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Boundary Files, Reference Guide

Census year 2016

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Table of contents

Boundary Files, Reference Guide

This reference guide is intended for users of the 2016 Census Boundary Files. The guide provides an overview of the files, the general methodology used to create them, and important technical information for users.

What's new?

- A new geographic area, the Aggregate Dissemination Area (ADA), has been introduced for the 2016 Census.
- All 2016 Census spatial files are available as national files.
- Metadata files based on the Harmonized North American Profile of ISO 19115:2003 for Government of Canada Geospatial Data are now available for 2016 Census spatial data products.

1. About this guide

This reference guide does not provide details on specific software packages that are available for use with the 2016 Census Boundary Files. Users are advised to contact the appropriate software vendor for information.

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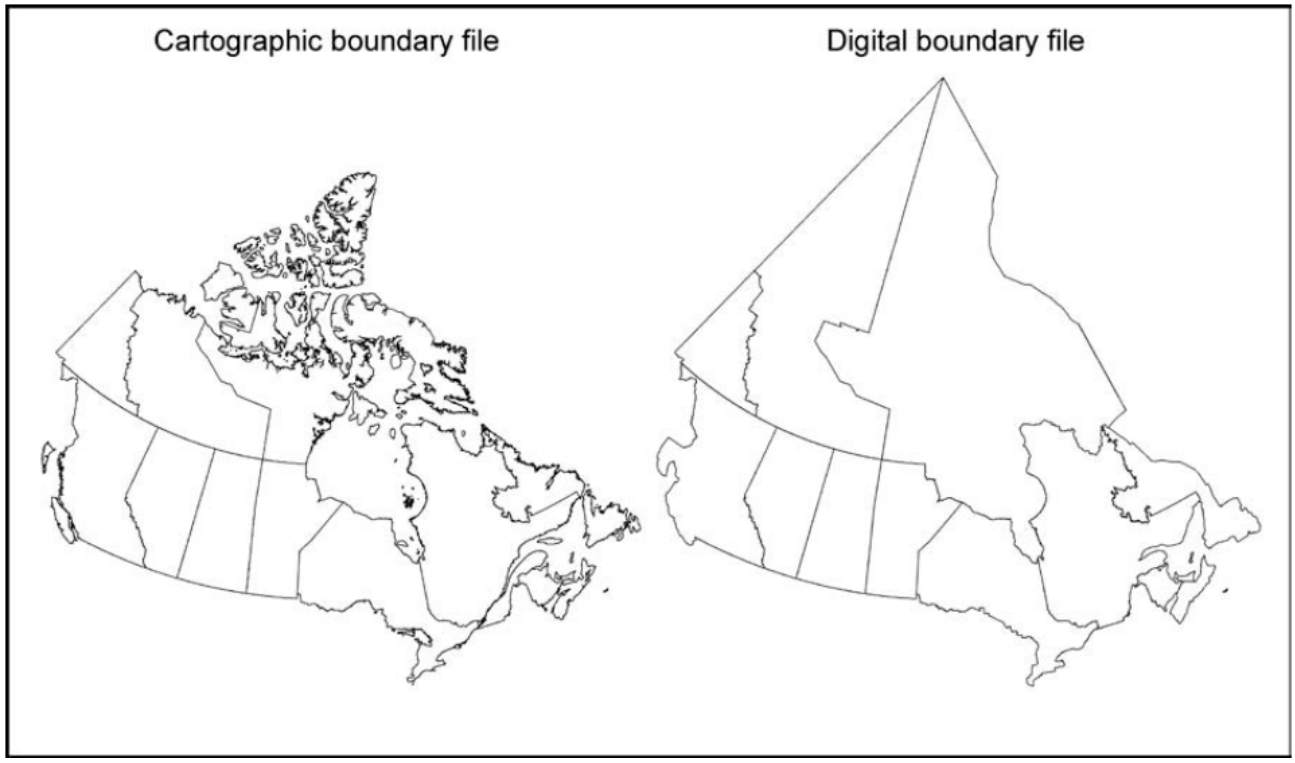
2. Overview

The 2016 Census Boundary Files depict boundaries of standard geographic areas established for the purpose of disseminating census data. See Figure 1.1 Hierarchy of standard geographic areas for dissemination, 2016 Census (http://www12.statcan.gc.ca/census-recensement/2016/ref/dict/figures/f1_1-eng.cfm) from the *Dictionary, Census of Population, 2016*.

The 2016 Census Boundary Files provide a framework for mapping and spatial analysis. They are available for download in two types: cartographic and digital. Cartographic boundary files depict the geographic areas using only the shorelines of the major land mass of Canada and its coastal islands. Digital boundary files depict the full extent of the geographic areas, including the coastal water area. Figure 2.1 illustrates an example of cartographic and digital boundary files.

The 2016 Census Boundary Files are similar to the 2011 Census Boundary Files in format. Each boundary file includes the unique identifiers, names and types (where applicable) of all higher level geographic areas available at time of release.

Figure 2.1
Example of a cartographic boundary file and a digital boundary file (provinces and territories)



Source: Statistics Canada, 2016 Census of Population.

Cartographic and digital boundary files are portrayed in Lambert conformal conic projection (North American Datum of 1983 [NAD83]). They are available for the following geographic areas:

- aggregate dissemination areas
- census agricultural regions
- provinces and territories
- census divisions
- economic regions
- census metropolitan areas and census agglomerations
- census consolidated subdivisions

- census subdivisions
- federal electoral districts (2013 Representation Order)
- census tracts
- dissemination areas
- dissemination blocks
- population centres
- designated places
- census division population ecumene

Hydrographic reference files are also available:

- coast
- lakes and rivers
- rivers

How to cite this guide

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Dissemination Block Boundary File, 2016 Census . Statistics Canada Catalogue no. 92-163-X.

