Census Forward Sortation Area Boundary File, Reference Guide

Census year 2006

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Census Forward Sortation Area Boundary File, Reference Guide

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What's new?

- All boundary files are available for download from the Statistics Canada website.

- Digital boundary files are reinstated for the 2006 Census.

- The hydrographic files contain improved details, including water feature names and types, and scale dependent ranking.

- New methodology was used to assign forward sortation areas to census dissemination blocks and to create the Census Forward Sortation Area Boundary File.

Table of contents

1. About this guide

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

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

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

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

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2. Overview

The 2006 Census Forward Sortation Area Boundary File contains the boundaries of 1,604 forward sortation areas (FSA; identified by the first three characters of the postal code) derived from postal codes captured from the 2006 Census of Population questionnaires. Through analysis of the postal codes reported by census households, a single forward sortation area was assigned to each dissemination block based on the most frequently captured forward sortation area for the dissemination block. Unreported dissemination blocks were assigned a forward sortation area based on proximity to reported dissemination blocks in the same province or territory or nearest Canada Post Corporation delivery installation.

The 2006 Census Forward Sortation Area Boundary File is available for download in two types: cartographic and digital. See Figure 2.1.

Figure 2.1 Province and territory boundary files, 2006 Census
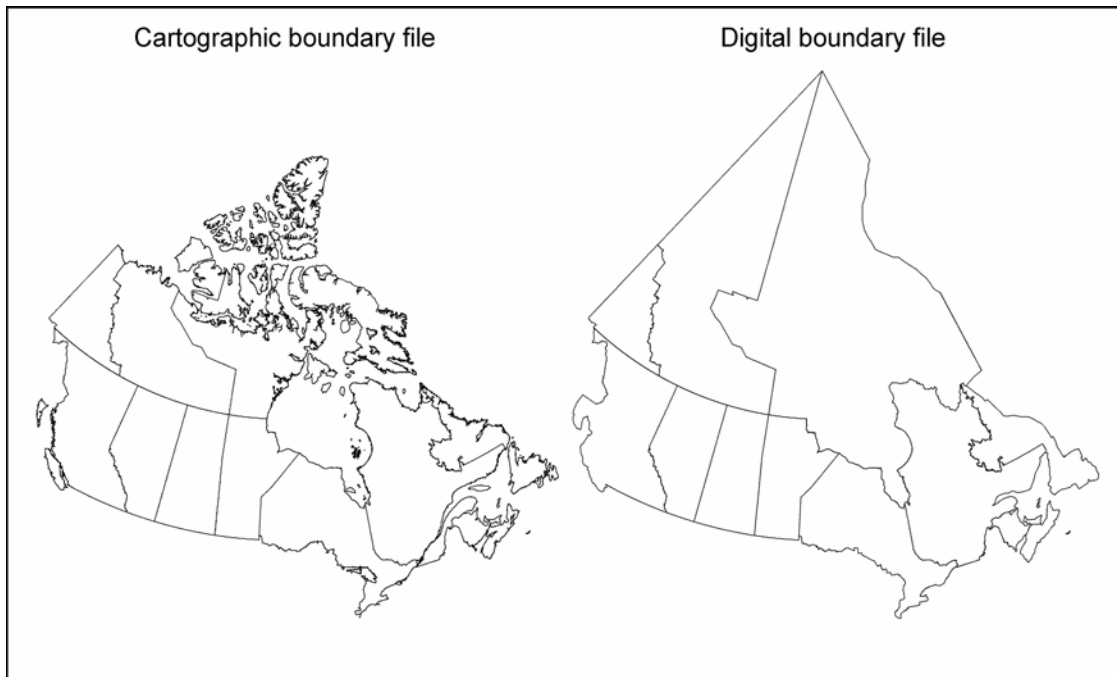
The 2006 Census Forward Sortation Area Boundary File provides a framework for mapping and spatial analysis. Digital boundary files depict the full extent of the geographical areas, including the coastal water area. Cartographic boundary files depict the geographical areas using the shorelines of the major land mass of Canada and its coastal islands. The files are available in three formats: ArcInfo® (.shp), Geography Markup Language (.gml), and MapInfo® (.tab).

Separate water files for lakes, some rivers, and some estuaries are also available. These 'water' layers can be used for additional reference purposes when mapping or displaying the boundaries in either the digital or cartographic boundary files.

Reference dates

Postal codes were determined to be applicable for the 2006 Census, if they appeared on Canada Post Corporation's Address Lookup File for May 2006, the month of the census. However, postal codes provided by the respondents were considered acceptable if they were found in the file from Canada Post Corporation within the six months leading up to the census. This is consistent with the effort to represent the FSA and the postal code whenever they could be considered as being in use at the time of the census.

The geographic reference date is a date determined by Statistics Canada to finalize the geographic framework for which the census data will be collected, tabulated and reported. The geographic reference date for the 2006 Census, and therefore for the geographic area boundaries used in the production process, is January 1, 2006.

3. How to use this product

Purpose of the product

The 2006 Census Forward Sortation Area Boundary File is released as a geographic reference tool for 2006 Census data, providing a spatial representation of forward sortation areas (FSAs) as reported by census respondents.

