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GeoSuite, 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?

- A concordance file linking the 2006 dissemination areas to the 2001 dissemination areas and a concordance file linking the 2006 dissemination block to the 2001 block are provided as supplemental files.
- Counts for two separate dwelling types are provided for each geo-statistical area. 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.
- A new flag appears on the census subdivision (CSD) table. The population amendment flag (`amendment_flag`). See Appendix F for explanation of flag.
- Dissemination block representative points are now found in the Dissemination Block Boundary File (Catalogue no. 92-163-XWE).

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 promoted to the status of a census metropolitan area (CMA). Instead, a CA assumes the status of a CMA 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.

Table of contents

	Page
What's new?	4
Table of contents	5
1. About this guide	6
2. Overview	7
Introduction	7
Reference date	8
3. Getting started.....	9
Name search	9
Code search	11
Chart search.....	11
Reports.....	12
Load query.....	12
Quit.....	13
Sample sessions	13
4. Data quality	16
Lineage	16
Positional accuracy.....	21
Attribute accuracy	21
Logical consistency	22
Completeness.....	24
5. Technical specifications	26
System requirements	26
Installation of GeoSuite.....	26
Appendix A: Glossary	27
Appendix B: Data quality, sampling and weighting, confidentiality and random rounding.....	34
Appendix C: Geographic units by province and territory, 2006 Census.....	41
Appendix D: Census subdivision types by province and territory, 2006 Census.....	42
Appendix E: Hierarchy of standard geographic units for dissemination, 2006 Census..	44
Appendix F: Amendment flag.....	45
End-use licence agreement for Statistics Canada's GeoSuite, 2006 Census.....	47

1. About this guide

This reference guide provides an overview of the GeoSuite CD-ROM 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.

The Getting started section describes the main menu of GeoSuite and provides explanations on the various functions of the program. It also includes four sample sessions with step-by-step examples of how to do different kinds of data requests.

Section 4, Data quality, provides information for users to evaluate the suitability of the data for a particular application.

Installation instructions are provided in section 5, Technical specifications.

Supplementary information is provided in the appendices.

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

2. Overview

Introduction

GeoSuite is a powerful search tool based on the 2006 Census geographic reference information and includes population and dwelling count data for all standard geographic areas. With GeoSuite, users may retrieve data, explore the links between geographic areas and obtain information on those areas. The information available includes 2006 population counts, 2006 dwelling counts, land area (except for dissemination blocks), geographic codes, names and, in some cases, 2001 Census population counts (both final and adjusted) for growth calculations.

This version of GeoSuite 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 / census agglomerations and non-census metropolitan areas / census agglomerations (CMA/CAs and non-CMA/CAs)
- census tracts (CTs)
- urban areas and rural areas (UARAs)
- dissemination areas (DAs)
- dissemination blocks (DBs)

GeoSuite also provides access to the following information:

- DA reference map listing that enables users to get reference numbers for DA maps covering any standard geographic area; and
- A series of reports, including dissemination block reference lists. These reports can be viewed on screen, printed or exported.
- DA correspondence data that relate the 2001 Census dissemination areas to the 2006 Census dissemination areas;
- Dissemination block correspondence data that relate the 2001 Census block to the 2006 Census dissemination block.

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 on the GeoSuite 2006 CD-ROM.

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. Getting started

When you install GeoSuite (see section 5), by default a 'GeoSuite 2006' program group is created. The GeoSuite icon is located in this program group. Double-clicking on this icon will launch the GeoSuite program. The first screen to appear will be a language selection. Choose the language of preference. A licence agreement screen appears next with a choice of accepting the conditions of the licence agreement or not. If you click on the **Accept** button, you will proceed to the **GeoSuite Main Menu** screen. If you click on the **Do Not Accept** button, you will automatically exit from the system.

On the **Main Menu** screen, there are six functions available: **Name Search**, **Code Search**, **Chart Search**, **Reports**, **Load Query**, and **Quit**. These functions are described in detail in the following sections and the Windows™ Help.

There are Windows™ Help files found in the software. You can access the **Help** from the **Menu Bar** or the **Toolbar**. If you would like to get information on a particular topic, go into the **Help** menu in the **Menu Bar** and select either **Contents** or **Search for Help on...** to display a list of available help topics. If you would like help on the screen that you are in, then click on the **Help** button in the **Toolbar** to display the help topic for that screen or press **F1**.

Name search

The **Name Search** function allows you to search for a geographic name or area and to retrieve data on the area. There are four steps in this process.

- Step 1: Select an area (for example, a specific province, place name, or even all of Canada).
- Step 2: Select the lower geographic level where you expect to find the information you need (for example, economic regions in the province or provinces in the country).
- Step 3: Select the data set you wish to view by selecting the fields and sort order and adding any conditions on the data.
- Step 4: View, print or export the results of your search, perform calculations or save your query.

Step 1 of 4: Name search

Upon entering this screen, your cursor is in the **Enter Name** field. You may type in all, some, or none of the letters of the desired name, then press the tab key to move below to the **List Panel**.