Census Tract Boundary File, 2016 Census. Statistics Canada Catalogue no. 92-168-X.

Dissemination Area Boundary File, 2016 Census. Statistics Canada Catalogue no. 92-169-X.

Federal Electoral District Boundary File, 2016 Census. Statistics Canada Catalogue no. 92-171-X.

3. About this product

Purpose of the product

The purpose of the 2016 Census Boundary Files is to provide a framework for mapping to support Geographic Information System (GIS) applications used for 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 combining standard geographic areas. The boundary files are positionally consistent with the 2016 Census Road Network File, which provides additional reference for geographic context for mapping applications.

Definitions and concepts

Geographic terms and concepts are briefly defined in the Dictionary, Census of Population, 2016 (http://www12.statcan.gc.ca/census-recensement/2016/ref/dict/index-eng.cfm).

Content

In general each boundary file contains the unique identifier (UID), name and type (where applicable) of the geographic level the file represents, as well as the UID, name and type of all higher level geographies where available at time of release.

Geographic areas are portrayed in parts where the geographic area straddles a provincial or territorial boundary. For example, the census metropolitan area/census agglomeration geographic areas are portrayed in parts.

All files are available in English and in French, in three formats: ArcGIS® (.shp), Geography Markup Language (.gml), and MapInfo® (.tab).

General methodology

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

To produce the files, the following processes were applied:

Creation of the 2016 Census Digital Boundary Files

For digital boundary file creation, spatial and attribute information were extracted using the lowest level of geography, also known as the basic block. Primary data manipulation of the product layers included preserving the geographic hierarchy of the attributes inherent within a geographic level. The basic block native file was copied into a SDE feature dataset and stored as a feature class to facilitate geo-processing (e.g., projecting, joins, transforming and verification operations).

All of the higher level geographies were created from the basic block level. The files were verified for their spatial and attribute content, translated into French and English, and appropriately named according to the file naming convention (see Technical Specification section). Final data processing consisted of the conversion from the SDE feature dataset feature class format, using FME® (Safe Software), into the following file formats supported by Geographic Information System (GIS) software: ArcGIS® (.shp), Geography Markup Language (.gml), and MapInfo® (.tab).

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

Creation of the 2016 Census Cartographic Boundary Files

As with the digital boundary file creation, the spatial and attribute information for the cartographic boundary file creation were extracted at the lowest level of geography, the basic block. The spatial and attribute information of the hydrography component were extracted. The basic block and the hydrography spatial components were copied into a SDE feature dataset and stored as a feature class to facilitate geo-processing (e.g., projecting, joins, transforming and verification operations).

To create the cartographic boundary files, a subset of the full hydrography; the coastal layer was created. This subset of coastal hydrographic features was then used to erase the portions of the basic block that are covered by coastal waters.

The files were verified for their spatial and attribute content, translated into French and English, and appropriately named according to the file naming convention (see Technical Specifications section). Final data processing consisted of the conversion from the SDE feature dataset feature class format, using FME® (Safe Software), into the following file formats supported by Geographic Information System (GIS) software: ArcGIS® (.shp), Geography Markup Language (.gml), and MapInfo® (.tab).

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

Creation of the 2016 Hydrographic reference files

The inland water layer 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 the 1:250,000 maps) and the Digital Chart of the World. In selected areas, information was supplemented with data from the National Hydro Network.

Coastal file

The coastal file was created by selecting a subset of hydrographic features which represent the coastal water bodies surrounding the land area of Canada for use with the suite of cartographic boundary files.

Inland lakes and rivers (polygon)

The inland polygon lakes and rivers file contains a selection of internal water bodies and islands not found in the coastal layer.

Inland rivers (line)

The inland river file contains a selection of linear water features such as rivers and streams.

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

Limitations

The positional accuracy of these files does not support cadastral, surveying, digitizing or engineering applications.

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

Comparison to other products/versions

Each 2016 Census Boundary File is compatible with other 2016 Census Boundary File products. It portrays its respective geographic area boundary, as well as selected attributes for all higher level geographies that respect the geographic hierarchy, available at the time of release. Boundary files are derived from the same native sources.

The attributes found in each of the boundary files are compatible. Where applicable, boundary files contain the same unique identifier, name and type.

The 2016 Boundary Files are similar but not necessarily consistent with the boundary file products released prior to the 2016 Census.

The 2016 Boundary Files can be linked to other 2016 census data products using the unique identifier (UID) for each geographic area.

Using with other products

When considering using the 2016 Census Boundary Files, users should be aware of the compatibility of these files with other similar files. Boundary files are available for download on the Internet from other websites; however, they may not be consistent with Statistics Canada files.

Reference date

The geographic reference date is a date determined by Statistics Canada to finalize the geographic framework for which census data are collected, tabulated and reported. The reference date for the geographic area boundaries in cartographic and digital boundary files is January 1, 2016.

4. Technical specifications

Record layouts and data descriptions

Aggregate Dissemination Area

The Aggregate Dissemination Area Boundary Files portray the aggregate dissemination area boundaries for which census data are disseminated. An aggregate dissemination area is a grouping of census tracts or census subdivisions or dissemination areas.

Table 4.1
Aggregate dissemination area boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
ADAUID	Character (8)	Uniquely identifies an aggregate dissemination area (composed of the 2-digit province/territory unique indentifier followed by the 2-digit census division code and the 4-digit aggregate dissemination area code).
PRUID	Character (2)	Uniquely identifies a province or territory.
PRNAME	Character (100)	Province or territory name.
CDUID	Character (4)	Uniquely identifies a census division (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code).
CDNAME	Character (100)	Census division name.
CDTYPE	Character (3)	Census division type.

Census Agricultural Region

The Census Agricultural Region Boundary Files portray the census agricultural region boundaries for which Census of Agriculture data are disseminated. Census agricultural regions are groupings of census divisions.