This product is based upon reported postal codes rather than the postal code assigned to the address by Canada Post Corporation. As a result, differences in the forward sortation area structure will be noted when compared to *The Canadian FSA Map Book* published by Canada Post Corporation or the FSA maps shown on their website. These differences should not be construed as one product being more or less accurate than the other. Rather they should be interpreted as places where respondents reported a postal code other than the one assigned by Canada Post Corporation.

Other differences may arise from the methodology used to delineate the forward sortation area boundaries. As described in Section 4, Data quality, the method used for the product relies on the 2006 Census responses, while those of Canada Post Corporation's are a result of the assignment of postal codes for use as a delivery mechanism.

The Census Forward Sortation Area Boundary File is available in two formats: digital and cartographic. The 2006 Digital Boundary File portrays the boundaries used for the 2006 Census collection and dissemination activities and as such often extends as straight lines into bodies of water. The 2006 Cartographic Boundary File supports the spatial analysis and thematic mapping of data from the 2006 Census where displaying the main landmass of Canada is preferred.

With the appropriate computer software, the boundary files provide the framework for thematic mapping to support applications such as: land use and demographic studies, or social, economic and market research. Geographic identifiers permit linkage of statistical data to geographic areas depicted in the boundary files. Boundary files can also be used to create new geographic areas by aggregating standard geographic areas and for other data manipulations available with the user's software. The boundary files can be used with the 2006 Road Network File, which provides additional geographic context for mapping applications.

The cartographic boundary files were created for thematic mapping, particularly choropleth mapping of census data. The shorelines were integrated with the boundaries to enable users to easily shade the land polygons. Supplementary hydrography is also available to support the mapping of inland lakes, oceans and land outside the landmass of Canada. The cartographic boundary files include the shoreline around Canada and the shoreline of larger inland water bodies within Canada (e.g., Great Lakes).

Limitations

The forward sortation areas contained within this product are those reported by census respondents for their place of residence. The postal code provided by a respondent may not be the same postal code as the one assigned to their dwelling by Canada Post Corporation. For instance, some respondents reported the postal code of a business building, possibly their work address.

All households that provided a postal code with the same FSA were grouped to calculate FSA totals in the Highlight Tables. As a result, it is possible that households located in a particular province be included in an FSA found in another province. Therefore, calculating a provincial population and dwelling count by grouping FSAs will not necessarily yield the same count as the one provided in the provincial or territorial population and dwelling counts table. Two FSAs are reported in more than one province or territory for the 2006 Census.

The product was created to support the analysis of data from the 2006 Census of Population. It may not be adequate for other purposes, especially if users are interested in business postal codes or linking information from other administrative sources.

The positional accuracy of the Census Forward Sortation Area Boundary File does not support cadastral, surveying, digitizing or engineering applications.

The data used to create the product is based on source data that had a wide range of scales. As for all other boundary files, these forward sortation area boundaries will not be precise if plotted at a larger scale than the scale of the source material used in their creation. The maps should not be used for digitizing purposes or to determine the precise location of boundaries. They are not intended to serve as a detailed legal or cadastral representation of the geographic areas.

General methodology

The Census Forward Sortation Area Boundary File contains the boundaries of 1,604 forward sortation areas derived from postal codes captured from the 2006 Census questionnaires. By analysing the postal codes reported by census households, a single FSA was assigned to each dissemination block (most often the FSA reported by the largest number of census households). FSA polygons were formed by grouping dissemination blocks.

The postal code is a six-character code defined and maintained by Canada Post for the purpose of sorting and delivering mail. The first three characters of the postal code identify the FSA. Individual FSAs are associated with a postal facility from which mail delivery originates. For the census, the postal code is captured for all households from the address information on the front page of the 2006 Census questionnaire on May 16, 2006.

Content

The product contains boundaries for 1,604 forward sortation areas. In total, census respondents reported 1,623 forward sortation areas, 19 of which are not represented given the methodology described below. The 1,604 forward sortation areas portrayed on the file cover the entire country of Canada.

Two FSAs are reported in more than one province or territory for the 2006 Census. These FSAs are:

- 'S0M', which was reported in Alberta and Saskatchewan
- 'X0E', which was reported in the Northwest Territories and Nunavut.

However, in neither case was the response significant enough to warrant a separate polygon in the secondary province or territory in the 2006 Census Forward Sortation Area Boundary File.

A breakdown of the number of forward sortation areas by province or territory is provided below.

Table 3.1 Number of forward sortation areas by province or territory

Province/territory	Forward sortation areas
Newfoundland and Labrador	35
Prince Edward Island	7
Nova Scotia	76
New Brunswick	110
Quebec	407
Ontario	513
Manitoba	64
Saskatchewan	46
Alberta	150
British Columbia	187
Yukon Territory	3
Northwest Territories	3
Nunavut	3
Canada	**1,604**

A geographic area representing a forward sortation area can be in multiple parts.

Comparison with other products

The 2006 Census Forward Sortation Area Boundary File is the only product available from Statistics Canada that provides a spatial distribution of the use of forward sortation areas by census respondents.

The 2006 Census Forward Sortation Area Boundary File product is compatible with other Statistics Canada spatial data products such as the Road Network File and the 2006 Census Boundary Files. The 2006 Census Forward Sortation Area Boundary File is not compatible with the 2001 Census Forward Sortation Area Boundary File.