You may want to use the **Level** list to view only the names of a particular geographic type. To do this, pull down the list on the right. By default, all of the names in Canada are displayed.

The data for the name selected in the list panel are displayed in the three data information panels. Users can toggle between the panels by clicking on the three tabs: **2006 Census Info**, **Geographic Levels**, and **2001 Census Info**.

The data for the selected geographic area may be printed using either the **Print** command on the **Menu Bar**, or the **Print** button on the **Toolbar** at the top of the screen.

You may then press **Next** to go to the next screen or **Back** to go back to the **Main Menu**.

When the 'CT (Census Tract)' level is selected from the **Level** pull down list, a **Select CMA/CA** button appears. This button allows you to narrow your search and view only the CTs in a specific CMA/CA.

Step 2 of 4: Select lower geographic level

All of the choices available for the place selected in Step 1 are displayed and you must choose one level of geographic data that you want to view. Not every selection will bring up data. There may or may not be data present for the levels and the area you selected in the previous screen.

Step 3 of 4: Select data

In this screen you select fields to output for the chosen area and the level of geographic data you wish to view. When this screen first appears, it displays the fields specific to the lower geographic level selected in **Step 2 of 4**. Users can also select fields from a higher geographic level by clicking on the **Select fields from table** pull down list (upper right corner).

For instructions on how to move items from one list to the other, see **Using Selection Lists** in the Windows Help files.

Click on the **Set Sort Order** button to sort the data in a particular order.

Click on the **Set Condition** button to add conditions and view a subset that matches the conditions.

Click on the **No Duplicate** option to eliminate duplicate records in the data you select to view. For more information on the **No Duplicate** option, see the fourth sample session.

You must have entered at least one item in the **Selected Fields** list in order to set a sort order or to access the next screen.

The last step is to click on the **Next** button to run the query and display your data in the **View Data** window (Step 4).

Step 4 of 4: View data

Once you have selected the data fields for the area and level of geography, this step will allow you to view, print or export the results of your search, perform calculations or save your query.

You can also use the **Back** button to retrace your steps through the search and repeat the search using a different geographic area or altering the fields or conditions.

You can change the size of columns by using the mouse to grab the line between columns. A symbol with two arrows will appear. Drag the symbol to enlarge or shrink the columns.

Code search

Geographic codes are created by Statistics Canada to identify geographic entities. They are an alternative to searching for data by name. The **Code Search** function allows you to search for a geographic code and retrieve data on the area. You can then search for information on lower geographic levels within a geographic area. There are four steps in this process. The last three steps are identical to a **Name Search**.

Step 1: Select a code (for example, a specific province code, place name code, or even all of Canada).

Step 2: Select the lower geographic level where you expect to find the information you need (for example, place names in the province, or provinces in the country).

Step 3: Determine the data set you wish to view, by selecting the fields, sort order, and adding any conditions on the data.

Step 4: View, print, or export the results of your search, perform calculations or save your query.

Step 1 of 4: Code search

Upon entering the screen, your cursor is in the **Enter Code** field. You may type in all, some, or none of the numbers of the desired code, then press the tab key to move below to the **List Panel**.

Refer to **Name Search** for a description of Step 1 of 4.

Step 2 of 4: Select lower geographic level

Refer to **Name Search** for a description of Step 2 of 4.

Step 3 of 4: Select data

Refer to **Name Search** for a description of Step 3 of 4.

Step 4 of 4: View data

Refer to **Name Search** for a description of Step 4 of 4.

Chart search

The **Chart Search** function allows you to select and view data using a chart view that represents the geographic hierarchy.

To view data for a certain geographic level, click on the acronym button that corresponds to it. For example, FED represents federal electoral district. Clicking the **FED** button will display a list of federal electoral districts and columns of data about them in the **Geography Data** window.

You can choose more than one geographic level. Each additional level you choose adds a page to the **Geography Data** window. To view other pages, you need to click on the appropriate tab.

When you make a selection by clicking on a geographic level, only the geographic levels that are on the same path will stay enabled. The other choices are dimmed to show they are disabled.

When more than one geographic level is selected, the data in the lower level will be a subset of the units for the currently selected unit in the higher level.

You can remove levels from the **Geography Data** window by clicking on the appropriate button on the chart again.

There are two ways to toggle between the **Chart Search** screen and the **Data Display** window. You can click any part of the screen you want to see. This will bring it to the front. You can also use the toggle button to display whichever window is not in front.

You can change the size of columns by using the mouse to grab the line between columns. A symbol with two arrows will appear. Drag the symbol to enlarge or shrink the columns.

You can also click on the small grey box in the lower left-hand corner of the data page and drag to the right to split the chart. This is useful to keep the codes or names to the left while scrolling through the fields to the right.

Reports

This function displays a list of five standard, frequently requested reports based on 2006 Census data. These reports were formerly print publications of Statistics Canada.

