, systematic errors are a more serious problem for most data users than the random errors referred to previously.

For census data in general, the principal types of error are as follows:

- coverage errors, which occur when dwellings or individuals are missed, incorrectly enumerated or counted more than once

- non-response errors, which result when responses cannot be obtained from a certain number of households and/or individuals, because of extended absence or some other reason or when responses cannot be obtained from a certain number of questions in a complete questionnaire

- response errors, which occur when the respondent, or sometimes the census representative, misunderstands a census question, and records an incorrect response or simply uses the wrong response box

- processing errors, which can occur at various steps including coding, when "write-in" responses are transformed into numerical codes; data capture, when responses are transferred from the census questionnaire in an electronic format, by optical character recognition methods or key-entry operators; and imputation, when a "valid", but not necessarily correct, response is inserted into a record by the computer to replace missing or "invalid" data ("valid" and "invalid" referring to whether or not the response is consistent with other information on the record)

- sampling errors, which apply only to the supplementary questions on the "long form" asked of a one-fifth sample of households, and which arise from the fact that the responses to these questions, when weighted up to represent the whole population, inevitably differ somewhat from the responses which would have been obtained if these questions had been asked of all households.

The above types of error each have both random and systematic components. Usually, however, the systematic component of sampling error is very small in relation to its random component. For the other non-sampling errors, both random and systematic components may be significant.

Coverage errors

Coverage errors affect the accuracy of the census counts, that is, the sizes of the various census universes: population, families, households and dwellings. While steps have been taken to correct certain identifiable errors, the final counts are still subject to some degree of error because persons or dwellings have been missed, incorrectly enumerated in the census or counted more than once.

Missed dwellings or persons result in undercoverage. Dwellings can be missed because of the misunderstanding of collection unit (CU) boundaries, or because either they do not look like dwellings or they appear uninhabitable. Persons can be missed when their dwelling is missed or is classified as vacant, or because the respondent misinterprets the instructions on whom to include on the questionnaire. Some individuals may be missed because they have no usual residence and did not spend census night in a dwelling.

Dwellings or persons incorrectly enumerated or double-counted result in overcoverage. Overcoverage of dwellings can occur when structures unfit for habitation are listed as dwellings (incorrectly enumerated), when there is a certain ambiguity regarding the collection unit (CU) boundaries or when units (for example, rooms) are listed separately instead of being treated as part of one dwelling (double-counted). Persons can be counted more than once because their dwelling is double counted or because the guidelines on whom to include on the questionnaire have been misunderstood. Occasionally, someone who is not in the census population universe, such as a foreign resident or a fictitious person, may, incorrectly, be enumerated in the census. On average, overcoverage is less likely to occur than undercoverage and, as a result, counts of dwellings and persons are likely to be slightly underestimated.

For the 2006 Census, three studies are used to measure coverage error. In the Dwelling Classification Study, dwellings listed as vacant were revisited to verify that they were vacant on Census Day, and dwellings whose households were listed as non-respondent were revisited to determine the number of usual residents and their characteristics. Adjustments have been made to the final census counts to account for households and persons missed because their dwelling was incorrectly classified as vacant. The census counts may also have been adjusted for dwellings whose households were classified as non-respondent. Despite these adjustments, the final counts still may be subject to some undercoverage. Undercoverage tends to be higher for certain segments of the population, such as young adults (especially young adult males) and recent immigrants. The Reverse Record Check Study is used to measure the residual undercoverage for Canada, and each province and territory. The Overcoverage Study is designed to investigate overcoverage errors. The results of the Reverse Record Check and the Overcoverage Study, when taken together, furnish an estimate of net undercoverage.

Other non-sampling errors

While coverage errors affect the number of units in the various census universes, other errors affect the characteristics of those units.

Sometimes it is not possible to obtain a complete response from a household, even though the dwelling was identified as occupied and a questionnaire was mailed out or dropped off. The household members may have been away throughout the census period or, in rare instances, the householder may have refused to complete the form. More frequently, the questionnaire is returned but no response is provided to certain questions. Effort is devoted to ensure as complete a questionnaire as possible. Once the questionnaires are captured, edit analysis are performed to detect significant cases of partial non-response and follow-up interviews are attempted to get the missing information. Despite this, at the end of the collection stage, a small number of responses are still missing, i.e., non-response errors. Although missing responses are eliminated during processing by replacing each one of them by the corresponding response for a "similar" record, there remain some potential imputation errors. This is particularly serious if the non-respondents differ in some respects from the respondents; this procedure will then introduce a non-response bias.

Even when a response is obtained, it may not be entirely accurate. The respondent may have misinterpreted the question or may have guessed the answer, especially when answering on behalf of another, possibly absent, household member. The respondent may also have entered the answer in the wrong place on the questionnaire. Such errors are referred to as response errors. While response errors usually arise from inaccurate information provided by respondents, they can also result from mistakes by the census representative who completed certain parts of the questionnaire, such as the structural type of dwelling, or who followed up to obtain a missing response.

Some of the census questions require a written response. During processing, these "write-in" entries are given a numeric code. Coding errors can occur when the written response is ambiguous, incomplete, and difficult to read or when the code list is extensive (e.g., major field of study, place of work). A formal quality control (QC) operation is used to detect, rectify and reduce coding errors. Within each work unit, a sample of responses is independently coded a second time. The resolution of discrepancies between the first and second codings determines whether recoding of the work unit is necessary. Census coding is now entirely automated, resulting in a reduction of coding errors.

The information on the questionnaires is scanned and captured into a computer file. To monitor and to ensure that the number of data capture errors are within tolerable limits, a sample of fields are sampled and reprocessed. Analysis of the two captures is done. Unsatisfactory work is identified, corrected and appropriate feedback is done to the system in order to minimize their occurrence.

Once captured, the data are edited where they undergo a series of computer checks to identify missing or inconsistent responses. These are replaced during the imputation stage of processing where either a response consistent with the other respondents' data is inferred or a response from a similar donor is substituted. Imputation ensures a complete database where the data correspond to the census counts and facilitate multivariate analyses. Although errors may have been introduced during imputation, the methods used have been rigorously tested to minimize systematic errors.

Various studies are being carried out to evaluate the quality of the responses obtained in the 2006 Census. For each question, non-response rates and edit failure rates have been calculated. These can be useful in identifying the potential for non-response errors and other types of errors. Also, tabulations from the 2006 Census have been or will be compared with corresponding estimates from previous censuses, from sample surveys (such as the Labour Force Survey) and from various administrative records (such as birth registrations and municipal assessment records). Such comparisons can indicate potential quality problems or at least discrepancies between the sources.

In addition to these aggregate-level comparisons, there are some micro-match studies in progress, in which census responses are compared with another source of information at the individual record level. For certain "stable" characteristics (such as age, sex, mother tongue and place of birth), the responses obtained in the 2006 Census, for a sample of individuals, are being compared with those for the same individuals in the 2001 Census.

Sampling errors

Estimates obtained by weighting up responses collected on a sample basis are subject to error due to the fact that the distribution of characteristics within the sample will not usually be identical to the distribution of characteristics within the population from which the sample has been selected.

The potential error introduced by sampling will vary according to the relative scarcity of the characteristics in the population. For large cell values, the potential error due to sampling, as a proportion of the cell value, will be relatively small. For small cell values, this potential error, as a proportion of the cell value, will be relatively large.

The potential error due to sampling is usually expressed in terms of the so-called "standard error". This is the square root of the average, taken over all possible samples of the same size and design, of the squared deviation of the sample estimate from the value for the total population.

The following table provides approximate measures of the standard error due to sampling for census long form (2B) data. These measures are intended as a general guide only.

Table B.1 Approximate standard error due to sampling for 2006 Census sample data

Cell value	Approximate standard error
50 or less	15
100	20
200	30
500	45
1,000	65
2,000	90
5,000	140
10,000	200
20,000	280
50,000	450
100,000	630
500,000	1,400

Users wishing to determine the approximate error due to sampling for any given cell of data, based upon the 20% sample, should choose the standard error value corresponding to the cell value that is closest to the value of the given cell in the census tabulation. When using the obtained standard error value, the user, in general, can be reasonably certain that, for the enumerated population, the true value (discounting all forms of error other than sampling) lies within plus or minus three times the standard error (e.g., for a cell value of 1,000, the range would be 1,000 ± [3 x 65] or 1,000 ± 195).

The standard errors given in the table above will not apply to population, household, dwelling or family counts for the geographic area under consideration (see Sampling and weighting below). The effect of sampling for these cells can be determined by a comparison with a corresponding 100% data product.

The effect of the particular sample design and weighting procedure used in the 2006 Census will vary, however, from one characteristic to another and from one geographic area to another. The standard error values in the table may, therefore, understate or overstate the error due to sampling.

Sampling and weighting

The 2006 Census data were collected either from 100% of the households or on a sample basis with the data weighted to provide estimates for the entire population. The long form questionnaire (2B) information was collected on a 20% random sample basis of the households and weighted to compensate for sampling. All table headings are noted accordingly. Note that on Indian reserves and in remote areas all data were collected on a 100% basis.

For any given geographic area, the weighted population, household, dwelling or family total or subtotal may differ from that shown in reports containing data collected on a 100% basis. Such variations are due to sampling and to the fact that, unlike sample data, 100% data do not exclude institutional residents.

