GeoSuite Data Package,
Reference Guide,
Census year 2021

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Geographic Attribute File, Reference Guide, Census year 2021

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

What's new?

- The downloadable version of GeoSuite is not available for the 2021 Census. The *2021 GeoSuite Data Package* containing all of the 2021 tables in comma separated value (.csv) format is available for download.
- All 2021 Census geography products now include the Dissemination Geography Unique Identifier (DGUID) for geographic areas.

1. About this guide

This reference guide is intended for users of the *2021 GeoSuite Data Package*. A record layout is provided in the Technical specifications section.

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2. Overview

The *2021 GeoSuite Data Package* contains the same 2021 Census data that are available in GeoSuite Web in tabular format. It includes the 2021 Census population counts, the 2021 Census dwelling counts, representative point coordinates, land area, geographic codes, names and, in some cases, the 2016 Census population counts (both final and adjusted). It also includes lookup tables as well as reference lists.

3. About this product

Purpose of the product

The objective of the *2021 GeoSuite Data Package* is to provide users with the ability to load all 2021 GeoSuite data into their own application or database, in order to format, retrieve and query data, explore the links between 2021 Census standard levels of geography, and obtain selected tabular information.

Definitions and concepts

Geographic terms and concepts are briefly defined in the *Dictionary, Census of Population, 2021*.

Content

The *2021 GeoSuite Data Package* contains information for all 2021 Census standard geographic areas, including unique identifiers (UIDs), DGUIDs, related attributes, population and dwelling counts, land area, representative point coordinates and Census incompletely enumerated Indian reserves and Indian settlements.

Hierarchy of standard geographic areas

The *2021 GeoSuite Data Package* includes data for the following the 2021 Census standard geographic areas:

- Canada (CAN)
- Provinces and territories (PRs)
- Census divisions (CDs)
- Federal electoral districts (FEDs) (2013 Representation Order)
- Census subdivisions (CSDs)
- Designated places (DPLs)
- Economic regions (ERs)
- Census consolidated subdivisions (CCSs)
- Census metropolitan areas (CMAs), census agglomerations (CAs) and census metropolitan influenced zones (MIZs)
- Census tracts (CTs)
- Population centres (POPCTRs) and rural areas (RAs)
- Dissemination areas (DAs)
- Dissemination blocks (DBs)
- Aggregate dissemination areas (ADAs)
- Place names (PNs)

The Figure 1.1, "Hierarchy of standard geographic areas for dissemination, 2021 Census," illustrates the relationships between all standard geographic areas.

2021 Census population and private dwellings

The population and dwelling counts contained within the *2021 GeoSuite Data Package* are from the 2021 Census. The counts for a particular geographic area represent the number of people whose usual place of residence is in that area, regardless of where they happened to be on census day, May 11, 2021.

2021 Census land area

Land area is the area in square kilometres of the land-based portions of 2021 Census standard geographic areas. The land area data contained within the *2021 GeoSuite Data Package* may or may not be consistent with land area data provided by other sources. Land area is calculated using ArcGIS® software for the sole purpose of calculating population density.

Land area data for 2021 Census standard geographic areas reflect the boundaries in effect on January 1, 2021 (the geographic reference date for the 2021 Census of Canada).

2021 Census incompletely enumerated Indian reserves and Indian settlements flag

In 2021, some Indian reserves and Indian settlements were incompletely enumerated. For these reserves and settlements, dwelling enumeration was either not permitted or was interrupted before it could be completed.

The 2021 Census population and dwelling counts are not available for the incompletely enumerated Indian reserves and Indian settlements, and are not included in 2021 Census tabulations. Data for geographic areas containing one or more of these reserves and settlements are noted accordingly.

2016 Census population by 2016 Census boundaries

The 2016 Census population counts are as they were enumerated during the 2016 Census, according to boundaries that were in effect as of January 1, 2016. These data are provided for all standard geographic areas.

2016 Census population by 2021 Census boundaries and the adjusted population flag

Users wishing to compare the 2021 Census statistical data with those of other censuses should be aware that the boundaries of geographic areas may change from one census to another. In order to facilitate this comparison, the 2016 Census population counts are adjusted as needed to take into account boundary changes between the 2016 and the 2021 censuses. The 2016 Census population by 2021 Census boundaries is also known as the 2016 adjusted population. Where the 2016 adjusted population counts did not equal the 2016 final population counts, the adjusted population flag was set to 1.

Since data are provided by the 2021 Census boundaries and geographic structure, calculations on census data from the *2021 GeoSuite Data Package* should only be done using the 2016 data adjusted to the 2021 boundaries.

Secondary province code

The secondary province (XPR) field is used to indicate which CMAs, CAs and POPCTRs cross provincial boundaries. The XPR field is read in conjunction with the PR (code) field to obtain the names of these provinces.