There are five different reports available:

- CMA/CA: Dissemination Block reference list by CT (a list of CMAs/CAs that contain census tracts is displayed).
- CMA/CA: Dissemination Block reference list by CSD (all CMAs/CAs are available).
- CD: Dissemination Block reference list by CSD (all CDs are displayed with their codes to differentiate those with the same name).
- FED: CSD reference list (all FEDs are listed).
- CSD: CT reference list (all CSDs in a CMA/CA are listed, but not all will contain census tracts).

Select the report you want by clicking the appropriate button.

Click on the **Select Area** button to choose the geographic area for your report. **Reports** may then be printed, viewed on screen, or exported.

Load query

A saved query is created by completing a **Name Search** or **Code Search** through the program data, then saving the steps you used by clicking the **Save Query** button in the **View Data** screen. Saved queries allow users to carry out identical searches through **GeoSuite**, but using different fields.

To load a query you created in an earlier search, select its name and description and click OK. This will open the **Select Data** screen and allow you to revise or re-enter field selections, sort order and conditions. Clicking the **Back** button at this point will return you to the **Load Query** screen. Once you have clicked the **Next** button, the **Back** button may then be used to return to Step 1.

You may delete queries you no longer want to save and recall any you may have just accidentally deleted.

Quit

This function allows you to exit GeoSuite. The next screen will ask you to confirm your intentions to exit GeoSuite.

Sample sessions

The steps for four sample data requests are detailed below. These sample sessions have been designed to give an overview of the most useful functions of GeoSuite and to review difficult selections for novice users.

1. Searching for geographic areas and their data values

In this sample session, you will be searching for the Lambert coordinates of three DAs - 24010018, 24010019, and 35010155.

From the **Main Menu**, click the **Code Search** button.

Click on the **Level** drop-down list, which initially contains 'All'.

From the list that appears, scroll down until you can see 'DA (Dissemination Area)', and click on the entry.

The cursor will now be in the text box at the top of the screen. Type in the DA code for the first DA on which you need information, 24010018. The list below displays the DAs in numerical order.

Once you stop typing, the information for that DA is displayed in the tabs in the bottom half of the screen. Clicking on each **Panel** brings it forward, so you can see the information grouped on it.

Note the Lambert coordinates on paper, or print the information using the **Print** button on the toolbar at the top of the screen, or use the **Print** option from the **File Menu**.

Use the scroll bar on the list of codes, or the down arrow key, to scroll down to the next record, 24010019. Click on this record to select it.

To view the information on the final DA, double-click in the **Enter Code** text box at the top of the screen. This will shade the numbers you typed in previously, so they will be overwritten when you start to type in the next code. Type in 35010155.

2. Browsing data using the Chart Search function

In this sample session, you will be using the **Chart Search** function to browse FEDs in Ontario.

From the **Main Menu**, click the **Chart Search** button.

In the **Chart** window, click on the **PROV/TERR** button. This opens the data panel in the **Geographic Data** window, listing all of the provinces.

In the **Chart**, click on the **FED** button. This opens a 'FED' data tab behind the tab labelled 'PR'.

In the **Geographic Data** window, click in the record for Ontario to select it. Now click on the **FED** tab. The table contains each of the FEDs in Ontario. Use the scroll bar at the bottom of the data to reveal the rest of the fields. Use the scroll bar at the side of the data to move down through the rest of the records.

3. Creating a .txt file of population for a CMA by CSDs

In this sample session, you will be creating a .txt file with CSDs of the type 'City' and their 2006 population in the CMA of Toronto, ordered by name.

From the **Main Menu**, click the **Name Search** button.

In the text box at the top of the screen, type in 'Toronto'.

Hit the tab key to move to the list of names.

Hit the down arrow to scroll through the **Level** column and select the only Toronto entry which is a CMA/CA.

Click on the **Next** button to move to Step 2 of 4.

Click on 'CSD (Census Subdivision)' in the list of geographic levels.

Click on the **Next** button to move to Step 3 of 4.

In the **Available Fields** list, double-click on 'CSDname'. It should appear in the **Selected Fields** list. Now use the scroll bars on the **Available Fields** list until 'CSDpop2006' appears, then double-click on it.

Click on the **Set Sort Order** button.

Double-click on 'CSD Name' in the **Selected Fields** window. It should appear in the **Sort By** list.

Click on the **OK** button to close this screen.

Click on the **Set Condition** button.

Click on the drop-down list in the **Field** column and select CSDtype from the list.

Click on the drop-down list in the **Criterion** column, and select 'Equals'.

Click in the **Value** column, and then click on the **Select from List** button.

Click in the row with 'C' in the CSDtype column to select that value.

Click on the **OK** button to close this screen.

Click on the **Next** button to see the data.

Click on the **Export** button on the **Toolbar**, or select the **Export** option from the **Tools** menu.

Click in the **Type** drop-down list, and select the appropriate file delimiter.

Enter the file name to save the data. Use the **Browse** button to select a directory path or a filename that already exists.

Click on the **OK** button to complete the export. The data file can now be opened from within a spreadsheet software such as Microsoft™ Excel™.

