Correspondence Files, Reference Guide

Census year 2016

Statistics Canada Statistique Canada

Canada

How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada, visit our website, www.statcan.gc.ca.

You can also contact us by

email at STATCAN.infostats-infostats.STATCAN@canada.ca

telephone, from Monday to Friday, 8:30 a.m. to 4:30 p.m., at the following numbers:

- Statistical Information Service   1-800-263-1136
- National telecommunications device for the hearing impaired   1-800-363-7629
- Fax line   1-514-283-9350

Depository Services Program

- Inquiries line   1-800-635-7943
- Fax line   1-800-565-7757

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed standards of service that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under "Contact us" > "Standards of service to the public."

Note of appreciation

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

Standard table symbols

The following symbols are used in Statistics Canada publications:

.   not available for any reference period
..   not available for a specific reference period
...   not applicable
0   true zero or a value rounded to zero
0^s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^{p} preliminary
^{r} revised
x   suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E} use with caution
F   too unreliable to be published
*   significantly different from reference category (p < 0.05)

Table of contents

Correspondence Files, Reference Guide

There are three 2016 Census correspondence files that provide users with tabular data that describe the correspondence between two vintages of geographic areas.

The dissemination area correspondence file describes the relationship between the 2016 dissemination area and the 2011 dissemination area. The dissemination area and land area correspondence file will describe the percentage of the 2016 dissemination area's land area within the boundaries of the 2011 dissemination area. The dissemination block correspondence file will describe the relationship between the 2016 dissemination block and the 2011 dissemination block.

Each file contains a unique identifier for the 2016 Census geographic area and the corresponding unique identifier for the 2011 Census geographic area. In addition, a relationship flag is included which indicates the degree of correspondence between the geographic areas, facilitating a comparison between census years.

What's new?

The final dissemination block (DB) delineation took place in the late spring of 2016. DBs continue to be formed (as was the case in 2001 since the inception of the Dissemination Block Program) by intersection of the roads and high-level geographic area boundaries.

- The DB code is changed from two to three digits.
- The full DB_UID is increased from 10 to 11 for the 2016 Census:

  PR(2) + CD(2) + DAcode(4) + DBcode (from two to three)

- Dissemination areas (DAs) were not redelineated to support the 2016 Census. DAs were refined where administrative (i.e., census subdivision) boundaries changed or as a result of growth. Therefore there is a high degree of correspondence between the 2011 DA and the 2016 DA (97%).

1. About this guide

This reference guide is intended for users of the 2016 Census Correspondence Files. The Technical specifications includes record layouts.

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

2. Overview

There are three 2016 Census correspondence files that provide users with tabular data that describe the correspondence between two vintages of geographic areas:

- The dissemination area correspondence file describes the relationship between the 2016 dissemination area and the 2011 dissemination area
- The dissemination area and land area correspondence file describes the percentage of 2016 dissemination area's land area contained within the boundaries of the 2011 dissemination area
- The dissemination block correspondence file describes the relationship between the 2016 dissemination block and the 2011 dissemination block.

Each file contains a unique identifier for the 2016 Census geographic area and the corresponding unique identifier for the 2011 Census geographic area. In addition, a relationship flag is included which indicates the degree of correspondence between the geographic areas, facilitating a comparison between census years.

How to cite this guide

Correspondence Files, Reference Guide, 2016 Census. Statistics Canada Catalogue no. 92-156-G.

How to cite this product

Correspondence Files, 2016 Census. Statistics Canada Catalogue no. 92-156-X.

3. About this product

Purpose of the product

The 2016 Census correspondence files provide users with tabular data that describes the correspondence between two vintages of geographic areas.

Definitions and concepts

Dissemination Block (DB)

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.

Reported in

2016, 2011, 2006 (dissemination block)

2001 (block)

Remarks

Dissemination blocks are primarily an artefact of the road network. As such, the number of DBs created is a function of the timeliness and accuracy of the road network prior to the census. It is not possible to have a road network reflecting exactly the situation on Census Day. For the 2016 Census, the road network used for the DB creation is up to date as of June 2016.

In preparation for the 2016 Census, Statistics Canada developed strategies to ensure dissemination geographies match with topographic datasets used outside Statistics Canada for policy and planning purposes. This convergence work resulted in updates to the current road network and corresponding DB structure. Convergence work was completed in British Columbia, Alberta, Ontario, Quebec, New Brunswick, Nova Scotia and Prince Edward Island. Highway medians, ramp areas and other irregular polygons may form dissemination blocks on their own. A morphological dissemination block is split to form two or more DBs wherever it is traversed by the boundaries of selected standard geographic areas. This makes it possible to aggregate dissemination block data to all higher level standard geographic areas. In 2011, DB boundaries had to respect the following standard geographic areas: federal electoral districts (FEDs), census subdivisions (CSDs), census tracts (CTs), designated places (DPLs) and dissemination areas (DAs). The 2016 DBs should respect three additional standard geographic areas, namely health regions (HRs), local health integration networks (LHNs) and previous census population centres (POPCTRs).