Two standard data products will be available for forward sortation areas from the 2006 Census. In particular, the Statistics Canada website carries Highlight Tables featuring population and dwelling counts for forward sortation areas. These tables are available free of charge from www.statcan.ca. Standard profiles and cross-tabulations of the population, by forward sortation area, will also be available and users will be able to order custom tabulations. Please see Section 4, Data quality, for more information on consistency with the published population and dwelling counts.

4. Data quality

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

Lineage

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

Sources

The product was derived from the 2006 Census postal code variable and the National Geographic Database. The postal code is captured for all households from the address information provided or accepted by the respondent on the front page of the census questionnaire. For the 2006 Census, held on May 16, some census questionnaires contained a pre-printed postal code that the respondents could either accept or correct; however, other census questionnaires did not contain a pre-printed postal code and the respondents were asked to provide one by writing it on the questionnaire. These reported postal codes were processed through a series of edit operations that identified missing or invalid responses and replaced them with a valid response to produce the 2006 Census postal code variable. At the end of this process, a final postal code was associated with each census household. The 2006 Census population and dwelling counts for forward sortation areas (FSAs) are available on the Statistics Canada website (www.statcan.ca).

Creation of the 2006 Digital Boundary File

Steps 1 through 6 were performed for each province and territory individually.

Step 1: Initial assignment of FSAs to dissemination blocks

The FSA was derived from the first three characters of the postal code of each household. The FSA most frequently associated with households in a dissemination block was assigned to that dissemination block.

Step 2: Creation of the initial postal code point layer

The initial forward sortation area (FSA) assigned in step 1 was linked with the representative point of the dissemination block. FSAs for dissemination blocks without households were not included in this layer. In Figure 4.1, the dissemination blocks with an associated FSA are shaded grey.

Figure 4.1 Dominant reported point layer
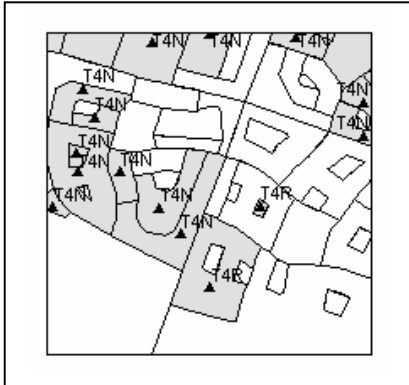
Step 3: Creation of the forward sortation area layer with non-blank dissemination block polygons

Dissemination blocks that did not have an assigned FSA value were assigned the FSA value of the nearest neighbouring representative point (see Figure 4.2).

Figure 4.2 Assignment of forward sortation area to blank dissemination blocks
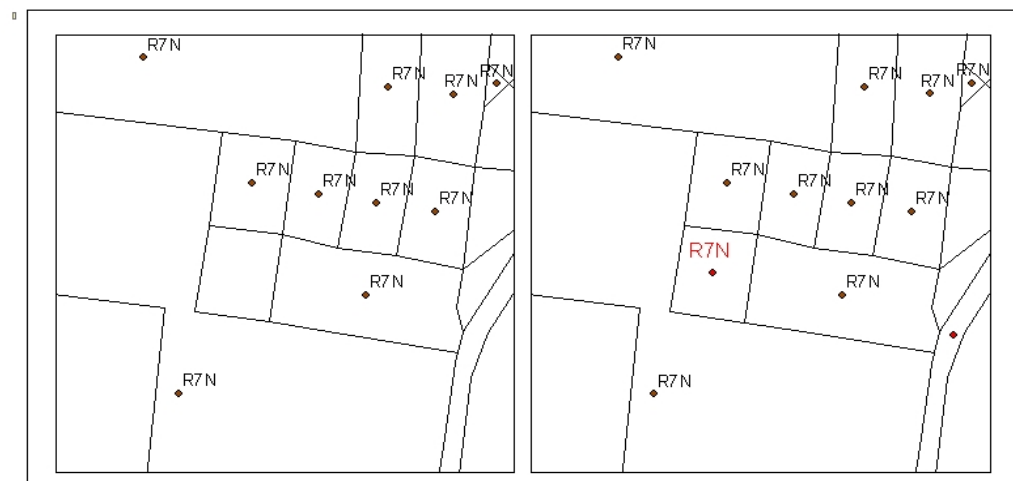
Step 4: Creation of forward sortation areas (FSAs)

The neighbouring polygons with the same FSA value were aggregated to form larger FSA areas (see Figure 4.3).