Confidentiality and random rounding

The figures shown in the tables have been subjected to a confidentiality procedure known as random rounding to prevent the possibility of associating statistical data with any identifiable individual. Under this method, all figures, including totals and margins, are randomly rounded either up or down to a multiple of "5", and in some cases "10". While providing strong protection against disclosure, this technique does not add significant error to the census data. The user should be aware that totals and margins are rounded independently of the cell data so that some differences between these and the sum of rounded cell data may exist. Also, minor differences can be expected in corresponding totals and cell values among various census tabulations. Similarly, percentages, which are calculated on rounded figures, do not necessarily add up to 100%. Order statistics (median, quartiles, percentiles, etc.) and measures of dispersion such as the standard error are computed in the usual manner. When a statistic is defined as the quotient of two numbers (which is the case for averages, percentages, and proportions), the two numbers are rounded before the division is performed. For income, owner’s payments, value of dwelling, hours worked, weeks worked and age, the sum is defined as the product of the average and the rounded weighted frequency. Otherwise, it is the weighted sum that is rounded. It should also be noted that small cell counts may suffer a significant distortion as a result of random rounding. Individual data cells containing small numbers may lose their precision as a result. Also, a statistic is suppressed if the number of actual records used in the calculation is less than 4 or if the

sum of the weight of these records is less than 10. In addition, for values expressed in dollar units, the statistic is suppressed if the range of the values is too narrow or if all values are less than, in absolute value, a specified threshold. Finally, again for values expressed in dollar units, the statistic is suppressed if there is a dollar value too large compared to all the others.

Users should be aware of possible data distortions when they are aggregating these rounded data. Imprecisions as a result of rounding tend to cancel each other out when data cells are re-aggregated. However, users can minimize these distortions by using, whenever possible, the appropriate subtotals when aggregating.

For those requiring maximum precision, the option exists to use custom tabulations. With custom products, aggregation is done using individual census database records. Random rounding occurs only after the data cells have been aggregated, thus minimizing any distortion.

In addition to random rounding, area suppression has been adopted to further protect the confidentiality of individual responses.

Area suppression is the deletion of all characteristic data for geographic areas with populations below a specified size. The extent to which data are suppressed depends upon the following factors:

- if the data are tabulated from the 100% database, they are suppressed if the total population in the area is less than 40

- if the data are tabulated from the 20% sample database, they are suppressed if the total non-institutional population in the area from either the 100% or 20% database is less than 40.

There are some exceptions to these rules:

- income distributions and related statistics are suppressed if the population in the area, excluding institutional residents, is less than 250 from either the 100% or the 20% database, or if the number of private households is less than 40 from the 20% database

- place-of-work distributions and related statistics are suppressed if the total number of employed persons in the area is less than 40, according to the sample database. If the data also include an income distribution, the threshold is raised to 250, again according to the sample database

- tabulations covering both place of work and place of residence along with related statistics are suppressed, if the total number of employed persons in the area is less than 40 according to the sample database, or if the area's total population, excluding institutional residents, according to either the 100% or the sample database, is less than 40. If the tabulations also include an income distribution, the threshold is raised to 250 in all cases and the tabulations are suppressed if the number of private dwellings in the place of residence area is less than 40
- same-sex couples' distributions and related statistics are suppressed if the population in private households in the area is less than 5,000, according to the 20% sample database

- if the data are tabulated from the 100% database and refer to six-character postal codes or to groups of either blocks or block-faces, they are suppressed if the total population in the area is less than 100

- if the data are tabulated from the 20% sample database and refer to six-character postal codes or to groups of either blocks or block-faces, they are suppressed if the total non-institutional population in the area from either the 100% or 20% database is less than 100

- if the data refer to groups of either blocks or block-faces, and cover place of work, they are suppressed if the total number of employed persons in the area is less than 100, according to the sample database

- if the data refer to groups of either blocks or block-faces, and cover both place of work and place of residence, they are suppressed if the total number of employed persons in the area is less than 100, according to the sample database, or if the area's total population, excluding institutional residents, according to either 100% or the sample database, is less than 100.

In all cases, suppressed data are included in the appropriate higher aggregate subtotals and totals.

The suppression technique is being implemented for all products involving subprovincial data (i.e., Profile series, basic cross-tabulations, semi-custom and custom data products) collected on a 100% or 20% sample basis.

For further information on the quality of census data, contact the Social Survey Methods Division at Statistics Canada, Ottawa, Ontario, Canada K1A 0T6, or by calling 613-951-4783.

Appendix C: Geographic units by province and territory, 2006 Census

Table C.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 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.

Appendix D: Census subdivision types by province and territory, 2006 Census

Table D.1 Census subdivision types by province and territory, 2006 Census

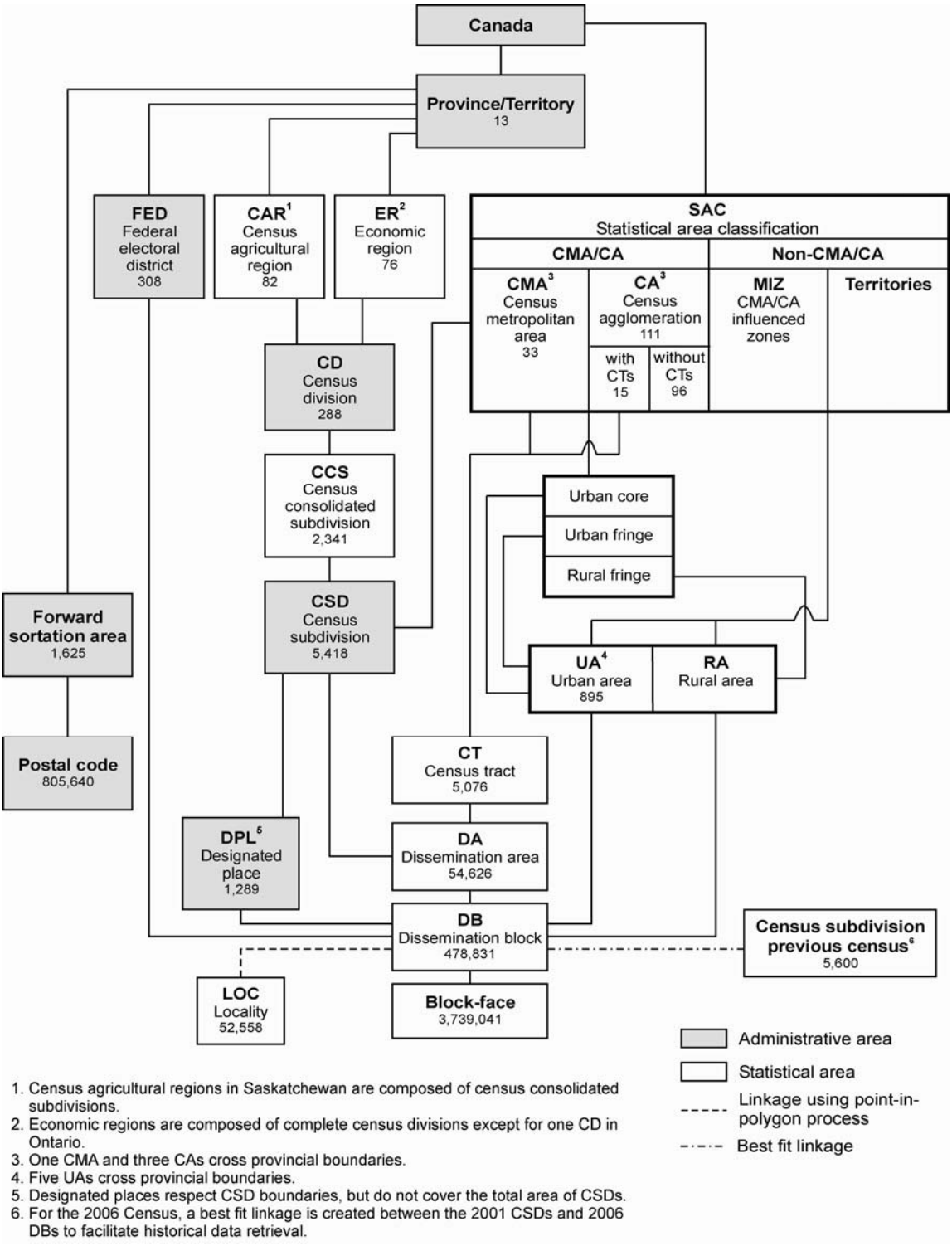
Census subdivision type		Total	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.
		5,418	377	113	100	276	1,294	585	297	984	453	836	35	37	31
C	City / Cité	7	...	...	...	3	...	4	...	...	...	...	...	...	...
CC	Chartered community	3	...	...	...	...	...	...	...	...	...	...	...	3	...
CÉ	Cité	1	...	...	...	...	1	...	...	...	...	...	...	...	...
CG	Community government	4	...	...	...	...	...	...	...	...	...	...	...	4	...
CM	County (municipality)	28	...	...	...	...	...	...	...	...	28	...	...	...	...
CN	Crown colony / Colonie de la couronne	1	...	...	...	...	...	...	...	1	...	...	...	...	...
COM	Community	33	...	33	...	...	...	...	...	...	...	...	...	...	...
CT	Canton (municipalité de)	50	...	...	...	...	50	...	...	...	...	...	...	...	...
CU	Cantons unis (municipalité de)	2	...	...	...	...	2	...	...	...	...	...	...	...	...
CY	City	146	3	2	...	5	...	46	9	14	16	48	1	1	1
DM	District municipality	50	...	...	...	...	...	...	...	...	...	50	...	...	...
HAM	Hamlet	35	...	...	...	...	...	...	...	...	...	...	2	9	24
ID	Improvement district	7	...	...	...	...	...	...	...	...	7	...	...	...	...
IGD	Indian government district	2	...	...	...	...	...	...	...	...	...	2	...	...	...
IM	Island municipality	1	...	...	...	...	...	...	...	...	...	1	...	...	...
IRI	Indian reserve / Réserve indienne	1,095	2	4	26	20	30	148	82	177	93	507	4	2	...
LGD	Local government district	2	...	...	...	...	...	...	2	...	...	...	...	...	...
LOT	Township and royalty	67	...	67	...	...	...	...	...	...	...	...	...	...	...
M	Municipality / Municipalité	3	...	...	...	...	...	3	...	...	...	...	...	...	...
MD	Municipal district	49	...	...	12	...	...	...	...	...	37	...	...	...	...
MÉ	Municipalité	578	...	...	...	...	578	...	...	...	...	...	...	...	...
MU	Municipality	52	...	...	...	...	...	52	...	...	...	...	...	...	...
NH	Northern hamlet	9	...	...	...	...	...	...	...	9	...	...	...	...	...
NL	Nisga'a land	1	...	...	...	...	...	...	...	...	...	1	...	...	...
NO	Unorganized / Non organisé	133	...	...	...	...	97	17	10	2	...	...	2	2	3
NV	Northern village	13	...	...	...	...	...	...	...	13	...	...	...	...	...
NVL	Nisga'a village	5	...	...	...	...	...	...	...	...	...	5	...	...	...
P	Parish / Paroisse (municipalité de)	152	...	...	...	152	...	...	...	...	...	...	...	...	...
PE	Paroisse (municipalité de)	215	...	...	...	...	215	...	...	...	...	...	...	...	...
RCR	Rural community / Communauté rurale	1	...	...	...	1	...	...	...	...	...	...	...	...	...

