

Catalogue no. 92-160-G
ISBN 978-0-660-41174-3

Boundary Files, Reference Guide Second edition, Census year 2021



Release date: February 9, 2022



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 infostats@statcan.gc.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 |

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.

Published by authority of the Minister responsible for Statistics Canada

© Her Majesty the Queen in Right of Canada as represented by the Minister of Industry, 2022

All rights reserved. Use of this publication is governed by the Statistics Canada [Open Licence Agreement](#).

An [HTML version](#) is also available.

Cette publication est aussi disponible en français.

Table of contents

What's new?	4
1. About this guide	5
2. Overview	6
3. About this product	7
Purpose of the product	7
Definitions and concepts	7
Content	7
General methodology	7
Limitations	8
Comparison to other products or versions	8
Use with other products	9
Reference date	9
4. Technical specifications	10
Record layout and data descriptions	10
Attribute domain values	21
Software formats	22
File extension and accented character information	22
Metadata	22
Geographic representation	22
File naming convention	23
5. Data quality	25
Lineage	25
Positional accuracy	25
Attribute accuracy	25
Logical consistency	26
Consistency with other products	26
Completeness	26
Appendix	26

Boundary Files, Reference Guide, Second edition, Census year 2021

This reference guide is intended for users of the *2021 Census Boundary Files*. This guide provides an overview of the files, the general methodology used to create them, and important technical information.

What's new?

- Each boundary file now includes the Dissemination Geography Unique Identifier (DGUID) for geographic areas.
- Each boundary file contains only the information relative to its specific geographic level. The new [2021 Dissemination Geographies Relationship File](#) allows linking all geographies to their higher levels.
- Due to methodology changes in the delineation of the census metropolitan areas and census agglomerations (CMA/CA) geographies, the “CMA/CA Boundary Files” and “Census Tract (CT) Boundary Files” releases were moved to February 9, 2022.
- As of 2020, all the boundaries maintained by Statistics Canada have been adjusted to the more current, accurate and consistent CanVec hydrographic features ([Topographic Data of Canada – Natural Resources Canada](#)), which comply with international geomatics standards seamlessly across Canada.
- The *2021 Census Boundary Files* are now available in File Geodatabase (.gdb), Esri® REST and Web Mapping Service (WMS) formats.
- The *2021 Census Boundary Files* are no longer available in MapInfo (.tab) format.

1. About this guide

This reference guide does not provide details on specific software packages that are available for use with the *2021 Census Boundary Files*. Users are advised to contact the appropriate software vendor for information.

This data product is provided 'as-is,' and Statistics Canada makes no warranty, 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

The *2021 Census Boundary Files* depict the boundaries of all standard geographic areas established for the purpose of disseminating census data. See [Figure 1.1, “Hierarchy of standard geographic areas for dissemination, 2021 Census”](#) from the *Dictionary, Census of Population, 2021*.

They contain information such as unique identifier (UID), name and type where applicable, as well as land area and province or territory unique identifier (PRUID). Each boundary file can be linked to all higher level geographic areas using its DGUID and the new *2021 Dissemination Geographies Relationship File*.

They are available for download or viewing in two types: cartographic and digital. Both cartographic and digital boundary files are portrayed in Lambert conformal conic projection (North American Datum of 1983 [NAD83]).

3. About this product

Purpose of the product

The purpose of the *2021 Census Boundary Files* is to provide a framework for mapping and spatial analysis, and to support Geographic Information System (GIS) applications used for land use and demographic studies, or social, economic and market research. Geographic unique 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 *2021 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, 2021](#).

Content

Each *2021 Census Boundary File* contains the UID, DGUID, name and type where applicable, and land area of the geographic level the file represents. It also contains the PRUID. A *2021 Census Boundary File* is available for each of the following geographic areas:

- Provinces and territories (PRs)
- Census divisions (CDs)
- Federal electoral districts (2013 Representation Order) (FEDs)
- Census subdivisions (CSDs)
- Designated places (DPLs)
- Economic regions (ERs)
- Census agricultural regions (CARs)
- Census consolidated subdivisions (CCSs)
- Census metropolitan areas and census agglomerations (CMA/CAs)
- Census tracts (CTs)
- Population centres (POPCTRs)
- Dissemination areas (DAs)
- Dissemination blocks (DBs)
- Aggregate dissemination areas (ADAs)

General methodology

The National Geographic Database (NGD) is a joint Statistics Canada-Elections Canada initiative to develop and maintain a spatial database that 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 source files used for the creation of the boundary files reside on Statistics Canada's Spatial Data Infrastructure (SDI), which was derived directly from data stored in the NGD.