Figure 4.3 Integration of the forward sortation area and the dissemination blocks
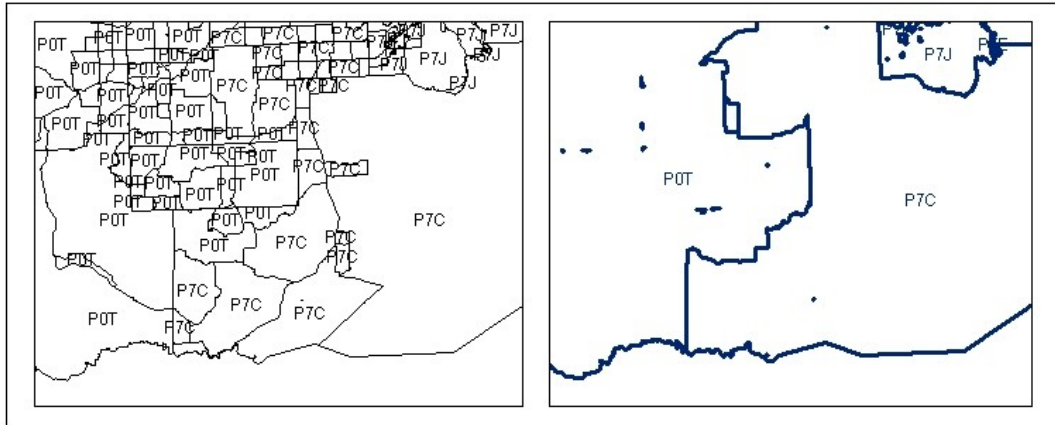
Step 5: Manual editing and generalization of the polygons to improve aesthetic appearance of boundary file (see Figure 4.4).

This included the following steps:

1. Where there were very small polygons with an FSA value that didn't match that of the surrounding area, these were re-assigned the value of the surrounding area, when appropriate.
2. Where FSAs were not contiguous, these dissemination blocks were examined in terms of the second most frequently reported FSA or the third most frequently reported FSA. FSAs were then made more contiguous by taking into consideration the less frequently reported postal codes.

Figure 4.4 Generalization of the forward sortation area
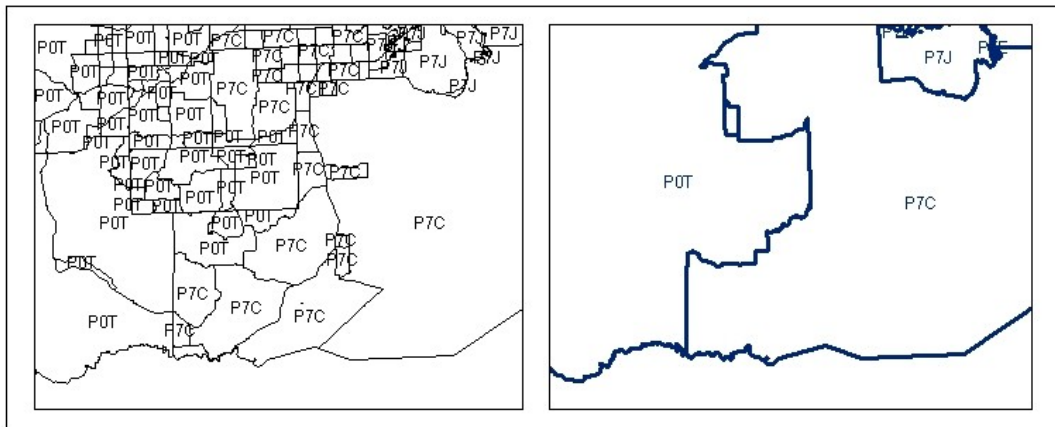
Step 6: Creation of the provincial/territorial forward sortation area piece

The layer created in Step 4 was dissolved on the forward sortation area. This resulted in a provincial/territorial forward sortation area piece.

Step 7: Integration of provincial and territorial pieces

The various provincial and territorial pieces were appended into a single coverage, producing a national Census Forward Sortation Area Digital Boundary File.

Creation of the 2006 Cartographic Boundary File

The creation of the 2006 Cartographic Boundary File used the 2006 Digital Boundary File and a set of hydrographic features from the National Geographic Database. The hydrographic features used included coastal features (e.g., oceans, bays), the Great Lakes, and the St. Lawrence River. These data were used to remove from the Digital Boundary File that portion of the geographical area that is within these major coastal water features.

Additional formatting

The files were transformed from Lambert conformal conic projection into latitude/longitude coordinates. Finally, the files were verified, translated into French and English versions and appropriately labelled.

The files were converted into three output formats: ArcInfo® [.shp], Geography Markup Language [.gml] and MapInfo® [.tab].

Coastal features

The coastal features were created by selecting water features exterior to Canada's land mass from the National Geographic Database's hydrographic reference layers. These reference data were sourced from the National Topographic Data Base (1:50,000 and 1:250,000) and the Digital Chart of the World (1:1,000,000). This included polygon features forming the Pacific, Atlantic and Arctic oceans, as well as the Beaufort and Labrador seas and all related channels, straits, passages, inlets and bays including Hudson Bay and James Bay. In addition, features forming the Great Lakes, Lake of the Woods and the St. Lawrence River were included.

The coastal features were then generalized by removing all islands smaller than 100,000 square metres except when the islands accounted for the only land area for geographic areas or when they were intersected by road arcs found on the Road Network File.

Inland water

The inland water file was created by selecting water features from the National Geographic Database's hydrographic reference layers. These reference data were sourced from the National Topographic Data Base (1:50,000 and 1:250,000) and the Digital Chart of the World (1:1,000,000). Each feature was assigned a rank based on its size and/or cultural importance. The largest and most important features have lower rank values. These ranks can be used to select and format features for map display at different scales.