Table D.1 Census subdivision types by province and territory, 2006 Census (continued)

Census subdivision type		Total	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.
RDA	Regional district electoral area	162	...	...	...	...	...	...	...	...	...	162	...	...	...
RG	Region	1	1	...	...	...	...	...	...	...	...	...	...	...	...
RGM	Regional municipality	4	...	...	3	...	...	...	...	...	1	...	...	...	...
RM	Rural municipality	414	...	...	...	...	...	...	118	296	...	...	...	...	...
RV	Resort village	40	...	...	...	...	...	...	...	40	...	...	...	...	...
SA	Special area	3	...	...	...	...	...	...	...	...	3	...	...	...	...
SC	Subdivision of county municipality / Subdivision municipalité de comté	28	...	...	28	...	...	...	...	...	...	...	...	...	...
SÉ	Settlement / Établissement	13	...	...	...	...	...	...	...	...	...	...	13	...	...
S-É	Indian settlement / Établissement indien	28	...	...	...	...	6	5	4	1	4	3	5	...	...
SET	Settlement	14	...	...	...	...	...	...	...	...	...	...	...	11	3
SM	Specialized municipality	2	...	...	...	...	...	...	...	...	2	...	...	...	...
SNO	Subdivision of unorganized / Subdivision non organisée	92	92	...	...	...	...	...	...	...	...	...	...	...	...
SV	Summer village	51	...	...	...	...	...	...	...	...	51	...	...	...	...
T	Town	751	279	7	31	15	...	88	52	147	110	15	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	210	...	...	...	...	...	210	...	...	...	...	...	...	...
TV	Town / Ville	12	...	...	...	11	...	1	...	...	...	...	...	...	...
V	Ville	220	...	...	...	...	220	...	...	...	...	...	...	...	...
VC	Village cri	8	...	...	...	...	8	...	...	...	...	...	...	...	...
VK	Village naskapi	1	...	...	...	...	1	...	...	...	...	...	...	...	...
VL	Village	583	...	...	...	69	51	11	20	284	101	42	4	1	...
VN	Village nordique	14	...	...	...	...	14	...	...	...	...	...	...	...	...

… not applicable

Appendix E: Hierarchy of standard geographic units for dissemination, 2006 Census



1. Census agricultural regions in Saskatchewan are composed of census consolidated subdivisions.
2. Economic regions are composed of complete census divisions except for one CD in Ontario.
3. One CMA and three CAs cross provincial boundaries.
4. Five UAs cross provincial boundaries.
5. Designated places respect CSD boundaries, but do not cover the total area of CSDs.
6. For the 2006 Census, a best fit linkage is created between the 2001 CSDs and 2006 DBs to facilitate historical data retrieval.

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What's new?

- The Geographic Attribute File is available for download from the Statistics Canada website.

- The Geographic Attribute File is once again available for the 2006 Census.

- Counts for two separate dwelling types are provided for the dissemination block. These two dwelling types are: total private dwellings and private dwellings occupied by usual residents. Dwelling counts were provided for total private dwellings in 2001.

New standard geographic areas

- The dissemination block (DB) is a new term for the 2006 Census. It was called 'block' in 2001.

- As of March 2003, census agglomerations (CAs) are no longer required to have an urban core population of 100,000 to be changed to the status of a census metropolitan area. Instead, a CA assumes the status of a census metropolitan area if it attains a total population of at least 100,000 of which 50,000 or more live in the urban core. This new rule effectively lowers the entry threshold.

- A major review of census subdivision (CSD) bilingual names was undertaken for the 2006 Census. This review results in six CSDs adopting bilingual names: Beaubassin East / Beaubassin-est (N.B.), Grand Falls / Grand-Sault (N.B.), French River / Rivière des Français (Ont.), Greater Sudbury / Grand Sudbury (Ont.), The Nation / La Nation (Ont.) and West Nipissing / Nipissing Ouest (Ont.). Furthermore, the number of CSD types increased from 46 in 2001 to 55 in 2006.

- For 2006, designated places (DPL) are required to respect census subdivision (CSD) boundaries. To ensure that DPLs created in 2001 or earlier respect 2006 CSD boundaries, DPLs straddling CSD boundaries were split to create independent DPLs. To maintain historical comparability and ease the transition into this new criterion, each new independent DPL keeps its existing name, with 'part' added to it, such as part A, part B, and is assigned its own unique code.

- The 2003 Representation Order of federal electoral districts (FED) replaces the 1996 Representation Order, increasing the number of FEDs from 301 to 308.

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End-use licence agreement for Statistics Canada's Geographic Attribute File 41

1. About this guide

This reference guide provides an overview of the Geographic Attribute File product, including the general methodology used to create it.

The Overview section provides a summary of the data contents and the reference date of the product.

Section 3, Data quality, provides information for users to evaluate the suitability of the data for a particular application.

The record layout is available in Section 4, Technical specifications.

Supplementary information is provided in the appendices.

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2. Overview

Introduction

The Geographic Attribute File is a flat file containing all geographic data disseminated at the block level. This is based on the 2006 Census geographic reference information and includes population and dwelling count data for the dissemination block, which can be rolled up to all geographic levels. With the Geographic Attribute File, users can manipulate the data into multiple platforms and applications. From the block level the data can be derived so that users can obtain information for all geographic areas. The information available includes 2006 population counts, 2006 dwelling counts, land area, geographic codes, names and in some cases, types.

This version of the Geographic Attribute File contains data for the following standard census and geographic units:

- Canada (CAN)
- provinces / territories (PR)
- economic regions (ERs)
- census divisions (CDs)
- census consolidated subdivisions (CCSs)
- census subdivisions (CSDs)
- designated places (DPLs)
- federal electoral districts (FEDs) (based on the 2003 Representation Order)
- census metropolitan areas (CMAs) / census agglomerations (CAs) and non-census metropolitan areas / census agglomerations
- census tracts (CTs)
- urban areas (UAs)
- dissemination areas (DAs)
- dissemination blocks (DBs)

A detailed description of the two correspondence files can be found in the publication entitled *Correspondence Files, Reference Guide* in HTML format (Catalogue no. 92-156-GWE) or in PDF format (Catalogue no. 92-156-GIE). These guides are included with the Geographic Attribute File.

Reference date

Population and dwelling counts

The population and dwelling counts are generated from the 2006 Census of Population which was conducted on May 16, 2006.

Standard geographic areas

The geographic reference date for the 2006 Census is January 1, 2006. Names, boundaries and other attributes of geographic areas change frequently (for example, municipal amalgamations, annexations, name and status changes). Since the geographic framework is used for census data collection, the geographic reference date must be set sufficiently in advance of Census Day to permit all changes to be processed in time. Furthermore, notification of these changes is normally not received from the applicable federal and provincial authorities until after the changes have occurred. For these reasons, the census reports data according to the geographic areas that were in effect on January 1, 2006, provided the information on the changes was received by Statistics Canada by March 1, 2006. Since census data refer to conditions as they existed on Census Day (May 16, 2006), and the geographic framework is established according to the geographic areas in effect as of January 1, 2006, census data may be reported for geographic areas which have subsequently changed during this period.