Table 4.2
Census agricultural regions boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
CARUID	Character (4)	Uniquely identifies a census agricultural region (composed of the 2-digit province/territory code and the 2-digit census agricultural region code).
CARENAME	Character (50)	The official census agricultural region English name.
CARFNAME	Character (50)	The official census agricultural region French name.
PRUID	Character (2)	Uniquely identifies a province or territory.
PRNAME	Character (100)	Province or territory name.

Province and Territory

The Province and Territory Boundary Files portray the boundaries of the 10 provinces and 3 territories for which census data are disseminated. Provinces and territories are the major political (legislated) areas of Canada. The files contain the boundaries of all provinces and territories which combined cover all of Canada.

Table 4.3
Province and territory boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
PRUID	Character (2)	Uniquely identifies a province or territory.
PRNAME	Character (100)	Province or territory name.
PRENAME	Character (100)	Province or territory name in English.
PRFNAME	Character (100)	Province or territory name in French
PREABBR	Character (10)	English abbreviation of the province or territory name.
PRFABBR	Character (10)	French abbreviation of the province or territory name.

Census division

The Census Division Boundary Files portray the census division boundaries for which census data are disseminated. A census division is an area of regional government (such as a county or regional district) or an area treated as equivalent for statistical purposes. A census division is usually made up of a number of adjacent census subdivisions (municipalities). The files contain the boundaries of all census divisions which combined cover all of Canada.

Table 4.4
Census division boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
CDUID	Character (4)	Uniquely identifies a census division (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code).
CDNAME	Character (100)	Census division name.
CDTYPE	Character (3)	Census division type.
PRUID	Character (2)	Uniquely identifies a province or territory.
PRNAME	Character (100)	Province or territory name.

See Table 1.4 Census division types by province and territory, 2016 Census (http://www12.statcan.gc.ca/census-recensement/2016/ref/dict/tab/t1_4-eng.cfm) from the *Dictionary, Census of Population, 2016.*

Economic region

The Economic Region Boundary Files portray the economic region boundaries for which census data are disseminated. An economic region is a grouping of complete census divisions (with an exception in Ontario) created as a standard geographic area for analysis of regional economic activity. The files contain the boundaries of all economic regions which combined cover all of Canada.

Table 4.5
Economic region boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
ERUID	Character (4)	Uniquely identifies an economic region (composed of the 2-digit province/territory unique identifier followed by the 2-digit economic region code).
ERNAME	Character (100)	Economic region name.
PRUID	Character (2)	Uniquely identifies a province or territory.
PRNAME	Character (100)	Province or territory name.

Census metropolitan area/census agglomeration

The Census Metropolitan Area and Census Agglomeration Boundary Files portray the boundaries of the census metropolitan areas and census agglomerations for which census data are disseminated. Census metropolitan areas and census agglomerations consist of one or more adjacent municipalities (census subdivisions) around a core. To form a census metropolitan area, the core must have a population of at least 50,000 and the entire census metropolitan area must have a total population of at least 100,000. To form a census agglomeration, the core must have a population of at least 10,000. The files contain the boundaries of all census metropolitan areas and census agglomerations defined for the census. Census metropolitan areas and census agglomerations crossing provincial boundaries appear in the boundary files in provincial parts.

There are four census metropolitan areas/census agglomerations that cross provincial boundaries. In each of these cases, the census metropolitan area/census agglomeration is divided by the provincial limit and is represented as two polygon records in the boundary file.

The four census metropolitan areas and census agglomerations that cross provincial limits are:

- Census Agglomeration of Campbellton, CMAUID 330, crosses the New Brunswick/Quebec provincial boundary
- Census Agglomeration of Hawkesbury, CMAUID 502, crosses the Quebec/Ontario provincial boundary
- Census Metropolitan Area of Ottawa - Gatineau, CMAUID 505, crosses the Quebec/Ontario provincial boundary
- Census Agglomeration of Lloydminster, CMAUID 840, crosses the Saskatchewan/Alberta provincial boundary

Table 4.6
Census metropolitan area/census agglomeration boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
CMAUID	Character (3)	Uniquely identifies a census metropolitan area/census agglomeration.

Table 4.6 (end)
Census metropolitan area/census agglomeration boundary files record layout

Attribute name	Data type	Description
CMAPUID	Character (5)	Uniquely identifies the provincial/territorial part of a census metropolitan area/census agglomeration in Canada (composed of the 2-digit province/territory unique identifier followed by the 3-digit census metropolitan area/census agglomeration code).
CMANAME	Character (100)	Census metropolitan area or census agglomeration name.
CMATYPE	Character (1)	A one character field indicating whether the unit is a census metropolitan area, a tracted census agglomeration or a non-tracted census agglomeration.
PRUID	Character (2)	Uniquely identifies a province or territory.
PRNAME	Character (100)	Province or territory name.

Table 4.7
Census metropolitan area/census agglomeration types by province and territory, 2016 Census

Census metropolitan area/census agglomeration type	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
B census metropolitan area	36	1	0	1	2	6	16	1	2	3	4	0	0	0
D census agglomeration with no census tracts	106	4	2	4	4	22	26	5	8	11	18	1	1	0
K census agglomeration with census tracts	14	0	0	0	1	2	3	0	0	4	4	0	0	0
Total	**156**	**5**	**2**	**5**	**7**	**30**	**45**	**6**	**10**	**18**	**26**	**1**	**1**	**0**

Note: includes provincial parts.
Source: Statistics Canada, 2016 Census of Population.

Census consolidated subdivision

The Census Consolidated Subdivision Boundary Files portray the census consolidated subdivision boundaries for which census data are disseminated. A census consolidated subdivision is a grouping of adjacent census subdivisions (municipalities) within the same census division used primarily for disseminating Census of Agriculture data. The files contain the boundaries of all census consolidated subdivisions which combined cover all of Canada.