Positional accuracy

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

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

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

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).

The attribute data associated with the polygons in the 2006 Census Forward Sortation Area Boundary File are derived from postal codes captured from the 2006 Census of Population questionnaires. Edit procedures verify that a reported postal code was valid and consistent with neighbouring postal codes. Postal codes which failed these checks were imputed, thus ensuring that 100% of the reported postal codes were valid postal codes according to Canada Post Corporation as of the postal code reference month.

It is important to note that postal codes were not verified against Canada Post Corporation's address information, merely that the postal code was considered valid by Canada Post Corporation.

Table 4.1 shows the percentage of census households that are in a census forward sortation area polygon that matches the code reported on the census questionnaire.

Table 4.1 Percentage of census households with reported forward sortation area on census questionnaire

Province/territory	Percentage of households
Newfoundland and Labrador	98.61
Prince Edward Island	97.55
Nova Scotia	96.94
New Brunswick	98.15
Quebec	98.73
Ontario	98.01
Manitoba	98.72
Saskatchewan	98.98
Alberta	98.52
British Columbia	98.27
Yukon Territory	98.39
Northwest Territories	99.63
Nunavut	99.82
Canada	**98.32**

Logical consistency

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

Boundaries found in this product are compatible with those found in other spatial products produced as part of the suite of 2006 Census products. Forward sortation area (FSA) boundaries are derived from the dissemination block level of the 2006 dissemination block boundaries and as such are inherently consistent with those features.

The FSA Boundary File is derived from the 2006 Census responses and not from address-based data from Canada Post Corporation. Whole dissemination blocks are assigned to one and only one FSA in the FSA Boundary File. The Postal Code Conversion File (PCCF) is however based on address-based data from Canada Post Corporation and contains block-face level data. Furthermore, since whole dissemination blocks are assigned one and only one FSA, the population and dwelling counts derived by aggregating dissemination blocks assigned to an FSA in the boundary file will not match the aggregations based on each household's reported FSA as found in the Highlight Tables.

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

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.

The product contains boundaries for 1,604 forward sortation areas. In total, 1,623 forward sortation areas were reported by at least one household in the 2006 Census.

There are a number of reasons why a reported forward sortation area may not be represented in the 2006 Census Forward Sortation Area Boundary File. For example, a forward sortation area may not be the most frequently reported on any dissemination block. This would result in the forward sortation area not appearing in the product.

5. Technical specifications

Software formats

The 2006 Census Forward Sortation Area Boundary File product is available for download from the Statistics Canada website in the following formats:

- ArcInfo® format version 9.0
  File extension: .shp

- Geography Markup Language version 2.1.2
  File extension: .gml

- MapInfo® format version 7.0
  File extension: .tab

Installation instructions

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

An additional template (.tem) file is included with the Geography Markup Language files for use with the Java Unified Mapping Platform (JUMP) free GIS data viewer.

Geographic representation

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

Datum: NAD 83
Coordinates: Latitude/Longitude

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

Record layouts

Table 5.1 shows the record layouts for the Census Forward Sortation Area Boundary File.

Table 5.1 Record layouts - ArcInfo® (.shp), Geography Markup Language (.gml) and MapInfo® (.tab) files

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcInfo®
Shape	Geometry	Specific to ArcInfo®
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language
CENSUS_FSA	char (3)	Uniquely identifies a census forward sortation area (composed of 3 alpha-numeric digits)
PRUID	char (2)	Uniquely identifies a province or territory

Table 5.2 Values for province/territory attribute

Province code	Province/territory name
10	Newfoundland and Labrador
11	Prince Edward Island
12	Nova Scotia
13	New Brunswick
24	Quebec
35	Ontario
46	Manitoba
47	Saskatchewan
48	Alberta
59	British Columbia
60	Yukon Territory
61	Northwest Territories
62	Nunavut

Supplementary hydrographic layers

The supplementary hydrographic layers are provided to allow for the mapping of inland water, oceans, Great Lakes, St. Lawrence River and land outside the Canadian land mass. The hydrographic layers were created to be used in conjunction with the boundary files. The record layout in Table 5.3 below is for interior water bodies (polygons), coastal water bodies (polygons) and interior rivers (lines). Table 5.4 below displays the recommended ranks for scale dependent mapping.

Table 5.3 Record layouts - ArcInfo® (.shp), Geography Markup Language (.gml) and MapInfo® (.tab) files

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcInfo®
Shape	Geometry	Specific to ArcInfo®
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language
HYDROUID	double (11)	Uniquely identifies a water feature
NAME	char (120)	Feature name
TYPE	char (6)	Feature type
RANK	double (11)	Feature rank
PRUID	char (2)	Uniquely identifies a province or territory

Table 5.4 Recommended ranks for scale dependent mapping

Interval (1:)	Rank	Number of polygons	Number of lines
10,000,000 plus	1	87	0
6,000,000 to 9,999,999	2	2,555	7,360
2,000,000 to 5,999,999	3	2,091	9,762
500,000 to 1,999,999	4	7,526	18,157
100,000 to 499,999	5	12,967	36,526
25,000 to 99,999	6	49,697	36,475

Appendix A Glossary

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

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

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

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

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

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

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

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

If the population of the urban core of a CA declines below 10,000, the CA is retired. However, once an area becomes a CMA, it is retained as a CMA even if its total population declines below 100,000 or the population of its urban core falls below 50,000. The urban areas in the CMA or CA that are not contiguous to the urban core are called the urban fringe. Rural areas in the CMA or CA are called the rural fringe.