4. Creating a list of the FEDs for a cross provincial CMA/CA

In this sample session, you will be creating a list of the FEDs (federal electoral districts) either partly or completely in the Ottawa - Gatineau CMA (census metropolitan area).

Select **Name Search** from the **GeoSuite Main Menu**.

The cursor will now be in the text box at the top of the screen. Type in the name Ottawa - Gatineau, for the CMA/CA on which you need information. The list below displays the CMAs/CAs in alphabetical order.

More than one Ottawa - Gatineau will appear in the list. Scroll to the Ottawa - Gatineau which is identified as a CMA/CA in the **Level** column. Click **Next**.

Select DB (dissemination block) from the display window of lower geography levels. Click **Next**.

From the **Select fields** from table list, choose FED (federal electoral district).

From the **Available Fields** list, choose FEDname.

Click **No Duplicates** to eliminate duplicate records in the output data. Click **Next**. (Federal electoral districts contain many census blocks. Choosing **No Duplicates** assures that FED names will appear only once in the data output.)

A list of FEDs in the Ottawa - Gatineau CMA appears in the data output window.

4. Data quality

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

The 2006 GeoSuite is a database 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 areas (see section on Lineage).

Data by the standard geographic areas are available in Name Search, Code Search and Chart Search options from the Main Menu in GeoSuite (refer to section 2). The user can also search in Name Search and Code Search by locality name (LOC). Localities are not a standard geographic area and no census data are available for them.

In addition to the 2006 Census data, DA reference map lists, correspondence reports and two supplementary files containing the 2006 DA to 2001 DA correspondence (see section 3) and the 2006 dissemination block to 2001 block are provided.

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.

All data in GeoSuite, excluding the reference map lists, were originally extracted from the ORACLE tables of the Query Base. The extraction from this database was done on February 5, 2007. The DA reference map lists were compiled during the production of the reference maps for the 2006 Census.

Pertinent information about the methods used in the production of the data in GeoSuite is provided below. For brevity, the lineage is described in terms of the various types of attribute information found in the database.

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 (non-CMAs)
- census agglomerations (CAs) and non-census agglomeration (non-CAs)
- census tracts (CTs)
- urban areas and rural areas (UARAs)
- 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 and territories as well as for 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, 2006¹.

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.

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.

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 GeoSuite, 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.

Refer to section on Completeness for details on the content 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.

2001 Census population by 2001 Census boundaries

These are the population counts as enumerated in the 2001 Census according to boundaries that were in effect as of January 1, 2001.

These data are provided for all standard geographic areas.

Users are cautioned that these data are only provided for reference purposes in cases where the ‘2001 Census population by 2001 Census boundaries’ is not the same as the ‘2001 Census population by 2006 Census boundaries’. Since data are provided by the 2006 Census boundaries and geographic structure, calculations on data from the 2006 GeoSuite should only be done using the 2001 data adjusted to the 2006 boundaries. Corrections made to the final 2001 Census data are reflected in the 2001 data adjusted to the 2006 boundaries.

2001 Census population by 2006 Census boundaries and the adjusted population flag

Users wishing to compare the 2006 Census data with those of other censuses should be aware that the boundaries of geographic areas may change from one census to another. In order to facilitate this comparison, the 2001 Census population counts are adjusted as needed to take into account boundary changes between the 2001 and the 2006 Censuses. The 2001 Census Population by 2006 Census Boundaries is also known as the 2001 adjusted population. Where the 2001 adjusted population counts did not equal the 2001 final population counts, the adjusted population flag was set to ‘1’. Most of these cases are the result of boundary changes; however, the ‘1’ may also refer to corrections to the 2001 population counts which are reflected in the 2001 adjusted population counts.

In the case of census subdivisions, this flag is also set to ‘1’ to identify newly incorporated municipalities (census subdivisions).

2001 adjusted population counts are provided for all levels of standard geography except for urban areas (UAs). The methodology for creating urban areas has changed since 2001 and therefore adjusted population counts are not applicable.

Care should be exercised in comparing the Northwest Territories 2006 Census population counts with counts from the 2001 Census. In 2001, the net undercount for the Northwest Territories was estimated at 8.11%, substantially higher than the national level of 2.99%, and almost double its 1996 level. The increase in the population between 2001 and 2006 is likely overstated due to improvements in coverage of the Northwest Territories in 2006.

Incompletely enumerated Indian reserve flag for 2006 and 2001

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. 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.

For the 2001 Census, there were a total of 30 incompletely enumerated Indian reserves and settlements. Data for the list of enumeration areas in incompletely enumerated Indian reserves and Indian settlements were suppressed. The higher level geographic areas with a component enumeration area on this list were also given an incompletely enumerated Indian reserve flag; these geographic areas were determined by the linkage between enumeration areas and higher-level geographic areas. The Indian reserve refusal flag indicates whether population and dwelling count data were suppressed for that geographic area (or part of it) for the 2001 Census.

Positional data

GeoSuite contains coordinates for dissemination area (DA), census subdivision (CSD) and designated place (DPL) representative points. These representative points are a single x,y coordinate that represents each geographic area. In GeoSuite the representative points are available in both Lambert projection and latitude/longitude.