Table 4.8
Census consolidated subdivision boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
CCSUID	Character (7)	Uniquely identifies a census consolidated subdivision (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code and the 3-digit census consolidated subdivision code).
CCSNAME	Character (100)	Census consolidated subdivision name.
PRUID	Character (2)	Uniquely identifies a province or territory.
PRNAME	Character (100)	Province or territory name.
CDUID	Character (4)	Uniquely identifies a census division (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code).
CDNAME	Character (100)	Census division name.
CDTYPE	Character (3)	Census division type.

Census subdivision

The Census Subdivision Boundary Files portray the census subdivision boundaries for which census data are disseminated. A census subdivision is a municipality or an area treated as equivalent to a municipality for statistical purposes (for example, Indian reserves and unorganized territories). Municipal status is defined by laws in effect in each province and territory in Canada. The files contain the boundaries of all census subdivisions which combined cover all of Canada.

Table 4.9
Census subdivision boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
CSDUID	VARCHAR2(7)	Uniquely identifies a census subdivision (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code and the 3-digit census subdivision code).
CSDNAME	VARCHAR2(100)	Census subdivision name.
CSDTYPE	VARCHAR2(3)	Census subdivisions are classified according to designations adopted by provincial/territorial or federal authorities.
PRUID	VARCHAR2(2)	Uniquely identifies a province or territory.
PRNAME	VARCHAR2(100)	Province or territory name.
CDUID	VARCHAR2(4)	Uniquely identifies a census division (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code).
CDNAME	VARCHAR2(100)	Census division name.
CDTYPE	VARCHAR2(3)	Census division type.
CCSUID	VARCHAR2(7)	Uniquely identifies a census consolidated subdivision (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code and the 3-digit census consolidated subdivision code).
CCSNAME	VARCHAR2(100)	Census consolidated subdivision name.
ERUID	VARCHAR2(4)	Uniquely identifies an economic region (composed of the 2-digit province/territory unique identifier followed by the 2-digit economic region code).
ERNAME	VARCHAR2(100)	Economic region name.
SACCODE	VARCHAR2(3)	The 3-digit Statistical Area Classification code.
SACTYPE	VARCHAR2(1)	The Statistical Area Classification groups census subdivisions according to whether they are a component of a census metropolitan area, a census agglomeration, a census metropolitan influenced zone or the territories.
CMAUID	VARCHAR2(3)	Uniquely identifies a census metropolitan area/census agglomeration.
CMAPUID	VARCHAR2(5)	Uniquely identifies the provincial/territorial part of a census metropolitan area/census agglomeration (composed of the 2-digit province/territory unique identifier followed by the 3-digit census metropolitan area/census agglomeration unique identifier).
CMANAME	VARCHAR2(100)	Census metropolitan area or census agglomeration name.
CMATYPE	VARCHAR2(1)	A one-character field identifying whether the unit is a census metropolitan area, a tracted census agglomeration or a non-tracted census agglomeration.

SACTYPE

The Statistical Area Classification type is a one-digit code that identifies whether a census subdivision is a component of a census metropolitan area (CMA), a census agglomeration (CA), a census metropolitan influenced zone (MIZ) or in the territories.

SACCODE

The Statistical Area Classification code is a three-digit code that identifies for which census metropolitan area (CMA), census agglomeration (CA) or census metropolitan influenced zone (MIZ) a census subdivision is a component. The MIZ categories, which denote the degree of influence that the CMAs and/or CAs have on these zones, are: strong (code 996), moderate (code 997), weak (code 998), no influence (code 999), or the territories (code 000), where the classification is not applicable.

Table 4.10
Statistical Area Classification values by province and territory, 2016 Census

Census metropolitan area/census agglomeration type	Canada	Newfound-land and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat-chewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
1 Census subdivision within census metropolitan area	495	13	0	6	33	164	99	12	43	51	74	...	...	...
2 Census subdivision within census agglomeration with at least one census tract	112	0	0	...	17	16	19	...	...	15	45	...	...	...
3 Census subdivision within census agglomeration having no census tracts	359	22	26	18	35	58	38	11	27	17	99	7	1	...
4 Census subdivision outside of census metropolitan area/ census agglomeration area having strong metropolitan influence	765	37	37	9	46	327	109	19	88	53	40	...	...	...
5 Census subdivision outside of census metropolitan area/ census agglomeration area having moderate metropolitan influence	1,327	124	42	24	83	425	120	56	244	104	105	...	...	...
6 Census subdivision outside of census metropolitan area/ census agglomeration area having weak metropolitan influence	690	45	1	27	44	112	70	70	168	72	81	...	...	...
7 Census subdivision outside of census metropolitan area/ census agglomeration area having no metropolitan influence	1,314	131	6	12	15	183	120	61	380	113	293	...	...	...
8 Census subdivision within a territory	100	0	0	...	...	...	...	...	...	...	...	29	40	31
Total	**5,162**	**372**	**112**	**96**	**273**	**1,285**	**575**	**229**	**950**	**425**	**737**	**36**	**41**	**31**

… not applicable
CSD census subdivision
CMA census metropolitan area
CA census agglomeration
CT census tract
Source: Statistics Canada, 2016 Census of Population.

Federal electoral district

The Federal Electoral District Boundary Files portray the federal electoral district boundaries for which census data are disseminated. A federal electoral district is an area represented by a Member of Parliament in the House of Commons. The federal electoral district boundaries used for the 2016 Census are based on the 2013 Representation Order. The files contain the boundaries of all federal electoral districts which combined cover all of Canada. The Federal Electoral District boundary files portray the federal electoral districts in effect on January 1, 2016.