Creation of the 2021 Census Boundary Files

Digital

For the digital boundary file creation, spatial and attribute information were extracted for each level of the geographic hierarchy. Primary data manipulation of the product layers included preserving the geographic hierarchy of the attributes inherent within a geographic level and ensuring spatial alignment between layers. The native files were copied into SDE feature datasets and stored as feature classes to facilitate geo-processing (e.g., projecting, joins, transforming and verification operations).

Cartographic

In contrast to 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 and the basic block and the hydrography spatial components were copied into SDE feature datasets and stored as feature classes 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. After erasure the basic blocks were dissolved to create each higher level geographic layer.

Post-processing

Both the digital and cartographic files were verified for their spatial and attribute content, translated into French and English, and appropriately named according to the [file naming convention](#). 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: Shapefile (.shp), Geography Markup Language (.gml), and File Geodatabase (.gdb).

The Shapefile, Geography Markup Language and File Geodatabase files were compressed into WinZip® files (file extension .zip) and made available for download from the Internet.

Limitations

The input data used to create the files was originally obtained from several sources having a wide range of scales. The *2021 Census Boundary Files* will not be precise if plotted at a larger scale than the scale of the source material used in their creation. Maps created from the boundary files should not be used to determine the precise location of boundaries.

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

Comparison to other products or versions

Each *2021 Census Boundary File* is compatible with other *2021 Census Boundary Files* and the *2021 Road Network File*. Boundary files are derived from the same native sources and the attributes found in each of the boundary files are compatible.

The *2021 Census Boundary Files* are similar but not necessarily consistent with the boundary files released prior to the 2021 Census.

The *2021 Census Boundary Files* can be linked to other 2021 Census data products using the UID and DGUID for each geographic area. The new *2021 Dissemination Geographies Relationship File* also allows the *2021 Census Boundary Files* to be linked to higher geographic levels through their DGUIDs.

Use with other products

When considering using the *2021 Census Boundary Files*, users should be aware of the compatibility of these files with those that are available from other sources. They may not be consistent with Statistics Canada files.

Reference date

Population counts

The population count data used to create the “2021 Designated Place Boundary Files”, the “2021 Census Metropolitan Area and Census Agglomeration Boundary Files” and the “2021 Population Centre Boundary Files” refer to the 2021 Census of Population which was conducted on May 11, 2021.

Standard geographic areas

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, 2021.

4. Technical specifications

Record layout and data descriptions

Province and territory

Table 4.1
Record layout - Province and territory boundary files

Attribute name	Data type	Description
PRUID	Character (2)	Uniquely identifies a province or territory.
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
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.
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).

1. For further information please refer to the "[Dissemination Geography Unique Identifier \(DGUID\)](#)" definition from the *Dictionary, Census of Population, 2021*.

For more information on provinces or territories, refer to the "[Province or territory](#)" definition from the *Dictionary, Census of Population, 2021*.

Census division

Table 4.2
Record layout - Census division boundary files

Attribute name	Data type	Description
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).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
CDNAME	Character (100)	Census division name.
CDTYPE	Character (3)	Census division type.
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the "[Dissemination Geography Unique Identifier \(DGUID\)](#)" definition from the *Dictionary, Census of Population, 2021*.

For more information on census divisions, refer to the "[Census division \(CD\)](#)" definition and "[Census division types by province and territory, 2021 Census](#)" table from the *Dictionary, Census of Population, 2021*.

Federal electoral district

Table 4.3

Record layout - Federal electoral district boundary files

Attribute name	Data type	Description
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).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
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.
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the "[Dissemination Geography Unique Identifier \(DGUID\)](#)" definition from the *Dictionary, Census of Population, 2021*.