DA reference map lists

The DA reference map lists were compiled during the production of the dissemination area reference maps for the 2006 Census. The lists were then provided for input to GeoSuite.

Reports

The reports in GeoSuite are derived based on the data extracted from the ORACLE Query Base.

Secondary province code

The secondary province (XPR) field in **Chart Search** is used to indicate which census metropolitan areas/census agglomerations (CMA/CA), and urban areas (UA) cross provincial boundaries. XPR is read in conjunction with the PR (code) field to obtain the names of these provinces. For example, the urban area of Flin Flon crosses Manitoba and Saskatchewan. The PR code shows the code for Manitoba and the XPR code shows the code for Saskatchewan.

In **Name Search** and **Code Search**, the other province is indicated as 'XProv'.

This field is derived based on data in the ORACLE Query Base.

Positional accuracy

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

The only positional data in GeoSuite are the designated place, dissemination area and census subdivision representative points. All representative points are generated using ArcGIS® software (version 9) in conjunction with their respective cartographic boundary file (CBF). The most detailed dissemination hydrography in the CBF 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).

Name search, code search and chart search

Samples of all of the data in the **Name Search**, **Code Search** and **Chart Search** were checked against the ORACLE Query Base.

Errors in the final population and dwelling count data can result from the collection, processing or derivation of the data for higher level geographic areas. Appendix B describes the errors that can result from the collection and processing. Several quality assurance processes were done on the ORACLE Query Base on the derivation of the data for higher level geographic areas. Samples of population and dwelling count data from GeoSuite were checked against the ORACLE Query Base. No problems were detected in the comparison.

Land area data are subject to a number of errors, including measurement, coding and transcription, processing and overall, cumulative historic errors. The land area measurements are provided for the sole purpose of calculating population density. (Please see Lineage and the Logical consistency section).

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

Blank fields are displayed for the final 2001 population counts when the final 2001 population counts are the same as the adjusted 2001 population counts. Users are cautioned about this in using the final 2001 population counts (refer to section on Lineage).

Blank fields are displayed when population and dwelling count data are suppressed at the CSD and DA or block level due to the Indian reserve refusals or suppression rules. Since the population counts for Indian reserve refusal CSDs are not included in any of the census counts, the zero (blank) population at the CSD, DA and block level is consistent with the rest of the counts in GeoSuite. Refer to section on Completeness for more information on the effect of this suppression.

Name data were also exported and checked for accuracy.

The data in the reports section were verified against an independent derivation of samples of each of five types of reports from the ORACLE Query Base. All problems detected were corrected.

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 in the ORACLE Query Base from which GeoSuite data were extracted. These included checks to ensure that lower level counts could be summed to obtain higher level counts and checks to ensure that the Indian reserve refusal flag was applied in a consistent manner between the geography levels. For example, if the Indian reserve refusal flag was applied at the CSD level, then the check ensured that the flag was also applied for the province where the CSD was located.

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 and the 2001 Census population by 2006 boundaries were tested to ensure that they could be summed up to a common higher geographic level. There were no errors found.

Users wishing to compare 2006 Census data with those of other censuses should take into account the fact that the boundaries of geographic areas may change from one census to another. In order to facilitate comparison, the 2001 Census population counts are adjusted as needed to take into account boundary changes between the 2001 and 2006 Censuses (refer to section on Completeness).

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).

Users are advised that when performing calculations (using the **Calculate** button), records with blanks in them for the variable are included in the calculations. The blank fields are simply set to zero in the calculation. For example, the average of a '2' and a blank would result in '1' and not '2'.

Hierarchy of geographic areas in the chart search section

The GeoSuite hierarchy shows urban areas (UAs) as parts of provinces. There were five exceptions for the 2006 Census where UAs cross provincial boundaries. These are:

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

The UA data is shown correctly in GeoSuite. For example, if a list of the UAs in Manitoba is selected, only the Manitoba portion of the population of Flin Flon will be shown on that list. (If the selection of UAs for a province is done by code then both the province code and the secondary province code should be considered.)

The GeoSuite hierarchy shows CMAs/CAs as parts of provinces. There were four exceptions for the 2006 Census where CMA/CAs cross provincial boundaries. These are:

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

The CMA/CA data are shown correctly in GeoSuite. For example, if a list of the CMA/CAs in New Brunswick is selected, only the New Brunswick portion of the population of Campbellton will be shown on that list. (If the selection of CMA/CAs 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 GeoSuite are consistent with those shown in the publication *A National Overview* (Catalogue no. 92-200-XPB). The '2001 Census population by 2006 boundaries' in GeoSuite is called '2001 Population' in the publication.

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 GeoSuite files. GeoSuite 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.

The dwelling counts refer to total private dwellings and private dwellings occupied by usual residents.

Some Indian settlements and Indian reserves were incompletely enumerated during the 2001 and/or 2006 Censuses. These reserves and settlements are identified wherever they appear in GeoSuite with the 2001 and/or 2006 Indian reserve refusal flag as appropriate.