3. 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 purpose and usage, as well as specific quality elements pertaining to lineage, positional accuracy, attribute accuracy, logical consistency and completeness. This information is provided to users for all spatial data products disseminated for the census.

The 2006 Geographic Attribute File is a flat ASCII table containing 2006 Census population and dwelling count data by geographic area. The 2006 population and dwelling counts, which include total private occupied dwelling counts and private dwellings occupied by usual residents counts and related data are provided for standard geographic.

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 or map products.

Geographic areas, their names and their types

Statistics Canada disseminates census data by standard geographic areas. These areas are either administrative or statistical.

Administrative areas are defined, with a few exceptions, by federal and provincial statutes. These include:

- Canada (CAN)
- provinces and territories (PR)
- federal electoral districts (FEDs) (2003 Representation Order)
- census divisions (CDs)
- census subdivisions (CSDs)
- designated places (DPLs)

Statistical areas are defined by Statistics Canada as part of the spatial frame used to collect and disseminate census data. These include:

- economic regions (ERs)
- census consolidated subdivisions (CCSs)
- census metropolitan areas (CMAs) and non-census metropolitan areas
- census agglomerations (CAs) and non-census agglomerations
- census tracts (CTs)
- urban areas (UAs)
- dissemination areas (DAs)
- dissemination blocks (DBs)

Geographic name data refer to the names given to standard geographic areas. Geographic names, however, are not given to all standard geographic areas. Named geographic areas include provinces and territories, economic regions, census divisions, census consolidated subdivisions, census subdivisions, census metropolitan areas and census agglomerations and non-census metropolitan areas/census agglomerations, designated places, urban areas and rural areas and federal electoral districts. Although census tracts do not have geographic names, they do have numeric names.

For provinces, territories and economic regions, the database contains both English and French names. The sources used for the names of the provinces and territories are the statutes of the respective provinces and territories.

The source of the geographic names of federal electoral districts is the 2003 Representation Order of the Chief Electoral Office, Elections Canada.

For those census divisions and census subdivisions that respect the administrative fabric within the provinces, the sources of the names (and census subdivision types) were the provincial governments. Statistics Canada receives input from the provincial governments concerning all boundary, name and type changes to their respective municipal structure. The census reflects the administrative structure within provinces that was in effect on the geographic reference date of January 1, 2006[1].

Where no provincial or territorial administrative areas exist, some census divisions and census subdivisions and their associated names (and census subdivision types) are created in consultation with provincial or territorial authorities. The names of Indian reserves and settlements are provided to Statistics Canada by Indian and Northern Affairs Canada.

For census consolidated subdivisions, names are derived from their component census subdivisions. The census consolidated subdivision's name coincides with the name of the largest census subdivision component in terms of land area.

The census metropolitan area or census agglomeration name is usually based on that of the largest urban centre(s) within the census metropolitan area or census agglomeration.

1. Due to operational constraints, Statistics Canada enforced a cut-off date of March 1, 2006 for the receipt of information concerning changes. This ensured that the changes would be instituted prior to Census Day, May 16, 2006.

Locality names are not considered part of the standard geographic hierarchy. The primary sources of Statistics Canada's locality names are:

- names reported by the census representatives during the past censuses;
- historical census subdivision records (name changes/dissolutions); and
- names approved by the provincial and territorial authorities [federally represented by the Geographic Names Data Base (GNDB)].

Information on the delineation criteria for geographic areas as well as the sources of geographic names is provided in the *2006 Census Dictionary* (Catalogue no. 92-566-XWE).

Codes and unique identifiers

A geographic code is a unique number used to identify and access standard geographic areas for the purpose of data storage, retrieval and display.

The system of geographic codes for provinces and territories, census divisions and census subdivisions is the Standard Geographical Classification (SGC). This classification system is a hierarchical coding system that provides a unique identifier for each level of this hierarchy. This coding system is developed by Statistics Canada and approved by provincial authorities.

For a census consolidated subdivision, the code is derived from the component census subdivisions. The census consolidated subdivision's code coincides with its largest census subdivision component in terms of land area.

The source of the geographic codes of federal electoral districts is the 2003 Representation Order of the Chief Electoral Office, Elections Canada.

All other codes are developed by Statistics Canada.

In the Geographic Attribute File, the unique identifier (uid) is a concatenation of geographic codes that uniquely identify standard geographic areas in Canada. For example, each dissemination area (DA) is assigned a four-digit code that is unique within a census division (CD). In order to uniquely identify each DA in Canada, the four-digit DA code must be preceded by the two-digit province code (PR) and the two-digit CD code. This concatenated code (PR + CD + DA) is called the DAuid.

The unique identifier is established by Statistics Canada.

2006 Census population and 2006 Census private dwellings

The population and dwelling count data were derived from the 2006 Census. Population counts are determined according to the "de jure" method. This means that people are enumerated at their usual place of residence, regardless of where they may have been on Census Day, May 16, 2006.

See the section on Completeness for details of the population and dwelling count data.

See Appendix B for notes on the quality of the 2006 Census data.

2006 Census land area

Land area is the area in square kilometres of the land-based portions of standard geographic areas.

The land area measurements are provided for the sole purpose of calculating population density.

Incompletely enumerated Indian reserve flag for 2006

On some Indian reserves and Indian settlements in the 2006 Census, enumeration was not permitted or was interrupted before it could be completed. Moreover, for some Indian reserves and Indian settlements, the quality of the enumeration was considered inadequate. These geographic areas (a total of 22) are called incompletely enumerated Indian reserves and Indian settlements.

Data for 2006 are therefore not available for the incompletely enumerated reserves and settlements, and are not included in tabulations. Data for geographic areas containing one or more of these reserves and settlements are therefore noted accordingly. While for higher-level geographic areas (Canada, provinces, census metropolitan areas and census agglomerations) the impact of the missing data is very small, the impact can be significant for smaller areas, where the affected reserves and settlements account for a higher proportion of the population.

Positional data

The Geographic Attribute File contains co-ordinates for the dissemination area (DA), weighted by population data. These representative points constitute a single x,y co-ordinate for each dissemination area. In the Geographic Attribute File the representative points are available in both Lambert projection and latitude/longitude.

Positional accuracy

Positional accuracy refers to the absolute and relative accuracy of the positions of geographic features. Absolute accuracy is the closeness of the co-ordinate 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 only positional data in the Geographic Attribute File are dissemination area representative points. All representative points are generated using ArcGIS® software (version 9) in conjunction with their respective cartographic boundary file. The most detailed dissemination hydrography in the cartographic boundary file is used. The points are initially calculated and stored based on the Lambert conformal conic projection; they are also transformed to latitude/longitude coordinates.

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).

Geographic names, types and codes were checked against the ORACLE Query base. All geographic entities relate to the dissemination block level. The relationships between all codes were checked by rolling up each geographic code and comparing them back to the ORACLE Query base. The following is a description of each of the relationships within the Geographic Attribute File:

Dissemination block	respect	Dissemination area
Dissemination block	respect	Designated place
Dissemination block	respect	Census subdivision
Dissemination block	respect	Census consolidated subdivision
Dissemination block	respect	Census division
Dissemination block	respect	Federal electoral district
Dissemination block	respect	Census tract
Dissemination block	respect	Economic region
Dissemination block	respect	Census tract
Dissemination block	respect	Census metropolitan area / Census agglomeration
Dissemination block	respect	Statistical Area Classification
Dissemination block	respect	Urban area
Dissemination block	respect	Province / Territory
Dissemination area	respect	Census subdivision
Dissemination area	respect	Census consolidated subdivision
Dissemination area	respect	Census division
Dissemination area	respect	Economic region
Dissemination area	respect	Census tract
Dissemination area	respect	Census metropolitan area / Census agglomeration
Dissemination area	respect	Province / Territory
Designated place	respect	Census subdivision
Designated place	respect	Census division
Designated place	respect	Province / Territory
Census subdivision	respect	Census consolidated subdivision
Census subdivision	respect	Census division
Census subdivision	respect	Economic region
Census subdivision	respect	Census metropolitan area / Census agglomeration
Census subdivision	respect	Province / Territory
Census consolidated subdivision	respect	Census division
Census consolidated subdivision	respect	Province / Territory
Census division	respect	Province / Territory
Economic region	respect	Province / Territory

Federal electoral district	respect	Province / Territory
Census tract	respect	Census metropolitan area / Census agglomeration
Census tract	respect	Province / Territory
Urban area	respect	Census metropolitan area / Census agglomeration

Numeric fields were exported and checked for accuracy. Data which are displayed as 'blank' in the Geographic Attribute File are exported as zero ('0'). This should be considered when using data from the population and dwelling count fields in the Geographic Attribute File.

Blank fields are displayed when population and dwelling count data are suppressed at the dissemination block level due to incompletely enumerated Indian reserves and Indian settlements or suppression rules. Population counts for Indian reserve refusal CSDs are not included in any of the census counts, therefore the zero (blank) population at the CSD, DA and block level is consistent with the rest of the counts on the ORACLE Query Base.

Name data were also exported and checked for accuracy.

Logical consistency

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

Internal consistency

Consistency between the data at the various geographic levels was checked. These included checks to ensure that lower level counts could be summed to obtain higher level counts.