For more information on federal electoral districts, refer to the "[Federal electoral district \(FED\)](#)" definition from the *Dictionary, Census of Population, 2021*.

Census subdivision

Table 4.4

Record layout - Census subdivision boundary files

Attribute name	Data type	Description
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).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
CSDNAME	Character (100)	Census subdivision name.
CSDTYPE	Character (3)	Census subdivisions are classified according to designations adopted by provincial/territorial or federal authorities.
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the "[Dissemination Geography Unique Identifier \(DGUID\)](#)" definition from the *Dictionary, Census of Population, 2021*.

For more information on census subdivisions, refer to the "[Census subdivision \(CSD\)](#)" definition and "[Census subdivision types by province and territory, 2021 Census](#)" table from the *Dictionary, Census of Population, 2021*.

Designated place

Table 4.5

Record layout - Designated place boundary files

Attribute name	Data type	Description
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).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
DPLNAME	Character (100)	Designated place name.
DPLTYPE	Character (3)	Designated place type.
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the "[Dissemination Geography Unique Identifier \(DGUID\)](#)" definition from the *Dictionary, Census of Population, 2021*.

For more information on designated places, refer to the “[Designated place \(DPL\)](#)” definition and “[Designated place types by province and territory, 2021 Census](#)” table from the *Dictionary, Census of Population, 2021*.

Economic region

Table 4.6

Record layout - Designated place boundary files

Attribute name	Data type	Description
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).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
ERNAME	Character (100)	Economic region name.
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the “[Dissemination Geography Unique Identifier \(DGUID\)](#)” definition from the *Dictionary, Census of Population, 2021*.

For more information on economic regions, refer to the “[Economic regions \(ER\)](#)” definition from the *Dictionary, Census of Population, 2021*.

Census agricultural region

Table 4.7

Record layout - Census agricultural regions boundary files

Attribute name	Data type	Description
CARUID	Character (4)	Uniquely identifies a designated place (composed of the 2-digit province or territory unique identifier followed by the 4-digit designated place code).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
CARENAME	Character (50)	The official census agricultural region English name.
CARFNAME	Character (50)	The official census agricultural region French name.
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the “[Dissemination Geography Unique Identifier \(DGUID\)](#)” definition from the *Dictionary, Census of Population, 2021*.

For more information on census agricultural regions, refer to the “[Census agricultural region \(CAR\)](#)” definition from the *Dictionary, Census of Population, 2021*.

Census consolidated subdivision

Table 4.8

Record layout - Census consolidated subdivision boundary files

Attribute name	Data type	Description
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).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
CCSNAME	Character (100)	Census consolidated subdivision name.
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the “[Dissemination Geography Unique Identifier \(DGUID\)](#)” definition from the *Dictionary, Census of Population, 2021*.

For more information on census consolidated subdivisions, refer to the “[Census consolidated subdivision \(CCS\)](#)” definition from the *Dictionary, Census of Population, 2021*.

Census metropolitan area and census agglomeration

Table 4.9

Record layout - Census metropolitan area and census agglomeration boundary files

Attribute name	Data type	Description
CMAUID	Character (3)	Uniquely identifies a census metropolitan area or census agglomeration.
CMAUID	Character (5)	Uniquely identifies the provincial or territorial part of a census metropolitan area or census agglomeration in Canada (composed of the 2-digit province or territory unique identifier followed by the 3-digit census metropolitan area or census agglomeration code).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
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.
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the "[Dissemination Geography Unique Identifier \(DGUID\)](#)" definition from the *Dictionary, Census of Population, 2021*.

For more information on census metropolitan areas and census agglomerations, refer to the "[Census metropolitan area \(CMA\) and census agglomeration \(CA\)](#)" definition and "[Census metropolitan area and census agglomeration types by province and territory, 2021 Census](#)" table from the *Dictionary, Census of Population, 2021*.