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

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

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

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

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

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

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.

Forward sortation area
The forward sortation area (FSA) is identified by the first three characters of the postal code. FSAs are associated with a postal facility from which mail delivery originates. The average number of households served by an FSA is approximately 8,000, but the number can range from zero to more than 60,000 households. This wide range of households can occur because some FSAs may serve only businesses (zero households) and some FSAs serve very large geographic areas.

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

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

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

Geographic reference date
The geographic reference date is a date determined by Statistics Canada for the purpose of finalizing the geographic framework for which census data will be collected, tabulated and reported. For the 2006 Census, the geographic reference date is January 1, 2006.

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

Land area data are unofficial, and are provided for the sole purpose of calculating population density.

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

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

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

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

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

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

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

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

Postal code
The postal code is a six-character code defined and maintained by Canada Post Corporation for the purpose of sorting and delivering mail.

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

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

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

Representative points are generated for block-faces, dissemination blocks, dissemination areas, census subdivisions, urban areas and designated places.

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

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

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

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

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

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

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

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

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

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

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

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

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

'Urban core' is a large urban area around which a CMA or a CA is delineated. The urban core must have a population (based on the previous census) of at least 50,000 persons in the case of a CMA, or at least 10,000 persons in the case of a CA.

The urban core of a CA that has been merged with an adjacent CMA or larger CA is called the 'secondary urban core'.

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

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

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

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

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

Appendix B Hierarchy of standard geographic units for dissemination, 2006 Census

Figure B.1 Hierarchy of standard geographic units for dissemination, 2006 Census
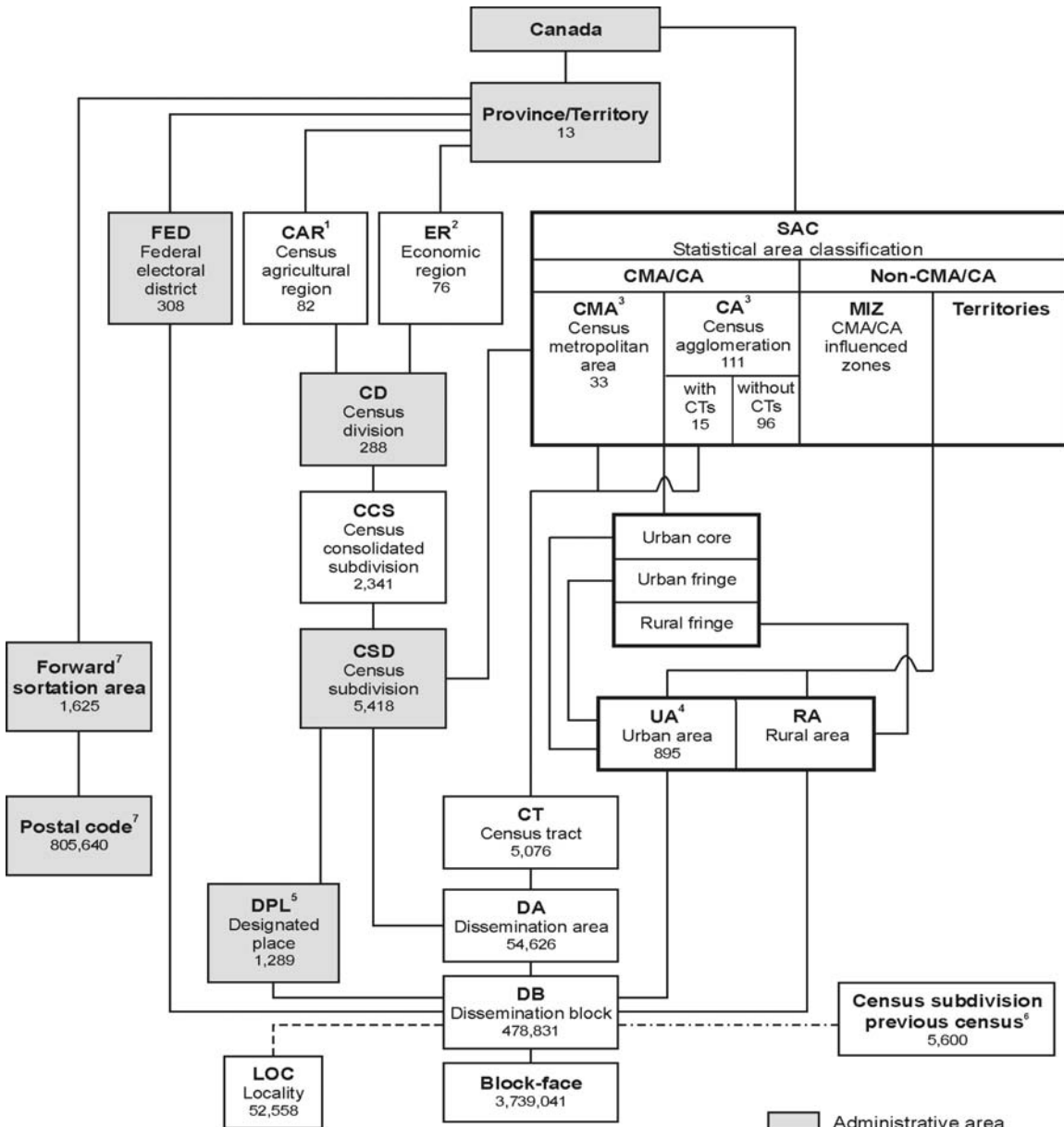
1. Census agricultural regions in Saskatchewan are composed of census consolidated subdivisions.
2. Economic regions are composed of complete census divisions except for one CD in Ontario.
3. One CMA and three CAs cross provincial boundaries.
4. Five UAs cross provincial boundaries.
5. Designated places 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.
7. Postal codes and forward sortation areas valid as of May 2006 (Canada Post Corporation).