Table 4.11
Federal electoral district boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
FEDUID	Character (5)	Uniquely identifies a federal electoral district (composed of the 2-digit province/territory unique identifier followed by the 3-digit federal electoral district code).
FEDNAME	Character (200)	Federal electoral district name.
FEDENAME	Character (100)	The federal electoral district name in English.
FEDFNAME	Character (100)	The federal electoral district name in French.
PRUID	Character (2)	A unique identifier code assigned to each province/territory.
PRNAME	Character (100)	Official name for each province/territory.

Census tract

The Census Tract Boundary Files portray the census tract boundaries for which census data are disseminated. Census tracts are small, relatively stable geographic areas that usually have a population less than 10,000 as per the previous census. They are located in census metropolitan areas and in census agglomerations with a core population of 50,000 or more in the previous census. The files contain the boundaries of all census tracts located within the census metropolitan areas and census agglomerations for which census tracts are delineated.

Table 4.12
Census tract boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
CTUID	Character (10)	Uniquely identifies a census tract within a census metropolitan area/census agglomeration (composed of the 3-digit census metropolitan area/census agglomeration unique identifier followed by the 7.2-character census tract name).
CTNAME	Character (7)	Every census tract is assigned a 7.2-character numeric 'name' (including leading zeros, a decimal point and trailing zeros).
PRUID	Character (2)	Uniquely identifies a province or territory.
PRNAME	Character (100)	Province or territory name.
CMAUID	Character (3)	Uniquely identifies a census metropolitan area/census agglomeration.
CMAPUID	Character (5)	Uniquely identifies the provincial/territorial part of a census metropolitan area/census agglomeration (composed of the 2-digit province/territory unique identifier followed by the 3-digit census metropolitan area/census agglomeration unique identifier).
CMANAME	Character (100)	Census metropolitan area or census agglomeration name.
CMATYPE	Character (1)	A one-character field identifying whether the unit is a census metropolitan area, a tracted census agglomeration or a non-tracted census agglomeration.

Dissemination area

The Dissemination Area Boundary Files portray the dissemination area boundaries for which census data are disseminated. A dissemination area is a small area composed of one or more neighboring blocks.

The digital boundary file contains the boundaries of all 56,590 dissemination areas which combined cover all of Canada. The cartographic boundary file contains the boundaries of 56,589 dissemination areas. 35510090 falls completely in coastal water and is not included in the cartographic boundary file.

Table 4.13
Dissemination area boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
DAUID	Character (8)	Uniquely identifies a dissemination area (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code and the 4-digit dissemination area code).
PRUID	Character (2)	Uniquely identifies a province or territory.
PRNAME	Character (100)	Province or territory name.
CDUID	Character (4)	Uniquely identifies a census division (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code).
CDNAME	Character (100)	Census division name.
CDTYPE	Character (3)	Census division type.
CCSUID	Character (7)	Uniquely identifies a census consolidated subdivision (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code and the 3-digit census consolidated subdivision code).
CCSNAME	Character (100)	Census consolidated subdivision name.
CSDUID	Character (7)	Uniquely identifies a census subdivision (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code and the 3-digit census subdivision code).
CSDNAME	Character (100)	Census subdivision name.
CSDTYPE	Character (3)	Census subdivisions are classified according to designations adopted by provincial/territorial or federal authorities.
ERUID	Character (4)	Uniquely identifies an economic region (composed of the 2-digit province/territory unique identifier followed by the 2-digit economic region code).
ERNAME	Character (100)	Economic region name.
SACCODE	Character (3)	The 3-digit Statistical Area Classification code.
SACTYPE	Character (1)	The Statistical Area Classification groups census subdivisions according to whether they are a component of a census metropolitan area, a census agglomeration, a census metropolitan influenced zone or the territories.
CMAUID	Character (3)	Uniquely identifies a census metropolitan area/census agglomeration.
CMAPUID	Character (5)	Uniquely identifies the provincial/territorial part of a census metropolitan area/census agglomeration (composed of the 2-digit province/territory unique identifier followed by the 3-digit census metropolitan area/census agglomeration unique identifier).
CMANAME	Character (100)	Census metropolitan area or census agglomeration name.
CMATYPE	Character (1)	A one-character field identifying whether the unit is a census metropolitan area, a tracted census agglomeration or a non-tracted census agglomeration.
CTUID	Character (10)	Uniquely identifies a census tract within a census metropolitan area/census agglomeration (composed of the 3-digit census metropolitan area/census agglomeration unique identifier followed by the 7.2-character census tract name).
CTNAME	Character (7)	Every census tract is assigned a 7.2-character numeric 'name' (including leading zeros, a decimal point and trailing zeros).
ADAUID	Character (8)	Uniquely identifies an aggregate dissemination area (composed of the 2-digit province/territory unique indentifier followed by the 2-digit census division code and the 4-digit aggregate dissemination area code).

Dissemination block

The Dissemination Block Boundary Files portray the dissemination block boundaries for which **c**ensus data are disseminated. A dissemination block is an area bounded on all sides by roads and/or boundaries of standard geographic areas and is the smallest geographic area for which population and dwelling count data are available.

The digital boundary file contains the boundaries of all 489,905 dissemination blocks which combined cover all of Canada. The cartographic boundary file contains the boundaries of 489,676 dissemination blocks.