Each dissemination block is assigned a three-digit code. In order to uniquely identify each dissemination block in Canada, the two-digit province/territory (PR) code, the two digit census division (CD) code and the four-digit dissemination area (DA) code must precede the DB code. For example:

PR-CD-DA-DB code	Description
12 09 0103 002	Province 12: Nova Scotia CD 09: Halifax DA 0103 DB 002
59 09 0103 003	Province 59: British Columbia CD 09: Fraser Valley DA 0103 DB 003

Dissemination Area (DA)

A dissemination area (DA) is a small, relatively stable geographic unit composed of one or more adjacent dissemination blocks with an average population of 400 to 700 persons. It is the smallest standard geographic area for which most census data are disseminated. DAs cover all the territory of Canada.

Reported in

2016, 2011, 2006, 2001

Remarks

For 2016, dissemination area (DA) boundary updates were undertaken where census tract and census subdivision boundaries were modified. In addition, a limited number of user-defined DA updates were completed.

Dissemination area rules

Dissemination areas respect several delineation criteria designed to maximize their usefulness for data analysis and to meet operational constraints.

1. Dissemination area (DA) boundaries respect the boundaries of census subdivisions and census tracts. DAs therefore remain stable over time, to the extent that census subdivisions and census tracts do.
2. Dissemination area boundaries follow roads. DA boundaries may follow other features (such as railways, water features, power transmission lines), where these features form part of the boundaries of census subdivisions or census tracts.
3. Dissemination areas are uniform in terms of population size, which is usually targeted from 400 to 700 persons to avoid data suppression. DAs with lower population counts (including zero population) may result in order to respect the boundaries of census subdivisions and census tracts. DAs with higher population counts may also result.
4. Dissemination areas are delineated based on the block population counts from the previous census due to operational constraints.
5. Dissemination areas are compact in shape, to the extent possible while respecting the above criteria.

Each dissemination area (DA) is assigned a four-digit code. In order to uniquely identify each DA in Canada, the two-digit province/territory (PR) code and the two-digit census division (CD) code must precede the DA code. For example:

PR-CD-DA-DB code	Description
12 09 0103	Province 12: Nova Scotia CD 09: Halifax DA 0103
59 09 0103	Province 59: British Columbia CD 09: Fraser Valley DA 0103

When dissemination areas were first created, geographic proximity was embedded in the DA code by assigning DA codes in a serpentine manner within each census division. As DAs evolve, this coding structure cannot be maintained. Therefore, DA codes can no longer ensure geographic proximity.

More information on definitions and concepts can be found in the geography universe of the Dictionary, Census of Population, 2016 (http://www12.statcan.gc.ca/census-recensement/2016/ref/dict/index-eng.cfm).

Content

Dissemination area correspondence file

The Dissemination Area Correspondence File (2016_92-156_DA_AD.txt, 2016_92-156_DA_AD.csv) describes the relationship of the 2016 dissemination area with the 2011 dissemination area. The fields available in the file are the 2016 dissemination area unique identifier (DAUID2016), the 2011 dissemination area unique identifier (DAUID2011), the 2016 dissemination block unique identifier (DBUID2016) and a relationship flag. The relationship flag indicates if the current census dissemination area is equal to the previous census dissemination area or if it has a one-to-many, many-to-one or many-to-many relationship. Together, these fields allow comparison between the 2016 dissemination area and the 2011 dissemination area.

The following series of tables contain detailed counts illustrating the relationship between 2011 and 2016 DAs. This will provide users statistical information explaining the changes to the DAs between the 2011 and 2016 censuses.

The following table contains detailed counts for all 2016 dissemination areas.

Table 3.1
Relationship type, 2016 dissemination area to 2011 dissemination area

Relationship type	Count	Percent[1]
one 2016 dissemination area = one 2011 dissemination area	54,985	97.16
one 2016 dissemination area = many 2011 dissemination areas	8	0.01
many 2016 dissemination areas = one 2011 dissemination area	478	0.84
many 2016 dissemination areas = many 2011 dissemination areas	1,119	1.98

1. Totals may not add to 100 due to rounding.

The following table contains detailed counts for 2016 dissemination areas inside census tracts.