2006 Census land area

Land area data for the standard geographic areas reflect the boundaries in effect on January 1, 2006 (the geographic reference date for the 2006 Census of Canada).

The data are derived from the Spatial Data Infrastructure (SDI), including selected water polygon layers. The Lambert conformal conic projection is transformed to the Albers equal-area conic projection, since the property of equal area is indispensable for calculating land area. The same projection parameters (two standard parallels, central meridian and latitude of projection origin) are used for each province or territory.

Land area is calculated using ArcGIS® software. There is a two-stage aggregation procedure. First, the data are calculated and stored in square kilometres at the basic block (BB) level to eight decimal places, and then aggregated to the dissemination block (DB) level and rounded to four decimal places. Second, the DB data are individually aggregated to each higher level standard geographic area.

Users should note that even when the boundaries of standard geographic areas did not change between the 2001 and 2006 Censuses, the land areas may differ due to geometry shifts. The shifts are caused by a change in the underlying database architecture and by improvements in the absolute positional accuracy of some of the roads.

Population and dwelling counts data

The 2006 Population and Dwelling Counts were tested to ensure that they could be summed up to a common higher geographic level. There were no errors found.

A detailed description of intercensal changes made to the geographic areas can be found in the publication entitled *Standard Geographical Classification, 2006, Volume I* (Catalogue no. 12-571-XIE, XWE).

Hierarchy of geographic areas

The Geographic Attribute File table shows urban areas as parts of provinces. There were five exceptions for the 2006 Census where urban areas cross provincial boundaries. These are:

- Campbellton (New Brunswick/Quebec)
- Hawkesbury (Quebec/Ontario)
- Ottawa - Gatineau (Quebec/Ontario)
- Flin Flon (Manitoba/Saskatchewan)
- Lloydminster (Saskatchewan/Alberta)

The urban area data are shown correctly in the Geographic Attribute File. For example, if a list of the urban areas in Manitoba is queried, only the Manitoba portion of the population of Flin Flon will be shown on that list. (If the selection of urban areas for a province is done by code then both the province code and the secondary province code should be considered.)

The Geographic Attribute File table hierarchy shows census metropolitan areas and census agglomerations as parts of provinces. There were four exceptions for the 2006 Census where census metropolitan areas and census agglomerations cross provincial boundaries. These are:

- Campbellton (New Brunswick/Quebec)
- Hawkesbury (Quebec/Ontario)
- Ottawa - Gatineau (Quebec/Ontario)
- Lloydminster (Saskatchewan/Alberta)

The census metropolitan area and census agglomeration data are shown correctly in the Geographic Attribute File. For example, if a list of the census metropolitan areas and census agglomerations in New Brunswick is queried, only the New Brunswick portion of the population of Campbellton will be shown on that list. (If the selection of census metropolitan areas and census agglomerations for a province is done by code then both the province code and the secondary province code should be considered.)

Consistency with other products

The population and dwelling counts in the Geographic Attribute File are consistent with those shown in the publication *A National Overview* (Catalogue no. 92-200-XPB). They are also consistent with those which have been disseminated by GeoSuite.

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.

Appendix C indicates the number of geographic units by province and territory. These numbers were checked on the Geographic Attribute File table. The Geographic Attribute File contains the correct number of geographic areas.

The completeness of the specific data in GeoSuite is provided below.

Population and dwelling counts

The 2006 Census population counts for a particular area represent the number of Canadians whose usual place of residence is in that area, regardless of where they happened to be on Census Day. Also included are any Canadians staying in a dwelling in that area on Census Day and having no usual place of residence elsewhere in Canada, as well as those considered "non-permanent residents". In most areas, there is little difference between the number of usual residents and the number of people staying in the area on Census Day. For certain places, however, such as tourist or vacation areas, or those including large work camps, the number of people staying in the area at any particular time could significantly exceed the number of usual residents shown here. The population counts include Canadians living in other countries, but do not include foreign residents living in Canada (the "foreign residents" category does not include "non-permanent residents"). Given these differences, users are advised not to interpret population counts as being the number of people living in the reported dwellings.

For the 2006 Census, a private dwelling is defined as:

> A set of living quarters designed for or converted for human habitation in which a person or group of persons reside or could reside. In addition, a private dwelling must have a source of heat or power and must be an enclosed space that provides shelter from the elements, as evidenced by complete and enclosed walls and roof and by doors and windows that provide protection from wind, rain and snow.

Ordinary private dwellings are subdivided into two categories: total private dwellings and private dwellings occupied by usual residents.

Some Indian settlements and Indian reserves were incompletely enumerated during the 2006 Census. These reserves and settlements are identified in the Geographic Attribute File with a 2006 Indian reserve refusal flag.

The 2006 population and dwelling counts of any geographic area with a 2006 incompletely enumerated Indian reserve refusal flag appears as a blank.

Because of the missing data, users are cautioned that for the affected geographic areas, comparisons (e.g., percentage change) between 2001 and 2006 are not exact. While for higher level geographic areas (Canada, provinces, census metropolitan areas and census agglomerations) the impact of the missing data is very small, the impact can be significant for smaller areas where the affected reserves and settlements account for a higher proportion of the population.

Census subdivision type

Appendix D indicates the number of census subdivision types by province and territory. These numbers were checked on the Geographic Attribute File. The Geographic Attribute File contains the correct number of the census subdivision types.

4. Technical specifications

System requirements and record layout

The Geographic Attribute File requires at least 1 MB of RAM for storage.

The following record layout provides a list of the 43 fields included in the Geographic Attribute File. The record layout is divided as follows: field name, field type (i.e., numeric or alphanumeric), field position and description.

Table 4.1 Geographic Attribute File - record layout

Attribute name	Description	Field type	Size	Position
DBuid	Uniquely identifies a dissemination block (composed of the 2-digit province/territory code, the 2-digit census division code, the 4-digit dissemination area code, and the 2-digit dissemination block code).	Char	10	1
DBpop2006	The 2006 Census dissemination block population	Num	8	11
DBtdwell2006	The 2006 Census dissemination block total private dwellings	Num	8	19
DBurdwell2006	The 2006 Census private dwellings occupied by usual residents	Num	8	27
DBarea	The 2006 Census dissemination block land area.	Num	13.4	35
DB_ir2006	The 2001 Census Indian reserve refusal flag	Char	1	48
DAuid	Uniquely identifies a dissemination area (composed of the 2-digit province/territory code, the 2-digit census division code, and the 4-digit dissemination area code).	Char	8	49
DAlamx	The dissemination area representative point x coordinate in Lambert format.	Num	18.8	57
DAlamy	The dissemination area representative point y coordinate in Lambert format.	Num	18.8	75
DAlat	The latitude in decimal degrees of the dissemination area representative point.	Num	10.6	93
DAlong	The longitude in decimal degrees of the dissemination area representative point.	Num	12.6	103
PRuid	Uniquely identifies a province or territory.	Char	2	115
PRname	The province or territory name.	Char	51	117
PRename	The province or territory name in English.	Char	25	168
PRfname	The province or territory name in French.	Char	25	193
PReabbr	The English abbreviation of the province or territory name.	Char	10	218
PRfabbr	The French abbreviation of the province or territory name.	Char	10	228

Table 4.1 Geographic Attribute File - record layout (continued)

Attribute name	Description	Field type	Size	Position
FEDuid	Uniquely identifies a federal electoral district (composed of the 2-digit province/territory code and the 3-digit federal electoral district code).	Char	5	238
FEDname	Federal electoral district name.	Char	83	243
ERuid	Uniquely identifies an economic region (composed of the 2-digit province/territory code and the 2-digit economic region code).	Char	4	326
ERname	The economic region name.	Char	87	330
CDuid	Uniquely identifies a census division (composed of the 2-digit province/territory code and the 2-digit census division code).	Char	4	417
CDname	The census division name.	Char	31	421
CDtype	The type of census division (see Domain).	Char	3	452
CSDuid	Uniquely identifies a census subdivision (composed of 2-digit province/territory code, 2-digit census division code and 3-digit census subdivision code).	Char	7	455
CSDname	The name provided by federal or provincial/territorial authorities.	Char	51	462
CSDtype	Census subdivisions are classified into 55 types according to designations adopted by provincial/territorial or federal authorities (see Appendix D).	Char	3	513
SACtype	The Statistical Area Classification groups census subdivisions according to whether they are a component of a census metropolitan area, a census agglomeration, or a census metropolitan area or a census agglomeration influenced zone (see Domain in this section).	Char	1	516
SACcode	The Statistical Area Classification code.	Char	3	517
CCSuid	Uniquely identifies a census consolidated subdivision (composed of the 2-digit province/territory code and the 2-digit census division code and the 3 digit census consolidated subdivision code).	Char	7	520
CCSname	The name of the census consolidated subdivision.	Char	51	527
DPLuid	Uniquely identifies a designated place (composed of the 2-digit province/territory code and the 4-digit designated place code).	Char	6	578
DPLname	Designated place name.	Char	80	584
DPLtype	Designated place type.	Char	3	664
CMAuid	Uniquely identifies the provincial parts of a census metropolitan area or census agglomeration.	Char	5	667

Table 4.1 Geographic Attribute File - record layout (continued)

Attribute name	Description	Field type	Size	Position
CMAname	The name of the census metropolitan area or census agglomeration.	Char	83	672
CMAtype	A one-character field identifying whether the unit is a census metropolitan area or a census agglomeration (see Domain).	Char	1	755
CTuid	Uniquely identifies a census tract (composed of the 3-digit census metropolitan area/census agglomeration code followed by the 7-character CTNAME).	Char	10.2	756
CTcode	The census tract code.	Char	4	766
CTname	The name of the census tract.	Char	7.2	770
UAuid	Uniquely identifies the provincial parts of each urban area (composed of the 2-digit province/territory code and the 4-digit urban area code).	Char	6	777
UAname	Urban area name.	Char	77	783

Domain

CDtype

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

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

SACtype:

The Statistical Area Classification groups census subdivisions according to whether they are a component of a census metropolitan area, a census agglomeration, a census **m**etropolitan area and census agglomeration **i**nfluenced **z**one (strong MIZ, moderate MIZ, weak MIZ or no MIZ), or the territories (Yukon Territory, Northwest Territories and Nunavut). The Statistical Area Classification is used for data dissemination purposes.