Table 4.14
Dissemination block boundary file record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
DBUID	Character (11)	Uniquely identifies a dissemination block (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code, the 4-digit dissemination area code and the 3-digit dissemination block code).
DBRPLAMX	Number (17.8)	Dissemination block representative point lambert X coordinate, in metres.
DBRPLAMY	Number (17.8)	Dissemination block representative point lambert Y coordinate, in metres.
PRUID	Character (2)	Uniquely identifies a province or territory.
PRNAME	Character (100)	Province or territory name.
CDUID	Character (4)	Uniquely identifies a census division (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code).
CDNAME	Character (100)	Census division name.
CDTYPE	Character (3)	Census division type.
CCSUID	Character (7)	Uniquely identifies a census consolidated subdivision (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code and the 3-digit census consolidated subdivision code).
CCSNAME	Character (100)	Census consolidated subdivision name.
CSDUID	Character (7)	Uniquely identifies a census subdivision (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code and the 3-digit census subdivision code).
CSDNAME	Character (100)	Census subdivision name.
CSDTYPE	Character (3)	Census subdivisions are classified according to designations adopted by provincial/territorial or federal authorities.
ERUID	Character (4)	Uniquely identifies an economic region (composed of the 2-digit province/territory unique identifier followed by the 2-digit economic region code).
ERNAME	Character (100)	Economic region name.
FEDUID	Character (5)	Uniquely identifies a federal electoral district (composed of the 2-digit province/territory unique identifier followed by the 3-digit federal electoral district code).
FEDNAME	Character (200)	Federal electoral district name.
SACCODE	Character (3)	The 3-digit Statistical Area Classification code.
SACTYPE	Character (1)	The Statistical Area Classification groups census subdivisions according to whether they are a component of a census metropolitan area, a census agglomeration, a census metropolitan influenced zone or the territories.
CMAUID	Character (3)	Uniquely identifies a census metropolitan area/census agglomeration.
CMAPUID	Character (5)	Uniquely identifies the provincial/territorial part of a census metropolitan area/census agglomeration (composed of the 2-digit province/territory unique identifier followed by the 3-digit census metropolitan area/census agglomeration unique identifier).
CMANAME	Character (100)	Census metropolitan area or census agglomeration name.
CMATYPE	Character (1)	A one-character field identifying whether the unit is a census metropolitan area, a tracted census agglomeration or a non-tracted census agglomeration.

Table 4.14 (end)
Dissemination block boundary file record layout

Attribute name	Data type	Description
CTUID	Character (10)	Uniquely identifies a census tract within a census metropolitan area/census agglomeration (composed of the 3-digit census metropolitan area/census agglomeration unique identifier followed by the 7.2-character census tract name).
CTNAME	Character (7)	Every census tract is assigned a 7.2-character numeric 'name' (including leading zeros, a decimal point and trailing zeros).
ADAUID	Character (8)	Uniquely identifies an aggregate dissemination area (composed of the 2-digit province/territory unique indentifier followed by the 2-digit census division code and the 4-digit aggregate dissemination area code).
DAUID	Character (8)	Uniquely identifies a dissemination area (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code and the 4-digit dissemination area code).

Below is a list of the 229 dissemination blocks which are not included within the cartographic boundary file. These dissemination blocks are located entirely within coastal waters and were therefore removed during the production of the cartographic boundary file.

Dissemination blocks not included within the Dissemination Block Cartographic Boundary File

DBUID						
10010503031	12090846024	12170417023	24020064012	24530126020	35120371016	59153602005
10010504001	12090846025	12170420005	24180040016	24590012045	35120371019	59153663024
10010520001	12090846026	12170425009	24180046016	24590012047	35120371020	59153663026
10010535028	12090846027	12170426003	24180055028	24590012049	35120392021	59153663029
10010556009	12090846028	12170429029	24180055030	24590012051	35120392023	59153663032
10010682008	12090901006	12170432005	24180063014	24590012053	35204675005	59170331005
10010714024	12090980004	12170440003	24180072018	24590012056	35370813015	59170634010
10010719015	12090981004	12170443008	24230066001	24590012057	35370840029	59170648027
10010724015	12120110001	12170446005	24230066014	24650667005	35380295018	59170648032
10010750032	12120122009	12170449013	24250187026	24663335023	35410146019	59170654007
10020079020	12170352018	12170450010	24250187027	24670307016	35420230022	59170654009
10020079021	12170352019	12170451012	24250195011	24670307020	35420255011	59170654011
10020117005	12170353005	12170517013	24250296011	24700067026	35430603024	59170688001
10040109013	12170355009	12170522009	24250300015	24700067028	35430603026	59190305008
10070487003	12170357004	12170528012	24250300017	24700088041	35430612021	59190316002
10070514010	12170358009	12170531004	24250300018	24700090013	35430612023	59210260004
10070519018	12170362009	13020063004	24250300019	24700151018	35430869042	59210274010
10070519027	12170367007	13020072020	24250300021	24700151020	35430869044	59210274012
10070549011	12170374015	13020072021	24340089017	24710146015	35430869046	59230154032
10070550003	12170378014	13020072022	24340089019	24710189012	35431329012	59240212006
10070550004	12170389013	13080068033	24370299011	24710191012	35510072001	59240215009
10080167009	12170393016	13080068034	24370308017	24710191014	35510090001	59240260010
10080167013	12170395006	13140162003	24370308019	24710191015	35510090002	59240264015
10080170007	12170396012	13150159001	24380045022	24710191017	35580385052	59260424007
10080221016	12170397005	13150166005	24380045028	24710191019	35580385101	59260432012
11030099010	12170398001	13150170003	24520099015	24710191021	35580433001	59290165002
11030160014	12170399002	13150220001	24520100018	24710194018	35600296010	62040038023
11030168041	12170400004	13150322021	24530073008	24710242019	35600323009	62040038044
12010049007	12170403016	13150326011	24530108023	24710244022	59150871005	62040038045
12010049008	12170404019	13150342017	24530124037	24970125025	59153241016	62040038049
12010049009	12170405014	13150343013	24530126014	35110128025	59153569008	62040062039
12090838005	12170406019	13150347008	24530126016	35120346018	59153569009	
12090846023	12170415010	24020064006	24530126018	35120346019	59153576012	

Population centre

The Population Centre Boundary Files portray the population centre boundaries for which census data are disseminated. A population centre 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. The files will contain the boundaries of all population centres defined for the census. Population centres crossing provincial boundaries appear in the boundary files in provincial parts.