Census tract

Table 4.10

Record layout - Census tract boundary files

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).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
CTNAME	Character (7)	Every census tract is assigned a 7.2-character numeric 'name' (including leading zeros, a decimal point and trailing zeros).
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the "[Dissemination Geography Unique Identifier \(DGUID\)](#)" definition from the *Dictionary, Census of Population, 2021*.

For more information on census tracts, refer to the "[Census tract \(CT\)](#)" definition from the *Dictionary, Census of Population, 2021*.

Population centre

Table 4.11

Record layout - Population centre boundary files

Attribute name	Data type	Description
PCUID	Character (4)	Uniquely identifies a population centre.
PCPUID	Character (6)	Uniquely identifies the provincial or territorial part of a population centre (composed of the 2-digit province or territory unique identifier followed by the 4-digit population centre unique identifier).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
PCNAME	Character (100)	Population centre name.
PCTYPE	Character (1)	Population centre type.
PCCLASS	Character (1)	Identifies whether a population centre is small, medium or large urban.
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the "[Dissemination Geography Unique Identifier \(DGUID\)](#)" definition from the *Dictionary, Census of Population, 2021*.

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.

For more information on population centres, refer to the "[Population centre \(POPCTR\)](#)" definition from the *Dictionary, Census of Population, 2021*.

Dissemination area

Table 4.12

Record layout - Census consolidated subdivision boundary files

Attribute name	Data type	Description
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).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the "[Dissemination Geography Unique Identifier \(DGUID\)](#)" definition from the *Dictionary, Census of Population, 2021*.

The digital boundary file contains the boundaries of all 57,936 DAs which combined cover all of Canada. The cartographic boundary file contains the boundaries of 57,932 DAs. DA 24690104 in Quebec as well as 35010386, 35010377 and 35010392 in Ontario fall completely in coastal water and are not included in the cartographic boundary file.

For more information on dissemination areas, refer to the "[Dissemination area \(DA\)](#)" definition from the *Dictionary, Census of Population, 2021*.

Dissemination block

Table 4.13

Record layout - Census agricultural regions boundary files

Attribute name	Data type	Description
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).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
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.
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the "[Dissemination Geography Unique Identifier \(DGUID\)](#)" definition from the *Dictionary, Census of Population, 2021*.

For more information on dissemination blocks, refer to the “[Dissemination block \(DB\)](#)” definition from the *Dictionary, Census of Population, 2021*.

Below is a list of the 239 DBs which are not included within the cartographic boundary file. These DBs are located entirely within coastal waters and were therefore removed during the production of the cartographic boundary file.

Table 4.14

Dissemination blocks not included within the 2021 Census Dissemination Block Cartographic Boundary File - DBUID

Newfoundland and Labrador

10010503031

10010504001

10010520001

10010535028

10010556009

10010682008

10010714024

10010719015

10010750032

10020079021

10020079053

10020117005

10040108013

10040109013

10070483004

10070487003

10070519018

10070519027

10070549011

10070550003

10070550004

10080221016

Prince Edward Island

11020480009

11030303007

11030327016

11030327027

Nova Scotia

12010049007

12010049008

12010049009

12090838005

12090846021

12090846022

Table 4.14

Dissemination blocks not included within the 2021 Census Dissemination Block Cartographic Boundary File - DBUID

12090846023
12090846024
12090846025
12090846026
12090846027
12090846028
12090902005
12090980004
12090981004
12091023001
12120110001
12120122009
12170352018
12170352019
12170353005
12170355009
12170357004
12170358009
12170362009
12170374015
12170378014
12170389013
12170393016
12170395006
12170396012
12170397005
12170398001
12170399002
12170400004
12170403016
12170404019
12170405014
12170406019
12170415010
12170417023
12170420005
12170425009
12170426003
12170429029

Table 4.14**Dissemination blocks not included within the 2021 Census Dissemination Block Cartographic Boundary File - DBUID**

12170432005

12170440003

12170443008

12170446005

12170449013

12170450010

12170451012

12170454020

12170458014

12170460022

12170461013

12170466012

12170469011

12170477013

12170480001

12170482007

12170485014

12170486003

12170491007

12170495007

12170495009

12170497009

12170517013

12170522009

12170528012

12170531004

New Brunswick

13010103018

13020056012

13020063004

13020072020

13020072021

13020072022

13080068033

13080139005

13140093012

13140162001

13140162003

13140181006

13150159001

Table 4.14

Dissemination blocks not included within the 2021 Census Dissemination Block Cartographic Boundary File - DBUID