The values for Statistical Area Classification are:

1 Census subdivision within census metropolitan area
2 Census subdivision within census agglomeration with at least one census tract
3 Census subdivision within census agglomeration having no census tracts
4 Census subdivision outside of census metropolitan area/census agglomeration area having strong metropolitan influence
5 Census subdivision outside of census metropolitan area/census agglomeration area having moderate metropolitan influence
6 Census subdivision outside of census metropolitan area/census agglomeration area having weak metropolitan influence
7 Census subdivision outside of census metropolitan area/census agglomeration area having no metropolitan influence
8 Census subdivision within a territory

CMAtype:

The types associated with the census metropolitan areas/census agglomerations are: census metropolitan area is a B, census agglomeration with no census tracts, D and census agglomeration with census tracts is K.

Appendix A: Glossary

Adjusted counts
'Adjusted counts' refer to previous census population and dwelling counts that were adjusted (i.e., recompiled) 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.

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 census metropolitan area must have a total population of at least 100,000 of which 50,000 or more must live in the urban core. A census agglomeration must have an urban core population of at least 10,000. To be included in the census metropolitan area or census agglomeration, 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 census metropolitan area, it is retained as a census metropolitan area 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 census metropolitan area or census agglomeration that are not contiguous to the urban core are called the urban fringe. Rural areas in the census metropolitan area or census agglomeration 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 census metropolitan areas 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 and census agglomerations. Census subdivisions outside census metropolitan areas and census agglomerations are assigned to one of four categories according to the degree of influence (strong, moderate, weak or no influence) that the census metropolitan areas and/or census agglomerations 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 census metropolitan areas and census agglomerations. CSDs with the same degree of influence tend to be clustered. They form zones around census metropolitan areas and census agglomerations that progress through the categories from 'strong' to 'no' influence as distance from the census metropolitan areas and census agglomerations 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 or census agglomeration has been subdivided into census tracts, the census tracts are maintained even if the urban 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) or planar (such as Universal Transverse Mercator).

Cartographic boundary files, digital boundary files, representative points and road network files are disseminated in latitude/longitude coordinates.

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 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 and census agglomerations, as well as population living in rural areas outside census metropolitan areas and census agglomerations.

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.

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, a census **m**etropolitan area and census agglomeration **i**nfluenced **z**one (strong MIZ, moderate MIZ, weak MIZ or no MIZ), or the territories (Yukon Territory, Northwest Territories and Nunavut). The SAC is used for data dissemination purposes.

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 B: Data quality, sampling and weighting, confidentiality and random rounding

General

The 2006 Census was a large and complex undertaking and, while considerable effort was taken to ensure high standards throughout all collection and processing operations, the resulting estimates are inevitably subject to a certain degree of error. Users of census data should be aware that such error exists, and should have some appreciation of its main components, so that they can assess the usefulness of census data for their purposes and the risks involved in basing conclusions or decisions on these data.

Errors can arise at virtually every stage of the census process, from the preparation of materials through data processing, including the listing of dwellings and the collection of data. Some errors occur at random, and when the individual responses are aggregated for a sufficiently large group, such errors tend to cancel out. For errors of this nature, the larger the group, the more accurate the corresponding estimate. It is for this reason that users are advised to be cautious when using small area estimates. There are some errors, however, which might occur more systematically, and which result in "biased" estimates. Because the bias from such errors is persistent no matter how large the group for which responses are aggregated, and because bias is particularly difficult to measure, systematic errors are a more serious problem for most data users than the random errors referred to previously.

For census data in general, the principal types of error are as follows:

- coverage errors, which occur when dwellings or individuals are missed, incorrectly enumerated or counted more than once

- non-response errors, which result when responses cannot be obtained from a certain number of households and/or individuals, because of extended absence or some other reason or when responses cannot be obtained from a certain number of questions in a complete questionnaire

- response errors, which occur when the respondent, or sometimes the census representative, misunderstands a census question, and records an incorrect response or simply uses the wrong response box

- processing errors, which can occur at various steps including coding, when "write-in" responses are transformed into numerical codes; data capture, when responses are transferred from the census questionnaire in an electronic format, by optical character recognition methods or key-entry operators; and imputation, when a "valid", but not necessarily correct, response is inserted into a record by the computer to replace missing or "invalid" data ("valid" and "invalid" referring to whether or not the response is consistent with other information on the record)

- sampling errors, which apply only to the supplementary questions on the "long form" asked of a one-fifth sample of households, and which arise from the fact that the responses to these questions, when weighted up to represent the whole population, inevitably differ somewhat from the responses which would have been obtained if these questions had been asked of all households.

The above types of error each have both random and systematic components. Usually, however, the systematic component of sampling error is very small in relation to its random component. For the other non-sampling errors, both random and systematic components may be significant.

Coverage errors

Coverage errors affect the accuracy of the census counts, that is, the sizes of the various census universes: population, families, households and dwellings. While steps have been taken to correct certain identifiable errors, the final counts are still subject to some degree of error because persons or dwellings have been missed, incorrectly enumerated in the census or counted more than once.

Missed dwellings or persons result in undercoverage. Dwellings can be missed because of the misunderstanding of collection unit (CU) boundaries, or because either they do not look like dwellings or they appear uninhabitable. Persons can be missed when their dwelling is missed or is classified as vacant, or because the respondent misinterprets the instructions on whom to include on the questionnaire. Some individuals may be missed because they have no usual residence and did not spend census night in a dwelling.

Dwellings or persons incorrectly enumerated or double-counted result in overcoverage. Overcoverage of dwellings can occur when structures unfit for habitation are listed as dwellings (incorrectly enumerated), when there is a certain ambiguity regarding the collection unit (CU) boundaries or when units (for example, rooms) are listed separately instead of being treated as part of one dwelling (double-counted). Persons can be counted more than once because their dwelling is double counted or because the guidelines on whom to include on the questionnaire have been misunderstood. Occasionally, someone who is not in the census population universe, such as a foreign resident or a fictitious person, may, incorrectly, be enumerated in the census. On average, overcoverage is less likely to occur than undercoverage and, as a result, counts of dwellings and persons are likely to be slightly underestimated.

For the 2006 Census, three studies are used to measure coverage error. In the Dwelling Classification Study, dwellings listed as vacant were revisited to verify that they were vacant on Census Day, and dwellings whose households were listed as non-respondent were revisited to determine the number of usual residents and their characteristics. Adjustments have been made to the final census counts to account for households and persons missed because their dwelling was incorrectly classified as vacant. The census counts may also have been adjusted for dwellings whose households were classified as non-respondent. Despite these adjustments, the final counts still may be subject to some undercoverage. Undercoverage tends to be higher for certain segments of the population, such as young adults (especially young adult males) and recent immigrants. The Reverse Record Check Study is used to measure the residual undercoverage for Canada, and each province and territory. The Overcoverage Study is designed to investigate overcoverage errors. The results of the Reverse Record Check and the Overcoverage Study, when taken together, furnish an estimate of net undercoverage.

Other non-sampling errors

While coverage errors affect the number of units in the various census universes, other errors affect the characteristics of those units.

Sometimes it is not possible to obtain a complete response from a household, even though the dwelling was identified as occupied and a questionnaire was mailed out or dropped off. The household members may have been away throughout the census period or, in rare instances, the householder may have refused to complete the form. More frequently, the questionnaire is returned but no response is provided to certain questions. Effort is devoted to ensure as complete a questionnaire as possible. Once the questionnaires are captured, edit analysis are performed to detect significant cases of partial non-response and follow-up interviews are attempted to get the missing information. Despite this, at the end of the collection stage, a small number of responses are still missing, i.e., non-response errors. Although missing responses are eliminated during processing by replacing each one of them by the corresponding response for a "similar" record, there remain some potential imputation errors. This is particularly serious if the non-respondents differ in some respects from the respondents; this procedure will then introduce a non-response bias.

Even when a response is obtained, it may not be entirely accurate. The respondent may have misinterpreted the question or may have guessed the answer, especially when answering on behalf of another, possibly absent, household member. The respondent may also have entered the answer in the wrong place on the questionnaire. Such errors are referred to as response errors. While response errors usually arise from inaccurate information provided by respondents, they can also result from mistakes by the census representative who completed certain parts of the questionnaire, such as the structural type of dwelling, or who followed up to obtain a missing response.