The 2006 population and dwelling counts of any geographic area with a 2006 incompletely enumerated Indian reserve refusal flag, appears as a blank. The 2001 population of a geographic area with a 2001 incompletely enumerated Indian reserve 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 GeoSuite files. GeoSuite contains the correct number of the census subdivision types.

5. Technical specifications

System requirements

GeoSuite requires the following minimum system requirements:

- IBM Pentium processor 1 or higher
- Microsoft Windows NT 4.0 or higher
- Microsoft Mouse or compatible
- 64 MB RAM
- 30 MB of hard disk space
- CD-ROM reader

Installation of GeoSuite

GeoSuite requires approximately 150 MB of disk space to install both the software and data. It can be installed on computers running Windows™ NT or higher.

Note: It is strongly recommended that you close all running applications before installing GeoSuite. For Windows™ NT, you must be logged onto the system as the system administrator.

- Insert the CD-ROM into the CD-ROM drive.
- In the Program Manager, select **Run** from the **File** menu.
- Type **x:\GeoSuite.exe**, where **x** is the letter representing your CD-ROM drive. Then, click the **OK** button.
- Choose the language for the installation instructions. The language preference is for the installation instructions **only**. **GeoSuite** is a bilingual product and will prompt you to choose your language preference each time you run the program. **Note:** It is recommended that the installation language preference chosen be the same as your operating system.
- By default, the option to leave the **GeoSuite** data files on the CD/Network Drive is selected. To copy the data onto your hard drive, click on the empty circle to the left of this option and either accept or over-write the default location, or make the appropriate selection from the available lists.
- Click on the **Install** button to run the installation program.
- Follow the instructions on the screen.
- **GeoSuite** Setup will inform you when the installation is complete. Click **OK** to finish the installation procedure.
- If you selected in to have the data copied to your computer, **GeoSuite** Setup will copy the data now. You will be informed when the data is copied. Click **OK** and **GeoSuite** Setup will now install the user guide icon. **GeoSuite** Setup will inform you when the installation procedure is finished and the **GeoSuite 2006** program group will open.

Appendix A: Glossary

Adjusted counts

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

Block-face

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

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

Cartographic boundary files

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

Census agricultural region

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

Census consolidated subdivision

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

Census division

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

Census metropolitan area and census agglomeration

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

If the population of the urban core of a CA declines below 10,000, the CA is retired. However, once an area becomes a CMA, it is retained as a CMA even if its total population declines below 100,000 or the population of its urban core falls below 50,000. The urban

areas in the CMA or CA that are not contiguous to the urban core are called the urban fringe. Rural areas in the CMA or CA are called the rural fringe.

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

Census metropolitan area and census agglomeration influenced zone

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

Census subdivisions (CSDs) are assigned to a MIZ category based on the percentage of their resident employed labour force that has a place of work in the urban core(s) of CMAs or CAs. CSDs with the same degree of influence tend to be clustered. They form zones around CMAs and CAs that progress through the categories from 'strong' to 'no' influence as distance from the CMAs and CAs increases.

Census subdivision

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

Census tract

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

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

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 (CMAs) and census agglomerations (CAs), as well as population living in rural areas outside CMAs and CAs.

Spatial Data Infrastructure

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

The SDI supports a wide range of census operations, such as the maintenance and delineation of the boundaries of standard geographic areas (including the automated delineation of dissemination blocks, dissemination areas and urban areas), and geocoding. The SDI is also the source for generating many geography products for the 2006 Census, such as cartographic boundary files and road network files.

Spatial data quality elements

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

Standard Geographical Classification

The Standard Geographical Classification (SGC) is Statistics Canada's official classification for three types of geographic areas: provinces and territories, census divisions (CDs) and census subdivisions (CSDs). The SGC provides unique numeric identification (codes) for these hierarchically related geographic areas.

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 metropolitan area and census agglomeration influenced zone (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 is 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 $1,000 \pm [3 \times 65]$ or $1,000 \pm 195$).

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

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)	3011	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.

N.L. Newfoundland and Labrador

P.E.I. Prince Edward Island

N.S. Nova Scotia

N.B. New Brunswick

Que. Quebec

Ont. Ontario

Man. Manitoba

Sask. Saskatchewan

Alta. Alberta

B.C. British Columbia

Y.T. Yukon Territory

N.W.T. Northwest Territories

Nvt. Nunavut

Appendix D: 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	...
CE	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	...	...	...	...
ME	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	...	...	...	...	...	...	...	...	...

Census subdivision type (continued)		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 municipalit� de comt�	28	...	...	28	...	...	...	...	...	...	...	...	...	...
S�	Settlement / �tablissement	13	...	...	...	...	...	...	...	...	...	...	13	...	...
S-�	Indian settlement / �tablissement 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 organis�e	92	92	...	...	...	...	...	...	...	...	...	...	...	...
SV	Summer village	51	...	...	...	...	...	...	...	...	51	...	...	...	...
T	Town	751	279	7	31	15	...	88	52	147	110	15	3	4	...
TC	Terres r�serv�es aux Cris	8	...	...	...	...	8	...	...	...	...	...	...	...	...
TI	Terre inuite	12	...	...	...	...	12	...	...	...	...	...	...	...	...
TK	Terres r�serv�es 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	...	...	...	...	...	...	...	...