13150166001

13150166005

13150170003

13150322021

13150326011

13150343013

13150347008

Quebec

24020064006

24020064012

24180040016

24180046016

24180055028

24180055030

24180063014

24180072018

24230066001

24230066014

24250187026

24250296011

24250300015

24250300017

24250300018

24250300019

24250300021

24340089017

24340089019

24340089021

24340089023

24370299011

24370308017

24380045028

24520099015

24520100018

24530073008

24530108023

24530124037

24530126014

24530126016

24530126018

Table 4.14**Dissemination blocks not included within the 2021 Census Dissemination Block Cartographic Boundary File - DBUID**

24530126020

24590012045

24590012047

24590012049

24590012051

24590012053

24590012056

24590012057

24640228010

24650667005

24661242015

24663335023

24670307016

24690104001

24700067028

24700088041

24700151018

24710146015

24710189012

24710191014

24710191015

24710191017

24710191019

24710191021

24710194018

24710242019

24710244022

24970125025

Ontario

35010377001

35010386001

35010392001

35120346018

35120346019

35120371016

35120371019

35120392023

35204675005

35370813015

35380295018

Table 4.14

Dissemination blocks not included within the 2021 Census Dissemination Block Cartographic Boundary File - DBUID

35410146019

35420230022

35420255011

35430603026

35430612021

35430869046

35490201021

35510090001

35570420035

35580482046

35580482073

35580485003

35600296010

Manitoba

46230071033

British Columbia

59150871005

59153241016

59153569008

59153569009

59153576012

59153602005

59153663024

59153663026

59153663029

59153663032

59170331005

59170634010

59170648027

59170648032

59170654007

59170654009

59170654011

59170688001

59190305008

59190316002

59210260004

59210274010

59210274012

59230154032

Table 4.14**Dissemination blocks not included within the 2021 Census Dissemination Block Cartographic Boundary File - DBUID**

59240212006
59240215009
59240260006
59240260010
59240264015
59260295042
59260424007
59260432012
59290165002
59290180014
59290199017
59430125042
Nunavut
62040062039

Aggregate dissemination area**Table 4.15****Record layout - Census consolidated subdivision boundary files**

Attribute name	Data type	Description
ADAUID	Character (8)	Uniquely identifies an aggregate dissemination area (composed of the 2-digit province/territory unique identifier followed by the 2-digit census division code and the 4-digit aggregate dissemination area code).
DGUID	Character (21)	Dissemination Geography Unique Identifier. ¹
LANDAREA	Number (12.4)	Land area of geographic area, in square kilometres (km ²).
PRUID	Character (2)	Uniquely identifies a province or territory.

1. For further information please refer to the "[Dissemination Geography Unique Identifier \(DGUID\)](#)" definition from the *Dictionary, Census of Population, 2021*.

For more information on aggregate dissemination areas, refer to the "[Aggregate dissemination area \(ADA\)](#)" definition from the *Dictionary, Census of Population, 2021*.

Attribute domain values**Census division type (CDTYPE)**

For information on census division types, refer to the "[Census division type \(CDTYPE\), 2021 Census](#)" table.

Census subdivision type (CSDTYPE)

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

For information on census subdivision types, refer to the "[Census subdivision type \(CSDTYPE\), 2021 Census](#)" table.

Census metropolitan area and census agglomeration type (CMATYPE)

For information on census metropolitan area and census agglomeration types, refer to the "[Census metropolitan area and census agglomeration type \(CMATYPE\), 2021 Census](#)" table.

File specifications

Not applicable

Software formats

Boundary files for the 2021 Census are available for download from the Statistics Canada website in the following formats:

- Shapefile
File extension: .shp
- Geography Markup Language (GML) 3.1.1
File extension: .gml
- File Geodatabase
File extension: .gdb

The *2021 Census Boundary Files* are also available as map services from the Statistics Canada website in the following formats:

- Esri® REST service
- Web Map Service (WMS)

This reference guide does not provide details on specific software packages available for use with the *2021 Census Boundary Files*. Users should contact the appropriate software vendor for such information.