Positional data

The *2021 GeoSuite Data Package* contains the representative point coordinates for the DAs, weighted by population data. It also contains the representative point coordinates for the CSDs, the ADAs and the DPLs. These representative point coordinates are centrally located. The representative point coordinates were projected in Lambert conformal conic projection (NAD83).

Lookup tables

All the lookup tables required to describe the coded information (e.g., CDTYPE, CSDTYPE, DPLTYPE, etc.) contained in the data files are included in the package.

Reference lists

The package contains the five following frequently used reference lists:

- DB by CT for each CMA/CA
- DB by CSD for each CMA/CA
- DB by CSD for each CD
- CSD by FED
- CT by CSD

General methodology

The National Geographic Database (NGD) is a joint Statistics Canada-Elections Canada initiative to develop and maintain a 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 files used for the creation of the *2021 GeoSuite Data Package* reside on Statistics Canada's Spatial Data Infrastructure (SDI) which was derived directly from data stored in the NGD.

Attribute information was retrieved from SDI and tables were created for each 2021 Census standard geographic level. Each table contains attribute information for all higher level geographies, where applicable. Common attributes, such as codes and UIDs, link all standard levels of geography in order to provide the users with connections that represent relationships found in the complete geographic hierarchy.

Limitations

Not applicable

Comparison to other products or versions

The *2021 GeoSuite Data Package* contains UIDs, DGUIDs, names, and where applicable, types and classes applicable to the 2021 Census.

In order to harmonize the *2021 GeoSuite Data Package* with other products, it only includes place names sourced from the Geographical Names Board of Canada (GNBC).

The *2021 GeoSuite Data Package* includes all the DBs, while the "2021 Dissemination Block Cartographic Boundary File" does not include the DBs located entirely within coastal waters. See the *2021 Boundary Files, Reference Guide* for more information.

Users should note that even when the boundaries of standard geographic areas did not change between the 2016 and 2021 censuses, the land areas may differ due to geometry shifts. The shifts are caused by the integration of CanVec hydrographic features, as well as improvements in the absolute positional accuracy of roads.

Because of the missing counts for the incompletely enumerated Indian reserves and Indian settlements, users are cautioned that for the affected geographic areas, comparisons (e.g., percentage change) between 2016 and 2021 may not be precise. The impact of the missing data can be significant for lower-level geographic areas (e.g., CDs), where the incompletely enumerated Indian reserves and Indian settlements account for a higher proportion of the population. This is especially true for lower-level geographic areas where a particular Indian reserve or Indian settlement was incompletely enumerated for the 2021 Census and enumerated for the 2016 Census and vice versa.

Use with other products

The 2021 Census standard geographic areas in the *2021 GeoSuite Data Package* can be linked to other 2021 Census products using UIDs or DGUIDs.

The 2021 Census DB unique identifiers (DBUID) included in the *2021 GeoSuite Data Package* can be used with the *2021 Correspondence Files* to identify corresponding 2016 Census DBs. The 2016 DBUIDs can then be linked to the *2016 Geographic Attribute File* or *2016 Geosuite* to retrieve the 2016 Census standard geographic areas and their attributes.

Reference date

Population and dwelling counts

The population and dwelling count data contained within the *2021 GeoSuite Data Package* 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 2021 Census statistical data are collected, tabulated and reported. The reference date for the 2021 Census standard geographic areas is January 1, 2021.

4. Technical specifications

Record layout and data descriptions

The following table identifies and briefly describes the selected attributes comprising the content of the *2021 GeoSuite Data Package*.

Table 4.1
Record layout — GeoSuite

Attribute name	Data type	Description
Canada (CAN)		
CANuid	Character (2)	Uniquely identifies Canada.
CANname	Character (100)	Country name.
CANdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 Canada.[1]
CANpop_2021	Number (9)	2021 Canada population.
CANtdwell_2021	Number (9)	2021 Canada total private dwellings.
CANurdwell_2021	Number (9)	2021 Canada private dwellings occupied by usual residents.
CANpop_2016	Number (9)	2016 Canada population.
CANtdwell_2016a	Number (9)	2016 Canada total private dwellings adjusted on 2021 boundaries.
CANurdwell_2016a	Number (9)	2016 Canada private dwellings occupied by usual residents adjusted on 2021 boundaries.
CANir_2021	Character (1)	2021 Canada Indian reserve refusal flag.
CANarea	Number (14.4)	2021 Canada land area.
Province and territory (PR)		
PRcode	Character (2)	Uniquely identifies a province or territory.
PRdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 provinces or territories .[1]
PRname	Character (100)	Province or territory name.
PRpop_2021	Number (9)	2021 province or territory population.
PRtdwell_2021	Number (9)	2021 province or territory total private dwellings.
PRurdwell_2021	Number (9)	2021 province or territory private dwellings occupied by usual residents.
PRpop_2016	Number (9)	2016 province or territory population.
PRpop_2016a	Number (9)	2016 province or territory population adjusted on 2021 boundaries.
PRtdwell_2016a	Number (9)	2016 province or territory total private dwellings adjusted on 2021 boundaries.
PRurdwell_2016a	Number (9)	2016 province or territory private dwellings occupied by usual residents adjusted on 2021 boundaries.
PRarea	Number (14.4)	2021 province or territory land area.
PRadj_2016	Character (1)	2016 province or territory adjusted population flag.
PRir_2021	Character (1)	2021 province or territory Indian reserve refusal flag.
PRir_2016	Character (1)	2016 province or territory Indian reserve refusal flag.
Census division (CD)		
CDuid	Character (4)	Uniquely identifies a census division (composed of the 2-digit province or territory unique identifier the 2-digit census division code).
CDdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 census divisions.[1]
CDname	Character (100)	Census division name.
CDtype	Character (3)	Census division type.