Table 3.2
Relationship type, 2016 dissemination area to 2011 dissemination area – group 1

Relationship type	Count	Percent[1]
one 2016 dissemination area = one 2011 dissemination area	37,493	97.92
one 2016 dissemination area = many 2011 dissemination areas	0	0
many 2016 dissemination areas = one 2011 dissemination area	338	0.88
many 2016 dissemination areas = many 2011 dissemination areas	458	1.20

1. Totals may not add to 100 due to rounding.

The following table contains detailed counts for 2016 dissemination areas outside census tracts.

Table 3.3
Relationship type, 2016 dissemination area to 2011 dissemination area – group 2

Relationship type	Count	Percent[1]
one 2016 dissemination area = one 2011 dissemination area	17,492	95.58
one 2016 dissemination area = many 2011 dissemination areas	8	0.04
many 2016 dissemination areas = one 2011 dissemination area	140	0.76
many 2016 dissemination areas = many 2011 dissemination areas	661	3.61

1. Totals may not add to 100 due to rounding.

Dissemination Block Correspondence File

The dissemination block correspondence file (2016_92-156_DB_ID.txt, 2016_92-156_DB_ID.csv) describes the relationship of the 2016 dissemination block with the 2011 dissemination block. The fields available in the file are the 2016 dissemination block unique identifier (DBUID2016), the 2011 dissemination block unique identifier (DBUID2011), and a relationship flag. The relationship flag indicates if the current census dissemination block is equal to the previous census dissemination block or if it has a one-to-many, many-to-one or many-to-many relationship. Together, these fields allow comparisons between the 2016 dissemination blocks and the 2011 dissemination blocks.

The following table contains detailed counts for all 2016 dissemination blocks.

Table 3.4

Relationship type, 2016 dissemination block to 2011 dissemination block

Relationship type	Count	Percent[1]
one 2016 dissemination block = one 2011 dissemination block	401,562	81.97
one 2016 dissemination block = many 2011 dissemination blocks	19,707	4.02
many 2016 dissemination blocks = one 2011 dissemination block	45,345	9.26
many 2016 dissemination blocks = many 2011 dissemination blocks	23,291	4.75

1. Totals may not add to 100 due to rounding.

Dissemination area and land area correspondence file

The dissemination area and land area correspondence file (2016_92-156_DAland_ADsup.txt, 2016_92-156_ DAland_ADsup.csv) describes the relationship of the 2016 dissemination area with the 2011 dissemination area. The fields available in the file are the 2016 dissemination area unique identifier (DAUID2016), the 2011 dissemination area unique identifier (DAUID2011), a relationship flag and percentage of land area attribute. The relationship flag indicates if the current census dissemination area is equal to the previous census dissemination area or if it has a one-to-many, many-to-one or many-to-many relationship. The percentage of land area attribute describes the percentage of the 2016 dissemination area's land area within the boundaries of the 2011 dissemination area. Together, these fields allow comparisons between the 2016 dissemination areas and the 2011 dissemination areas.

General methodology

The 2011 dissemination block is maintained on the 2016 Statistics Canada Spatial Data Infrastructure, facilitating the creation of correspondence files which describe the relationship between the 2011 dissemination block and the 2016 dissemination block. As a result, correspondence files for other geostatistical areas which are rolled up from the 2011 dissemination block or 2016 dissemination block can also be generated.

Limitations

Not applicable

Comparisons to other products/versions

Not applicable

Using with other products

The 2016 Census Correspondence Files can be used to link 2016 data with the corresponding 2011 areas. The unique identifiers (DBUID and DAUID) can be used as a link to previous census geography products, such as GeoSuite and the Geographic Attribute File, to retrieve higher geographic level data, census population and dwelling counts or other attributes included in these products.

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 2016 *Census Correspondence Files* is January 1, 2016.

4. Technical specifications

Record layouts and data descriptions

Table 4.1
Record layout — Dissemination area correspondence file

Attribute name	Data type	Description
DAUID2016	CHAR2(8)	Uniquely identifies a dissemination area (composed of the two-digit province/territory code, the two-digit census division code, and the four-digit dissemination area code), 2016 Census.
DAUID2011	CHAR2(8)	Uniquely identifies a dissemination area (composed of the two-digit province/territory code, the two-digit census division code, and the four-digit dissemination area code), 2011 Census.
DBUID2016	CHAR2(11)	Uniquely identifies a dissemination block (composed of the two-digit province/territory code, the two-digit census division code, the four-digit dissemination area code, and the two-digit dissemination block code), 2016 Census.
DA_rel_flag	CHAR2(1)	Relationship flag indicating if the 2016 dissemination area is equal to the 2011 dissemination area or has a one-to-many relationship, a many-to-one relationship or a many-to-many relationship. 1 – one 2016 dissemination area was one 2011 dissemination area 2 – one 2016 dissemination area was many 2011 dissemination areas 3 – many 2016 dissemination areas were one 2011 dissemination area 4 – many 2016 dissemination areas were many 2011 dissemination areas