Table 4.15
Population centre boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
PCUID	Character (4)	Uniquely identifies a population centre
PCNAME	Character (100)	Population centre name
PCTYPE	Character (1)	Population centre type
PCPUID	Character (6)	Uniquely identifies the provincial or territorial part of an population centre (composed of the 2-digit province or territory unique identifier followed by the 4-digit population centre unique identifier)
PCCLASS	Character (1)	Identifies whether a population centre is small, medium or large urban.
PRUID	Character (2)	Uniquely identifies a province or territory.
PRNAME	Character (100)	Province or territory name.
CMAUID	Character (3)	Uniquely identifies a census metropolitan area/census agglomeration.
CMANAME	Character (100)	Census metropolitan area or census agglomeration name.
CMATYPE	Character (1)	A one character field indicating whether the unit is a census metropolitan area, a tracted census agglomeration or a non-tracted census agglomeration.
CMAPUID	Character (5)	Uniquely identifies the provincial/territorial part of a census metropolitan area/census agglomeration in Canada (composed of the 2-digit province/territory unique identifier followed by the 3-digit census metropolitan area/census agglomeration code).

Note: The official abbreviation for Population Centre is POPCTR. However, due to attribute name length limitations for some GIS applications, PC is used to represent Population Centre.

Designated place

The Designated Place Boundary Files portray the designated place boundaries for which census data are disseminated. A designated place is usually a small community that does not meet the criteria established by Statistics Canada to be a census subdivision (an area with municipal status) or a population centre. Designated places are created by provinces and territories, in cooperation with Statistics Canada, to provide data for submunicipal areas. The files will contain the boundaries of all designated places defined for the census.

Table 4.16
Designated place boundary files record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®.
Shape	Geometry	Specific to ArcGIS®.
DigitalBoundary CartographicBoundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup Language.
DPLUID	Character (6)	Uniquely identifies a designated place (composed of the 2-digit province or territory unique identifier followed by the 4-digit designated place code)
DPLNAME	Character (100)	Designated place name
DPLTYPE	Character (3)	Designated place type
PRUID	Character (2)	Uniquely identifies a province or territory.
PRNAME	Character (100)	Province or territory name.

Hydrographic reference layers

The hydrographic reference layers are provided to allow for the mapping of inland water, oceans, Great Lakes and the St. Lawrence River. The hydrographic layers were created to be used in conjunction with the boundary files. The record layout in Table 4.17 below is for interior water (polygons), coastal water bodies (polygons) and interior rivers (lines).

Table 4.17
Hydrographic reference layers record layout

Attribute name	Data type	Description
FID	Object ID (4)	Specific to ArcGIS®
Shape	Geometry	Specific to ArcGIS®
DigitalBoundary Cartographic Boundary	MultiPolygon PropertyType	Shape geometry; specific to Geography Markup language
HYDROUID	Character (8)	Uniquely identifies a water feature
NAME	Character (55)	Feature name
PRUID	Character (2)	Uniquely identifies a province or territory

Attribute domain values

CDTYPE

CDTYPE

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

CSDTYPE

Census subdivisions are classified according to designations adopted by provincial/territorial or federal authorities.

CSDTYPE

CSDTYPE	CSD description
< Null >	not applicable
C	City / Cité
CC	Chartered community
CG	Community government
CN	Crown colony / Colonie de la couronne
COM	Community
CT	Canton (municipalité de)

CSDTYPE (continued)

CSDTYPE	CSD description
CU	Canton unis (municipalité de)
CV	City / Ville
CY	City
DM	District municipality
HAM	Hamlet
ID	Improvement district
IGD	Indian government district
IM	Island municipality
IRI	Indian reserve / Réserve indienne
LGD	Local government district
LOT	Township and royalty
M	Municipality / Municipalité
MD	Municipal district
MÉ	Municipalité
MU	Municipality
NH	Northern hamlet
NL	Nisga'a land
NO	Unorganized / Non organisé
NV	Northern village
P	Parish / Paroisse (municipalité de)
PE	Paroisse (municipalité de)
RCR	Rural community / Communauté rurale
RDA	Regional district electoral area
RGM	Regional municipality
RM	Rural municipality
RV	Resort village
S-É	Indian settlement / Établissement indien
SA	Special area
SC	Subdivision of county municipality / Subdivision municipalité de comté
SÉ	Settlement / Établissement
SET	Settlement
SG	Self-government / Autonomie gouvernementale
SM	Specialized municipality
SNO	Subdivision of unorganized / Subdivision non organisée
SV	Summer village
T	Town
TC	Terres réservées aux Cris
TI	Terre inuite
TK	Terres réservées aux Naskapis
TL	Teslin land

CSDTYPE (end)

CSDTYPE	CSD description
TP	Township
TV	Town / Ville
V	Ville
VC	Village cri
VK	Village naskapi
VL	Village
VN	Village nordique

CMATYPE

Census metropolitan area or census agglomeration type.

Census metropolitan area or census agglomeration type

CMATYPE	CMA description
B	Census metropolitan area (CMA)
D	Census agglomeration (CA) that is not tracted
K	Census agglomeration (CA) that is tracted
< Null >	not applicable (outside of CMA or CA)

SACTYPE

The Statistical Area Classification type is a one-digit code that identifies whether a census subdivision is a component of a census metropolitan area (CMA), a census agglomeration (CA), a census metropolitan influenced zone (MIZ) or in the territories.

Statistical Area Classification code

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

SACCODE

The Statistical Area Classification code is a three-digit code that identifies which census metropolitan area (CMA), census agglomeration (CA) or census metropolitan influenced zone (MIZ) a census subdivision is a component of. The MIZ categories, which denote the degree of influence that the CMAs and/or CAs have on these zones, are: strong (code 996), moderate (code 997), weak (code 998), no influence (code 999), or the territories (code 000) where the classification is not applicable.