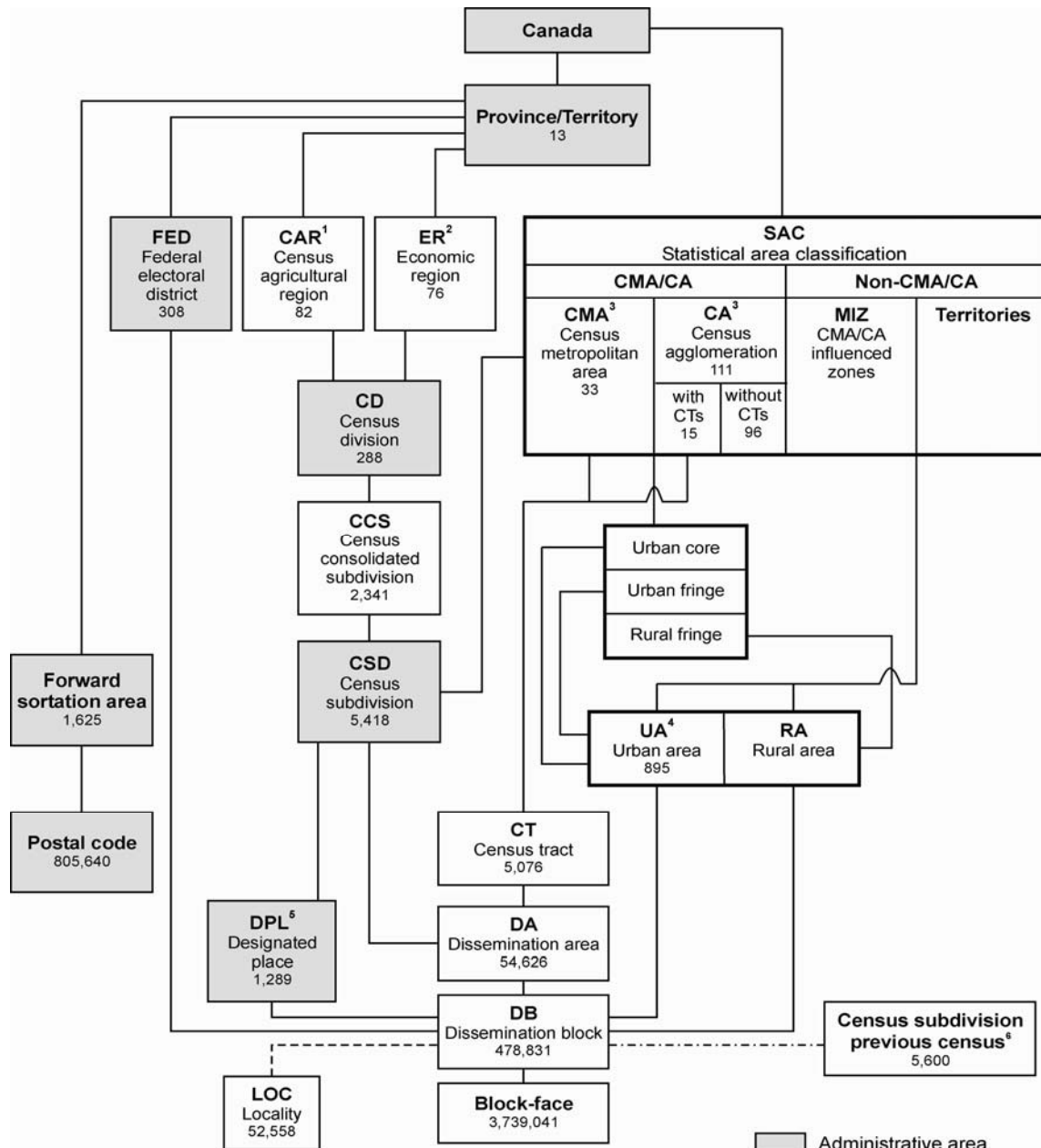
... not applicable

N.L. Newfoundland and Labrador
P.E.I. Prince Edward Island
N.S. Nova Scotia
N.B. New Brunswick
Que. Quebec

Ont. Ontario
Man. Manitoba
Sask. Saskatchewan
Alta. Alberta
B.C. British Columbia

Y.T. Yukon Territory
N.W.T. Northwest Territories
Nvt. Nunavut

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.

- Administrative area
- Statistical area
- Linkage using point-in-polygon process
- Best fit linkage

Appendix F: Amendment flag

Occasionally, data errors are uncovered after the publication of the population and dwelling counts. It is not possible to make changes to published counts such as those presented in the following table from the 2001 Census. This table presents the current census population and total private dwelling counts, along with the 2001 published and revised counts. The percentage change within the table is based on the 2001 revised counts, using current census boundaries, which also may affect the published amended count found on the Statistics Canada website. Users should note that a percentage change is only provided for total private dwelling counts. Counts for 'private dwellings occupied by usual residents' were not disseminated with the population and dwelling counts for the 2001 Census and therefore no percentage change can be calculated.