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

Appendix C Geographic units by province and territory, 2006 Census

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

Geographic unit	Canada 2001	Canada 2006	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.
Federal electoral district (2003 Representation Order)	301[1]	308	7	4	11	10	75	106	14	14	28	36	1	1	1
Economic region	76	76	4	1	5	5	17	11	8	6	8	8	1	1	1
Census agricultural region	82	82	3	3	5	4	14	5	12	20	8	8	0	0	0
Census division	288	288	11	3	18	15	98	49	23	18	19	28	1	2	3
Census consolidated subdivision	2,446	2,341	89	68	43	151	1,008	316	127	300	77	156	1	2	3
Census subdivision (CSD)	5,600	5,418	377	113	100	276	1,294	585	297	984	453	836	35	37	31
CSD dissolutions (January 2, 2001 to January 1, 2006)	340	...	9	0	0	0	282	5	7	29	4	4	0	0	0
CSD incorporations (January 2, 2001 to January 1, 2006)	...	158	5	0	2	1	100	4	6	11	5	24	0	0	0
Designated place	1,261	1,289	182	0	49	167	83	88	58	159	262	240	1	0	0
Census metropolitan area	27	33	1	0	1	2	6[2]	15[2]	1	2	2	4	0	0	0
Census agglomeration (CA)	113	111	3	2	4	5[2]	26[2]	28[2]	3	7[2]	12[2]	22	1	1	0
CA with census tracts	16	15	0	0	0	1	3	4	0	0	3	4	0	0	0
CA without census tracts	94	96	3	2	4	4[2]	23[2]	24[2]	3	7[2]	9[2]	18	1	1	0
Census tract	4,798	5,076	46	0	88	99	1,289	2,136	168	105	491	654	0	0	0
Urban area	913	895	32	7	36	32[2]	226[2]	260[2]	38[2]	58[2]	107[2]	95	1	3	5
Locality	52,291	52,558	2,445	964	3,924	3,450	12,617	10,905	2,349	3,898	3,472	7,708	363	173	290
Dissemination area	52,993	54,626	1,062	292	1,633	1,439	13,408	19,177	2,152	2,431	5,357	7,471	78	84	42
Dissemination block	478,707	478,831	8,199	3,251	14,656	14,864	108,751	126,244	30,421	51,729	65,071	52,808	1,261	967	609
Block-face	3,764,232	3,739,041	78,376	26,190	154,564	132,873	835,458	942,567	198,063	361,069	507,859	473,418	11,888	11,620	5,096
Forward sortation area	1,595	1,625	35	7	76	110	415	522	64	48	150	189	3	3	3
Postal code	758,658	805,640	10,378	3,157	25,313	57,355	202,972	269,676	23,943	21,541	76,924	112,904	942	506	29

… not applicable
1. Federal electoral districts (1996 Representation Order).
2. Census metropolitan areas, census agglomerations and urban areas crossing provincial boundaries are counted in both provinces, and, therefore, do not add up to the national total.
Sources: Statistics Canada, 2006 Census of Population; Canada Post Corporation, May 2006.

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

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

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

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

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

… not applicable

Source: Statistics Canada, 2006 Census of Population.

Appendix E Spatial file naming conventions

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

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

First character: projection of file

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

Next three characters: primary geographic area of file

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

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

Next three numbers: geographic code of coverage

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

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

Next character: file type

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

Next two numbers: geographic reference date

The geographic reference date is a date determined by Statistics Canada for the purpose of finalizing the geographic framework for which census data will be collected, tabulated and reported. For the 2006 Census, the geographic reference date is January 1, 2006.

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

Next character: file format

a	ArcInfo® shapefile (.shp)
g	Geography Markup Language (GML) file (.gml)
m	MapInfo® TAB file (.tab)

Final two characters: language

_e	English
_f	French

Examples of the use of the file naming conventions

- The 2006 Census Forward Sortation Area Digital Boundary File with English attributes in ArcInfo® format: gfsa000a06a_e.zip

- The 2006 Census Forward Sortation Area Cartographic Boundary File with French attributes in Geography Markup Language format: grta000b06g_f.zip

Appendix F Geography Markup Language (GML)

Scope

The Geography Markup Language (GML) is an XML encoding for the modelling, transport and storage of geographic information including both the spatial and non-spatial properties of geographic features. This specification defines the XML Schema syntax, mechanisms, and conventions that:

- Provide an open, vendor-neutral framework for the definition of geospatial application schemas and objects
- Allow profiles that support proper subsets of GML framework descriptive capabilities
- Support the description of geospatial application schemas for specialized domains and information communities
- Enable the creation and maintenance of linked geographic application schemas and datasets
- Support the storage and transport of application schemas and datasets
- Increase the ability of organizations to share geographic application schemas and the information they describe.