File extension and accented character information

The Shapefile, Geography Markup Language and File Geodatabase files are compressed into WinZip® files (file extension .zip).

Some of the *2021 Census Boundary Files* contain attributes with accented characters. They were successfully tested on desktop versions of ArcGIS® 10.5.1, File Geodatabase and FME Data Inspector 2015.1.

Metadata

The downloadable compressed packages (.zip) include a metadata file (.xml) that describes and validates the structure and content of the *2021 Census Boundary Files*.

The same metadata are applied to the Esri® REST service and Web Map Service.

Geographic representation

The *2021 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 (NAD27) that reflects the higher accuracy of geodetic surveying.

Users of *2021 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 display objectives.

File naming convention

Spatial product file names follow a file naming convention. The file projection, geographic level, geographic coverage, file type, geographic reference date, file format 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

- I - projection in Lambert conformal conic

Next three characters: primary geographic level of file

- pr_ - province/territory
- cd_ - census division
- fed - federal electoral district
- csd - census subdivision
- dpl - designated place
- er_ - economic region
- car - census agricultural region
- ccs - census consolidated subdivision
- cma - census metropolitan area/census agglomeration
- ct_ - census tract
- pc_ - population centre
- da_ - dissemination area
- db_ - dissemination block
- ada - aggregate dissemination area

Next three numbers: geographic code of coverage

- 000 - Canada

Next character: file type

- a - digital boundary file
- b - cartographic boundary file

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 2021 Census products, the geographic reference date is January 1, 2021.

- 21 - geographic reference date is 2021

Next character: file format

- a - Shapefile (.shp)
- f - File Geodatabase (.gdb)
- g - Geography Markup Language (.gml)
- s - Services (Esri® REST and Web Map Service [WMS])

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 quality elements include an overview of 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.

All data in the *2021 Census Boundary Files* were originally extracted from Statistics Canada's SDI.

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 NGD is not fully Global Positioning Systems (GPS)-compliant. However, every possible attempt is made to ensure that the standard geographic area boundaries maintained in the NGD respect the limits of the administrative entities that they represent (e.g., CD and CSD) or on which they are based (e.g., CMA/CA). 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) that are stored within the NGD is considered when positioning the limits of the standard geographic areas.

Within the NGD, DB 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 (e.g., projecting, appending, transforming and verification operations), the "2021 Dissemination Block Cartographic Boundary File" is converted into Shapefile (.shp), Geography Markup Language (.gml) or File Geodatabase (.gdb) files. These manipulations may have caused slight shifting of some of the underlying land and hydrographic features resulting in representative points falling in water.

Attribute accuracy

Attribute accuracy refers to the accuracy of the quantitative and qualitative attribute information attached to each feature (e.g., CSD name, UID).

As noted under the General methodology section, the attributes (names, types and UIDs) for all standard geographic areas are sourced from Statistics Canada's SDI. The names and types of standard geographic areas have been updated using source materials from provincial, territorial and federal authorities.

The attribute data associated with the polygons in the *2021 Census Boundary Files* were verified against the data in the SDI and found to accurately reflect them.

Logical consistency

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

The *2021 Census Boundary Files* were verified against data in the NGD and found to be logically consistent.

In each boundary file, all geographic areas have been verified to have a UID and DGUID that is valid for the 2021 Census.

Consistency with other products

The position of the boundaries in the *2021 Census Boundary Files* is not necessarily consistent with previous editions of boundary files or road network files as a result of updates made using provincially and territorially sourced data.

Topology checks were performed with the *2021 Road Network File* and the *2021 Census 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.

- Tolerance: 0.00001 metres
- Resolution: 0.000005 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.

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 CSDs. In cartographic boundary files, this is also 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 geographic areas that are situated in coastal areas.

Appendix

See [Table 1.1, “Geographic areas by province and territory, 2021 Census,”](#) from the *Dictionary, Census of Population, 2021*.