Geographic name	Standard geographical classification code	Census subdivision type	2006 pop	2001 pop	2001 rev. pop	% chg pop	2006 total priv. dwell.	2001 total priv. dwell.	2001 rev. total priv. dwell.	% chg total priv. dwell.
Newfoundland and Labrador										
Division No. 11										
Hopedale	1011030	T	530	559	581	-8.8	181	165	165	9.7
Quebec										
Les Laurentides										
Sainte-Agathe-des-Monts	2478032	V	9,679	8,687	8,964	8.0	5,642	5,494	5,695	-0.9
Les Pays-d'en-Haut										
Sainte-Marguerite-du-Lac-Masson	2477012	V	2,498	2,093	2,170	15.1	1,904	1,780	1,780	7.0
La Vallée-de-la-Gatineau										
Grand-Remous	2483095	MÉ	1,249	1,216	1,261	-1.0	704	635	655	7.5
Aumond	2483090	CT	775	640	658	17.8	641	353	361	77.6
Déléage	2483070	MÉ	1,964	1,999	2,053	-4.3	932	859	881	5.8
Egan-Sud	2483075	MÉ	508	512	539	-5.8	216	223	229	-5.7
Maniwaki	2483065	V	4,102	3,571	4,020	2.0	2,028	2,001	2,079	-2.5
Messines	2483060	MÉ	1,610	1,322	1,501	7.3	1,013	1,018	1,036	-2.2
Témiscouata										
Packington	2413015	PE	657	580	613	7.2	383	368	380	0.8
Ontario										
Cochrane										
Cochrane, Unorganized, North Part	3556092	NO	2,447	2,975	3,237	-24.4	1,870	1,818	1,928	-3.0
Moosonee	3556106	TV	2,006	936	1,916	4.7	658	297	659	-0.2
Thunder Bay										
Greenstone	3558075	MU	4,906	5,662	5,907	-16.9	2,596	2,702	2,702	-3.9

Geographic name (continued)	Standard geographical classification code	Census subdivision type	2006 pop	2001 pop	2001 rev. pop	% chg pop	2006 total priv. dwell.	2001 total priv. dwell.	2001 rev. total priv. dwell.	% chg total priv. dwell.
Ontario (continued)										
Hamilton										
Hamilton ¹	3525005	C	504,559	490,268	490,743	2.8	204,962	194,154	194,354	5.5
Manitoba										
Division No. 22										
Division No. 22, Unorganized	4622046	NO	2,313	2,153	2,401	-3.7	1,007	1,139	1,202	-16.2
Cross Lake 19A	4622052	IRI	1,663	502	1,233	34.9	369	102	346	6.6
Cross Lake 19	4622051	IRI	1,586	1,491	1,945	-18.5	373	349	378	-1.3
Cross Lake 19E	4622067	IRI	605	551	646	-6.3	126	112	108	16.7
Saskatchewan										
Division No. 7										
Beaver Flat	4707020	RV	58	34	21	176.2	108	89	89	21.3
Alberta										
Division No. 19										
Hythe	4819008	VL	821	582	680	20.7	288	281	281	2.5
Northwest Territories										
Fort Smith										
Fort Smith, Unorganized	6106097	NO	339	15	238	42.4	486	10	415	17.1
Wrigley	6106044	SET	122	165	182	-33.0	63	55	64	-1.6
Behchokò	6106031	CG	1,894	1,552	1,702	11.3	518	453	488	6.1
Detah	6106021	SET	247	182	234	5.6	86	59	79	8.9
Lutselk'e	6106020	SET	318	248	322	-1.2	144	75	119	21.0
Fort Resolution	6106018	SET	484	525	574	-15.7	265	291	296	-10.5
Enterprise	6106003	SET	97	61	67	44.8	41	25	35	17.1
Inuvik										
Sachs Harbour	6107041	HAM	122	114	114	7.0	54	48	56	-3.6
Inuvik	6107017	T	3,484	2,894	3,152	10.5	1,542	1,238	1,391	10.9
Fort McPherson	6107015	HAM	776	761	773	0.4	293	335	307	-4.6
Norman Wells	6107007	T	761	666	775	-1.8	370	323	365	1.4

2006 pop: 2006 population

2001 pop: 2001 population

2001 rev. pop: Revised 2001 population count

% chg pop: Percentage change in population based on revised 2001 population count

2006 total priv. dwell.: 2006 Total private dwelling count

2001 total priv. dwell.: 2001 Total private dwelling count

2001 rev. total priv. dwell.: 2001 Revised total private dwelling count

% chg total priv. dwell.: Percentage change in the total private dwelling count based on the revised 2001 total private dwelling count

1. 'Hamilton, City' is the same geographic area as the census division of Hamilton; therefore, the 2001 data for the census division of Hamilton should be used with caution.

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