Some of the census questions require a written response. During processing, these "write-in" entries are given a numeric code. Coding errors can occur when the written response is ambiguous, incomplete, and difficult to read or when the code list is extensive (e.g., major field of study, place of work). A formal quality control (QC) operation is used to detect, rectify and reduce coding errors. Within each work unit, a sample of responses is independently coded a second time. The resolution of discrepancies between the first and second codings determines whether recoding of the work unit is necessary. Census coding is now entirely automated, resulting in a reduction of coding errors.

The information on the questionnaires is scanned and captured into a computer file. To monitor and to ensure that the number of data capture errors are within tolerable limits, a sample of fields are sampled and reprocessed. Analysis of the two captures is done. Unsatisfactory work is identified, corrected and appropriate feedback is done to the system in order to minimize their occurrence.

Once captured, the data are edited where they undergo a series of computer checks to identify missing or inconsistent responses. These are replaced during the imputation stage of processing where either a response consistent with the other respondents' data is inferred or a response from a similar donor is substituted. Imputation ensures a complete database where the data correspond to the census counts and facilitate multivariate analyses. Although errors may have been introduced during imputation, the methods used have been rigorously tested to minimize systematic errors.

Various studies are being carried out to evaluate the quality of the responses obtained in the 2006 Census. For each question, non-response rates and edit failure rates have been calculated. These can be useful in identifying the potential for non-response errors and other types of errors. Also, tabulations from the 2006 Census have been or will be compared with corresponding estimates from previous censuses, from sample surveys (such as the Labour Force Survey) and from various administrative records (such as birth registrations and municipal assessment records). Such comparisons can indicate potential quality problems or at least discrepancies between the sources.

In addition to these aggregate-level comparisons, there are some micro-match studies in progress, in which census responses are compared with another source of information at the individual record level. For certain "stable" characteristics (such as age, sex, mother tongue and place of birth), the responses obtained in the 2006 Census, for a sample of individuals, are being compared with those for the same individuals in the 2001 Census.

Sampling errors

Estimates obtained by weighting up responses collected on a sample basis are subject to error due to the fact that the distribution of characteristics within the sample will not usually be identical to the distribution of characteristics within the population from which the sample has been selected.

The potential error introduced by sampling will vary according to the relative scarcity of the characteristics in the population. For large cell values, the potential error due to sampling, as a proportion of the cell value, will be relatively small. For small cell values, this potential error, as a proportion of the cell value, will be relatively large.

The potential error due to sampling is usually expressed in terms of the so-called "standard error". This is the square root of the average, taken over all possible samples of the same size and design, of the squared deviation of the sample estimate from the value for the total population.

The following table provides approximate measures of the standard error due to sampling for census long form (2B) data. These measures are intended as a general guide only.

Table B.1 Approximate standard error due to sampling for 2006 Census sample data

Cell value	Approximate standard error
50 or less	15
100	20
200	30
500	45
1,000	65
2,000	90
5,000	140
10,000	200
20,000	280
50,000	450
100,000	630
500,000	1,400

Users wishing to determine the approximate error due to sampling for any given cell of data, based upon the 20% sample, should choose the standard error value corresponding to the cell value that is closest to the value of the given cell in the census tabulation. When using the obtained standard error value, the user, in general, can be reasonably certain that, for the enumerated population, the true value (discounting all forms of error other than sampling) lies within plus or minus three times the standard error (e.g., for a cell value of 1,000, the range would be 1,000 ± [3 x 65] or 1,000 ± 195).

The standard errors given in the table above will not apply to population, household, dwelling or family counts for the geographic area under consideration (see Sampling and weighting below). The effect of sampling for these cells can be determined by a comparison with a corresponding 100% data product.

The effect of the particular sample design and weighting procedure used in the 2006 Census will vary, however, from one characteristic to another and from one geographic area to another. The standard error values in the table may, therefore, understate or overstate the error due to sampling.

Sampling and weighting

The 2006 Census data were collected either from 100% of the households or on a sample basis with the data weighted to provide estimates for the entire population. The long form questionnaire (2B) information was collected on a 20% random sample basis of the households and weighted to compensate for sampling. All table headings are noted accordingly. Note that on Indian reserves and in remote areas all data were collected on a 100% basis.

For any given geographic area, the weighted population, household, dwelling or family total or subtotal may differ from that shown in reports containing data collected on a 100% basis. Such variations are due to sampling and to the fact that, unlike sample data, 100% data do not exclude institutional residents.

Confidentiality and random rounding

The figures shown in the tables have been subjected to a confidentiality procedure known as random rounding to prevent the possibility of associating statistical data with any identifiable individual. Under this method, all figures, including totals and margins, are randomly rounded either up or down to a multiple of "5", and in some cases "10". While providing strong protection against disclosure, this technique does not add significant error to the census data. The user should be aware that totals and margins are rounded independently of the cell data so that some differences between these and the sum of rounded cell data may exist. Also, minor differences can be expected in corresponding totals and cell values among various census tabulations. Similarly, percentages, which are calculated on rounded figures, do not necessarily add up to 100%. Order statistics (median, quartiles, percentiles, etc.) and measures of dispersion such as the standard error are computed in the usual manner. When a statistic is defined as the quotient of two numbers (which is the case for averages, percentages, and proportions), the two numbers are rounded before the division is performed. For income, owner’s payments, value of dwelling, hours worked, weeks worked and age, the sum is defined as the product of the average and the rounded weighted frequency. Otherwise, it is the weighted sum that is rounded. It should also be noted that small cell counts may suffer a significant distortion as a result of random rounding. Individual data cells containing small numbers may lose their precision as a result. Also, a statistic is suppressed if the number of actual records used in the calculation is less than 4 or if the

sum of the weight of these records is less than 10. In addition, for values expressed in dollar units, the statistic is suppressed if the range of the values is too narrow or if all values are less than, in absolute value, a specified threshold. Finally, again for values expressed in dollar units, the statistic is suppressed if there is a dollar value too large compared to all the others.

Users should be aware of possible data distortions when they are aggregating these rounded data. Imprecisions as a result of rounding tend to cancel each other out when data cells are re-aggregated. However, users can minimize these distortions by using, whenever possible, the appropriate subtotals when aggregating.

For those requiring maximum precision, the option exists to use custom tabulations. With custom products, aggregation is done using individual census database records. Random rounding occurs only after the data cells have been aggregated, thus minimizing any distortion.

In addition to random rounding, area suppression has been adopted to further protect the confidentiality of individual responses.

Area suppression is the deletion of all characteristic data for geographic areas with populations below a specified size. The extent to which data are suppressed depends upon the following factors:

- if the data are tabulated from the 100% database, they are suppressed if the total population in the area is less than 40

- if the data are tabulated from the 20% sample database, they are suppressed if the total non-institutional population in the area from either the 100% or 20% database is less than 40.

There are some exceptions to these rules:

- income distributions and related statistics are suppressed if the population in the area, excluding institutional residents, is less than 250 from either the 100% or the 20% database, or if the number of private households is less than 40 from the 20% database

- place-of-work distributions and related statistics are suppressed if the total number of employed persons in the area is less than 40, according to the sample database. If the data also include an income distribution, the threshold is raised to 250, again according to the sample database

- tabulations covering both place of work and place of residence along with related statistics are suppressed, if the total number of employed persons in the area is less than 40 according to the sample database, or if the area's total population, excluding institutional residents, according to either the 100% or the sample database, is less than 40. If the tabulations also include an income distribution, the threshold is raised to 250 in all cases and the tabulations are suppressed if the number of private dwellings in the place of residence area is less than 40
- same-sex couples' distributions and related statistics are suppressed if the population in private households in the area is less than 5,000, according to the 20% sample database

- if the data are tabulated from the 100% database and refer to six-character postal codes or to groups of either blocks or block-faces, they are suppressed if the total population in the area is less than 100

- if the data are tabulated from the 20% sample database and refer to six-character postal codes or to groups of either blocks or block-faces, they are suppressed if the total non-institutional population in the area from either the 100% or 20% database is less than 100

- if the data refer to groups of either blocks or block-faces, and cover place of work, they are suppressed if the total number of employed persons in the area is less than 100, according to the sample database

- if the data refer to groups of either blocks or block-faces, and cover both place of work and place of residence, they are suppressed if the total number of employed persons in the area is less than 100, according to the sample database, or if the area's total population, excluding institutional residents, according to either 100% or the sample database, is less than 100.

In all cases, suppressed data are included in the appropriate higher aggregate subtotals and totals.

The suppression technique is being implemented for all products involving subprovincial data (i.e., Profile series, basic cross-tabulations, semi-custom and custom data products) collected on a 100% or 20% sample basis.

For further information on the quality of census data, contact the Social Survey Methods Division at Statistics Canada, Ottawa, Ontario, Canada K1A 0T6, or by calling 613-951-4783.

Appendix C: Geographic units by province and territory, 2006 Census

Table C.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 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.