U.S. Census Bureau partnership – TIGER/GML

Statistics Canada has committed to working with the U.S. Census Bureau to ensure cross-border consistency in our products, and foster the development and application of a common, North American data model.

Like the United Kingdom Ordnance Survey and the U.S. Census Bureau, Statistics Canada has chosen to disseminate data in the Open Geospatial Consortium standard Geography Markup Language (GML) format. This standard allows organisations to achieve maximum compatibility not only of format but eventually of content. In partnership with U.S. Census Bureau, Statistics Canada is committed to providing a harmonized North American street network file by 2008. This release of the digital boundary files and cartographic boundary files, along with the road network file, is the first step in delivering a harmonized international street network by 2008.

Example of 2006 digital boundary file dataset in GML format

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<wfs:FeatureCollection xmlns:c2006="http://geodepot.statcan.ca/2006"
               xmlns:ogc="http://www.opengis.net/ogc"
               xmlns:gml="http://www.opengis.net/gml"
               xmlns:wfs="http://www.opengis.net/wfs"
               xmlns:xlink="http://www.w3.org/1999/xlink"
               xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
               xmlns="http://geodepot.statcan.ca/2006">
  <gml:boundedBy>
    <gml:Box srsName="">
      <gml:coordinates>
              -128.94260038423948,51.165575832724286
              -59.991263338764725,89.99942707562514
          </gml:coordinates>
    </gml:Box>
  </gml:boundedBy>
  <gml:featureMember>
    <CensusSubdivision fid="C2006_CF_6204001">
      <csdUid>6204001</csdUid>
```

Example of 2006 digital boundary file dataset in GML format (continued)

```
        <csdname>Sanikiluaq</csdname>
        <csdtype>HAM</csdtype>
        <prUid>62</prUid>
        <prname>Nunavut</prname>
        <cdUid>6204</cdUid>
        <cdname>Baffin</cdname>
        <cdtype>REG</cdtype>
        <sactype>8</sactype>
        <erUid>6210</erUid>
        <ername>Nunavut</ername>
        <digitalBoundary>
          <gml:MultiPolygon srsName="EPSG:4269">
            <gml:polygonMember>
              <gml:Polygon>
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Appendix G Hydrography ranked layers

The lakes and rivers (polygon) file includes water layers which are ranked based on the number of water features displayed. The six layers contain various levels of hydrographic detail and are designed to suit different map scales and applications. For instance, rank 1 contains some of the largest lakes in Canada, excluding the St. Lawrence River, the Great Lakes and Lake of the Woods. By contrast, rank 6 contains an expanded set of water features for mapping at larger scales.

These layers are designed to be used at, but are not limited to, specific scales. The rank attribute is created specifically for use with Statistics Canada's census boundary files.

Lakes and rivers (polygon) file ranked layer details:

Rank 1: Contains polygons forming lakes. There are a total of 87 polygons in rank 1, 85 named polygons and 2 unnamed polygons.

Recommended scales for rank 1: 1:10,000,000 or smaller scale.

Rank 2: Contains polygons forming lakes and rivers which are not included within rank 1. There are a total of 2,555 polygons in rank 2, 1,484 named polygons and 1,071 unnamed polygons.

Recommended scales for rank 2: between 1:6,000,000 and 1:9,999,999.

Rank 3: Contains polygons forming lakes and rivers which are not included within ranks 1 or 2. There are a total of 2,091 polygons in rank 3, 949 named polygons and 1,142 unnamed polygons.

Recommended scales for rank 3: between 1:2,000,000 and 1:5,999,999.

Rank 4: Contains polygons forming lakes and rivers which are not included within ranks 1 through 3. There are a total of 7,526 polygons in rank 4, 5,251 named polygons and 2,275 unnamed polygons.

Recommended scales for rank 4: between 1:500,000 and 1:1,999,999.

Rank 5: Contains additional water features across Canada, with a focus on census metropolitan areas. This layer was derived by examining the hydrography present in reference maps of each census metropolitan area and adding all water features present in these maps. Because of the concentration of water features within census metropolitan areas, this rank is only recommended when displaying a specific census metropolitan area. This rank contains polygons forming lakes and rivers which are not included within ranks 1 through 4. There are a total of 12,967 polygons in rank 5, 5,786 named polygons and 7,181 unnamed polygons.

Recommended scales for rank 5: between 1:100,000 and 1:499,999.

Rank 6: Contains polygons forming lakes and rivers which are not included within ranks 1 through 5. There are a total of 49,697 polygons in rank 6, 44,949 named polygons and 4,748 unnamed polygons.

Recommended scales for rank 6: between 1:25,000 and 1:99,999.

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