Statistical Area Classification type

SACCODE	SACCODE description
000	Territories, classification is not applicable
001-995	CMA or CA
996	Strong

Statistical Area Classification (SAC) type

SACCODE	SACCODE description
997	Moderate
998	Weak
999	No influence

File specifications

Not applicable

Software formats

Boundary Files for the 2016 Census are available for download from the Statistics Canada website in the following formats:

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

System requirements

Not applicable

File extension and accented character information

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

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

Some of the 2016 Boundary Files contain attributes with accented characters. They were successfully tested on desktop versions of ArcGIS® 10.2.2, MapInfo® 12.0 and FME Data Inspector 2015.1.

Geographic representation

The 2016 Census Boundary Files are available on the Statistics Canada website in the following geographic representation:

- Projection: Lambert conformal conic
- False easting: 6200000.000000
- False northing: 3000000.000000
- Central meridian: -91.866667
- Standard parallel 1: 49.000000
- Standard parallel 2: 77.000000
- Latitude of origin: 63.390675
- Linear unit: metre (1.000000)
- Datum: North American 1983 (NAD83)
- Prime meridian: Greenwich
- Angular unit: degree
- Spheroid: GRS 1980

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

Users of 2016 Census Boundary Files can transform the files into the representation that best satisfies their needs knowing the effects these representations have on angles, areas, distances and direction. Users have the option to choose the best projection in concert with the maps objectives.

File naming convention

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

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

First character: projection of file

- l – projection in Lambert conformal conic

Next three characters: primary geographic level of file

- ada - aggregate dissemination area
- car - census agricultural region
- pr_ - province/territory
- fed - federal electoral district
- er_ - economic region
- cd_ - census division
- csd - census subdivision
- ccs - census consolidated subdivision
- cma - census metropolitan area/census agglomeration
- ct_ - census tract
- da_ - dissemination area
- db_ - dissemination block
- hy_ - supporting hydrography (Great Lakes, St. Lawrence River, oceans, etc.)

Next three numbers: geographic code of coverage

- 000 - Canada

Next character: file type

- a - digital boundary file
- b - cartographic boundary file
- c - interior lakes and rivers hydrographic reference file (polygon)
- d - interior rivers hydrographic reference file (line)
- e - ecumene
- h - hydrographic coverage of Great Lakes, St. Lawrence River and surrounding oceans

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 are collected, tabulated and reported. For 2016 Census products, the geographic reference date is January 1, 2016.

- 16 - geographic reference date is 2016

Next character: file format

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

Final two characters: language

- _e - English
- _f - French

5. Data quality

Spatial data quality elements provide information on the fitness-for-use of a spatial database by describing why, when and how the data are created, and how accurate the data are. The 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.

Boundary files

The geographic area unique identifier, name, type, and the relationships among the various geographic levels are found on Statistics Canada's Spatial Data Infrastructure. The data for administrative areas are updated using information from provincial, territorial and municipal sources.

Positional accuracy

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

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

Within Statistics Canada's Spatial Data Infrastructure, dissemination block representative points were generated using ArcGIS® software in conjunction with their respective cartographic boundaries. The most detailed hydrography available was used in identifying cartographic boundaries and calculating representative points in Statistics Canada native format. Efforts were made to ensure that representative points do not fall in water, where possible. After geo-processing the dissemination block boundary file and the hydrography files (e.g., projecting, appending, transforming and verification operations) and converting into ArcGIS (.shp), Geography Markup Language (.gml) or MapInfo (.tab) files, these manipulations may have caused slight shifting of some of the underlying land and hydrography features resulting in representative points falling in water.

Attribute accuracy

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

As noted under Lineage, the attributes (names, types and unique identifiers) for all geographic areas are sourced from Statistics Canada's Spatial Data Infrastructure. The names and types of administrative geographic areas have been updated for the 2016 Census using source materials from provincial, territorial and municipal authorities.

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

Logical consistency

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

In each boundary file, all geographic areas have been verified to have a unique identifier that is valid for the 2016 Census.

The hydrographic data files were created for the boundary files to enable thematic mapping at local and regional scales.

Consistency with other products

Topology checks were performed with the road network file and boundary files to measure the degree of integration amongst these products. The results indicated the degree of integration was within the default tolerance parameters as defined below.

XY Resolution: 0. 000005 metres
XY Tolerance: 0.00001 metres

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.

It is important to note that in both digital boundary files and cartographic boundary files, a geographic area may be depicted by more than one polygon. In the digital boundary files there are some geographic areas that have two or more parts. This is particularly the case for some census subdivisions. In cartographic boundary files, this is due to having removed the coastal water area from the digital boundary files, thus creating several polygons for one geographic area. In the cartographic boundary files this impacts only on geographic areas that are situated in coastal areas.

Appendices

See definitions of the geography universe from the Dictionary, Census of Population, 2016. http://www12.statcan.gc.ca/census-recensement/2016/ref/dict/index-eng.cfm

See Figure 1.1 Hierarchy of standard geographic areas for dissemination, 2016 Census *from the Dictionary, Census of Population, 2016.* http://www12.statcan.gc.ca/census-recensement/2016/ref/dict/figures/f1_1-eng.cfm

See Table 1.1 Geographic areas by province and territory, 2016 Census *from the Dictionary, Census of Population, 2016.* http://www12.statcan.gc.ca/census-recensement/2016/ref/dict/tab/t1_1-eng.cfm

See Table 1.5 Census subdivision types by province and territory, 2016 Census *from the Dictionary, Census of Population, 2016.* http://www12.statcan.gc.ca/census-recensement/2016/ref/dict/tab/t1_5-eng.cfm