Appendix D: Census subdivision types by province and territory, 2006 Census

Table D.1 Census subdivision types by province and territory, 2006 Census

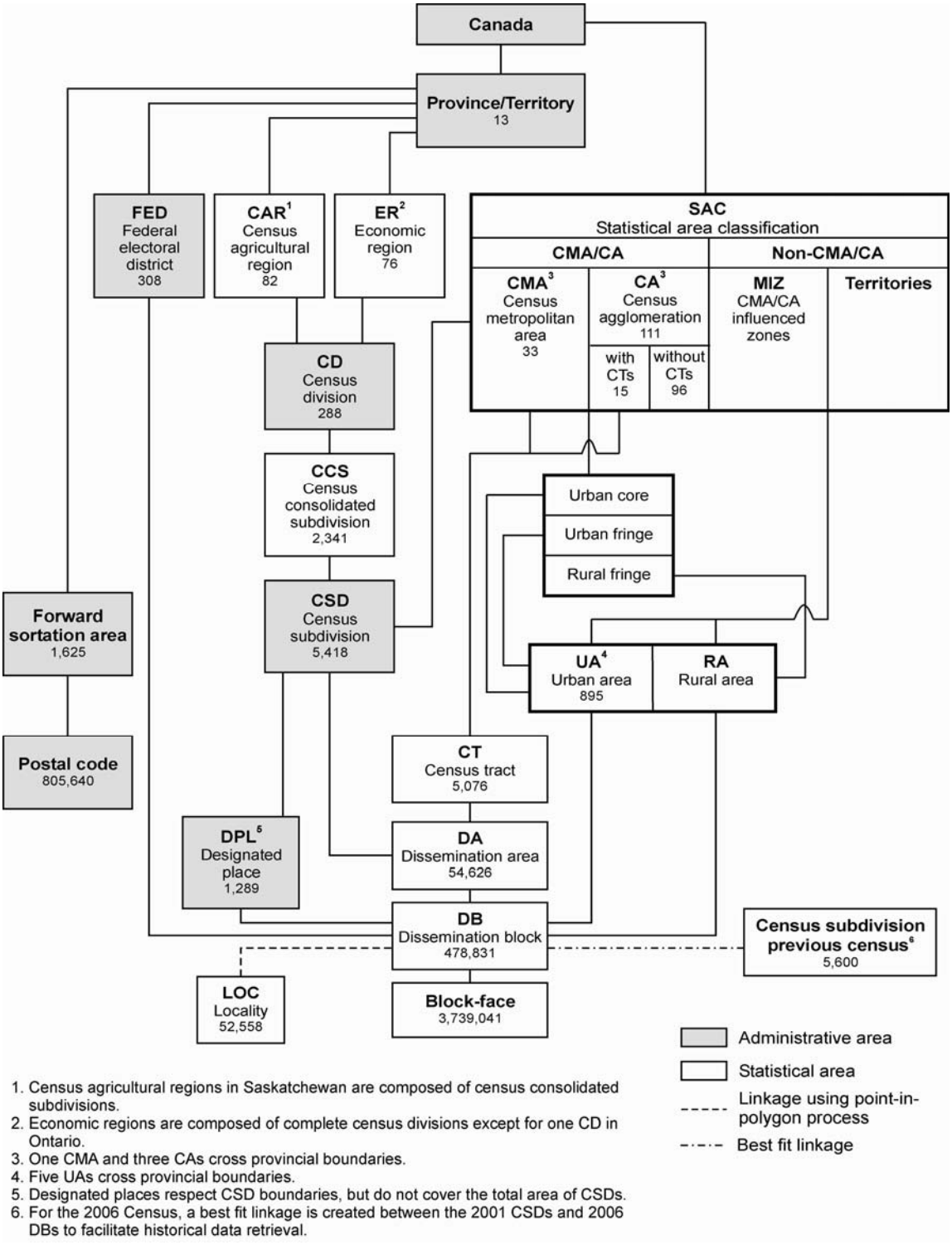
Census subdivision type		Total	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.
		5,418	377	113	100	276	1,294	585	297	984	453	836	35	37	31
C	City / Cité	7	...	...	...	3	...	4	...	...	...	...	...	...	...
CC	Chartered community	3	...	...	...	...	...	...	...	...	...	...	...	3	...
CÉ	Cité	1	...	...	...	...	1	...	...	...	...	...	...	...	...
CG	Community government	4	...	...	...	...	...	...	...	...	...	...	...	4	...
CM	County (municipality)	28	...	...	...	...	...	...	...	...	28	...	...	...	...
CN	Crown colony / Colonie de la couronne	1	...	...	...	...	...	...	...	1	...	...	...	...	...
COM	Community	33	...	33	...	...	...	...	...	...	...	...	...	...	...
CT	Canton (municipalité de)	50	...	...	...	...	50	...	...	...	...	...	...	...	...
CU	Cantons unis (municipalité de)	2	...	...	...	...	2	...	...	...	...	...	...	...	...
CY	City	146	3	2	...	5	...	46	9	14	16	48	1	1	1
DM	District municipality	50	...	...	...	...	...	...	...	...	...	50	...	...	...
HAM	Hamlet	35	...	...	...	...	...	...	...	...	...	...	2	9	24
ID	Improvement district	7	...	...	...	...	...	...	...	...	7	...	...	...	...
IGD	Indian government district	2	...	...	...	...	...	...	...	...	...	2	...	...	...
IM	Island municipality	1	...	...	...	...	...	...	...	...	...	1	...	...	...
IRI	Indian reserve / Réserve indienne	1,095	2	4	26	20	30	148	82	177	93	507	4	2	...
LGD	Local government district	2	...	...	...	...	...	...	2	...	...	...	...	...	...
LOT	Township and royalty	67	...	67	...	...	...	...	...	...	...	...	...	...	...
M	Municipality / Municipalité	3	...	...	...	...	...	3	...	...	...	...	...	...	...
MD	Municipal district	49	...	...	12	...	...	...	...	...	37	...	...	...	...
MÉ	Municipalité	578	...	...	...	...	578	...	...	...	...	...	...	...	...
MU	Municipality	52	...	...	...	...	...	52	...	...	...	...	...	...	...
NH	Northern hamlet	9	...	...	...	...	...	...	...	9	...	...	...	...	...
NL	Nisga'a land	1	...	...	...	...	...	...	...	...	...	1	...	...	...
NO	Unorganized / Non organisé	133	...	...	...	...	97	17	10	2	...	...	2	2	3
NV	Northern village	13	...	...	...	...	...	...	...	13	...	...	...	...	...
NVL	Nisga'a village	5	...	...	...	...	...	...	...	...	...	5	...	...	...
P	Parish / Paroisse (municipalité de)	152	...	...	...	152	...	...	...	...	...	...	...	...	...
PE	Paroisse (municipalité de)	215	...	...	...	...	215	...	...	...	...	...	...	...	...
RCR	Rural community / Communauté rurale	1	...	...	...	1	...	...	...	...	...	...	...	...	...

Table D.1 Census subdivision types by province and territory, 2006 Census (continued)

Census subdivision type		Total	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.
RDA	Regional district electoral area	162	...	...	...	...	...	...	...	...	...	162	...	...	...
RG	Region	1	1	...	...	...	...	...	...	...	...	...	...	...	...
RGM	Regional municipality	4	...	...	3	...	...	...	...	...	1	...	...	...	...
RM	Rural municipality	414	...	...	...	...	...	...	118	296	...	...	...	...	...
RV	Resort village	40	...	...	...	...	...	...	...	40	...	...	...	...	...
SA	Special area	3	...	...	...	...	...	...	...	...	3	...	...	...	...
SC	Subdivision of county municipality / Subdivision municipalité de comté	28	...	...	28	...	...	...	...	...	...	...	...	...	...
SÉ	Settlement / Établissement	13	...	...	...	...	...	...	...	...	...	...	13	...	...
S-É	Indian settlement / Établissement indien	28	...	...	...	...	6	5	4	1	4	3	5	...	...
SET	Settlement	14	...	...	...	...	...	...	...	...	...	...	...	11	3
SM	Specialized municipality	2	...	...	...	...	...	...	...	...	2	...	...	...	...
SNO	Subdivision of unorganized / Subdivision non organisée	92	92	...	...	...	...	...	...	...	...	...	...	...	...
SV	Summer village	51	...	...	...	...	...	...	...	...	51	...	...	...	...
T	Town	751	279	7	31	15	...	88	52	147	110	15	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	210	...	...	...	...	...	210	...	...	...	...	...	...	...
TV	Town / Ville	12	...	...	...	11	...	1	...	...	...	...	...	...	...
V	Ville	220	...	...	...	...	220	...	...	...	...	...	...	...	...
VC	Village cri	8	...	...	...	...	8	...	...	...	...	...	...	...	...
VK	Village naskapi	1	...	...	...	...	1	...	...	...	...	...	...	...	...
VL	Village	583	...	...	...	69	51	11	20	284	101	42	4	1	...
VN	Village nordique	14	...	...	...	...	14	...	...	...	...	...	...	...	...

… not applicable

Appendix E: Hierarchy of standard geographic units for dissemination, 2006 Census



1. Census agricultural regions in Saskatchewan are composed of census consolidated subdivisions.
2. Economic regions are composed of complete census divisions except for one CD in Ontario.
3. One CMA and three CAs cross provincial boundaries.
4. Five UAs cross provincial boundaries.
5. Designated places respect CSD boundaries, but do not cover the total area of CSDs.
6. For the 2006 Census, a best fit linkage is created between the 2001 CSDs and 2006 DBs to facilitate historical data retrieval.

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