Table 4.2
Record layout — Dissemination block correspondence file

Attribute name	Data type	Description
DBUID2016	CHAR2(11)	Uniquely identifies a dissemination block (composed of the two-digit province/territory code, the two-digit census division code, the four-digit dissemination area code, and the two-digit dissemination block code), 2016 Census.
DBUID2011	CHAR2(10)	Uniquely identifies a dissemination block (composed of the two-digit province/territory code, the ywo-digit census division code, the four-digit dissemination area code, and the two-digit dissemination block code), 2011 Census.
DB_rel_flag	CHAR2(1)	IRelationship flag indicating if the 2016 dissemination block is equal to the 2011 dissemination block or has a one-to-many relationship, a many-to-one relationship or a many-to-many relationship. 1 – one 2016 dissemination block was one 2011 dissemination block 2 – one 2016 dissemination block was many 2011 dissemination blocks 3 – many 2016 dissemination blocks were one 2011 dissemination block 4 – many 2016 dissemination blocks were many 2011 dissemination blocks.

Table 4.3
Record layout — Dissemination area and land area correspondence file

Attribute name	Data type	Description
DAUID2016	CHAR2(8)	Uniquely identifies a dissemination area (composed of the two-digit province/territory code, the two-digit census division code, and the four-digit dissemination area code), 2016 Census.
DAUID2011	CHAR2(8)	Uniquely identifies a dissemination area (composed of the two-digit province/territory code, the two-digit census division code, and the four-digit dissemination area code), 2011 Census.
DA_rel_flag	CHAR2(1)	Relationship flag indicating if the 2016 dissemination area is equal to the 2011 dissemination area or has a one-to-many relationship, a many-to-one relationship or a many-to-many relationship. 1 – one 2016 dissemination area was one 2011 dissemination area 2 – one 2016 dissemination area was many 2011 dissemination areas 3 – many 2016 dissemination areas were one 2011 dissemination area 4 – many 2016 dissemination areas were many 2011 dissemination areas
DA_area_percentage	NUMBER(6,2)	Percentage of the 2016 dissemination area's land area within the extent of the 2011 dissemination area

File specifications

Not applicable

Software formats

Not applicable

System requirements

Not applicable

Installation instructions

Not applicable

Geographic representation

Not applicable

File naming convention

The 2016 Census Correspondence Files follow a naming convention. The file names represent:

Census year_catalogue number_English geographic area acronym_French geographic area acronym.

5. Data quality

Lineage

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

Codes and unique identifiers

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

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

The unique identifier is established by Statistics Canada.

Positional accuracy

Strategies to increase positional accuracy and currency of road network data, have been implemented over the past several years. A key component of these efforts was the alignment of the existing road network to externally available GPS compliant authoritative provincial sources, in a process known as 'convergence.' Convergence has been completed in British Columbia, Alberta, Ontario, Quebec, New Brunswick, Nova Scotia and Prince Edward Island. The results of which will be reflected in 2016 Census spatial products. These efforts also ensure that Statistics Canada's dissemination geographies will better integrate with other spatial datasets originating outside of Statistics Canada such as the provincial sources and municipal topographic data.

Attribute accuracy

Not applicable

Logical consistency

Logical consistency describes the fidelity of relationships encoded in the data structure of the digital spatial data. Statistics Canada's Spatial Data Infrastructure keeps track of the correspondence between the previous and the current censuses for standard geographic areas.

Internal consistency

Consistency between the data at the various geographic levels was verified. These included checks to ensure all the 2016 dissemination blocks or 2016 dissemination areas are included in the correspondence files. All geographic areas have been verified to ensure that they have a unique identifier that is valid for the 2016 Census. Also, all 2016 dissemination area land area is equal to 100% of their 2011 dissemination area components.

2016 Census land area

Land area data for the standard geographic areas reflect the boundaries in effect on January 1, 2016 (the geographic reference date for the 2016 Census of Canada).

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

Land area is calculated using ArcGIS® software.

Users should note that even when the boundaries of standard geographic areas did not change between the 2011 and 2016 censuses, the land areas may differ due to geometry shifts. The shifts are caused by a change in the underlying database architecture and by improvements in the absolute positional accuracy of some of the roads.

Consistency with other products

The unique identifiers (UIDs) used in the correspondence files are the same as those used in other geography products and represent the same geographic areas.

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 2016 Census Correspondence Files contain the complete set of dissemination blocks or dissemination 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