Table 4.1
Record layout — GeoSuite

Attribute name	Data type	Description
CDpop_2021	Number (9)	2021 census division population.
CDtdwell_2021	Number (9)	2021 census division total private dwellings.
CDurdwell_2021	Number (9)	2021 census division private dwellings occupied by usual residents.
CDpop_2016	Number (9)	2016 census division population.
CDpop_2016a	Number (9)	2016 census division population adjusted on 2021 boundaries.
CDtdwell_2016a	Number (9)	2016 census division total private dwellings adjusted on 2021 boundaries.
CDurdwell_2016a	Number (9)	2016 census division private dwellings occupied by usual resident adjusted on 2021 boundaries.
CDarea	Number (14.4)	2021 census division land area.
CDadj_2016	Character (1)	2016 census division adjusted population flag.
CDir_2016	Character (1)	2016 census division Indian reserve refusal flag.
CDir_2021	Character (1)	2021 census division Indian reserve refusal flag.
PRuid	Character (2)	Uniquely identifies a province or territory.
CDcode	Character (2)	Census division code.
ERcode	Character (2)	Uniquely identifies an economic region.

Federal electoral district (FED) (2013 Representation)

Attribute name	Data type	Description
FEDuid	Character (5)	Uniquely identifies a federal electoral district (composed of the 2-digit province or territory unique identifier followed by the 3-digit federal electoral district code).
FEDdguid	Character (21)	Dissemination Geography Unique Identifier for 2013 federal electoral districts.[1]
FEDname	Character (200)	Federal electoral district name.
FEDpop_2021	Number (9)	2021 federal electoral district population.
FEDtdwell_2021	Number (9)	2021 federal electoral district total private dwellings.
FEDurdwell_2021	Number (9)	2021 federal electoral district private dwellings occupied by usual residents.
FEDpop_2016	Number (9)	2016 federal electoral district population.
FEDpop_2016a	Number (9)	2016 federal electoral district population adjusted on 2021 boundaries.
FEDtdwell_2016a	Number (9)	2016 federal electoral district total private dwellings adjusted on 2021 boundaries.
FEDurdwell_2016a	Number (9)	2016 federal electoral district private dwellings occupied by usual residents adjusted on 2021 boundaries.
FEDarea	Number (14.4)	2021 federal electoral district land area.
FEDadj_2016	Character (1)	2016 federal electoral district adjusted population flag.
FEDir_2016	Character (1)	2016 federal electoral district Indian reserve refusal flag.
FEDir_2021	Character (1)	2021 federal electoral district Indian reserve refusal flag.
PRuid	Character (2)	Uniquely identifies a province or territory.
FEDcode	Character (3)	Federal electoral district code.

Census subdivision (CSD)

Attribute name	Data type	Description
CSDuid	Character (7)	Uniquely identifies a census subdivision (composed of 2-digit province or territory unique identifier followed by the 2-digit census division code and 3-digit census subdivision code).
CSDdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 census subdivisions.[1]
CSDname	Character (100)	Census subdivision name.
CSDtype	Character (3)	Census subdivisions are classified according to designations adopted by provincial, territorial or federal authorities.
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.
CSDpop_2021	Number (9)	2021 census subdivision population.

Table 4.1
Record layout — GeoSuite

Attribute name	Data type	Description
CSDtdwell_2021	Number (9)	2021 census subdivision total private dwellings.
CSDurdwell_2021	Number (9)	2021 census subdivision private dwellings occupied by usual residents.
CSDpop_2016c	Number (9)	2016 census subdivision population count review.
CSDtdwell_2016c	Number (9)	2016 census subdivision total private dwellings count review.
CSDurdwell_2016c	Number (9)	2016 census subdivision private dwellings occupied by usual residents count review.
CSDpop_2016	Number (9)	2016 census subdivision population.
CSDpop_2016a	Number (9)	2016 census subdivision population adjusted on 2021 boundaries.
CSDtdwell_2016a	Number (9)	2016 census subdivision total private dwellings adjusted on 2021 boundaries.
CSDurdwell_2016a	Number (9)	2016 census subdivision private dwellings occupied by usual residents adjusted on 2021 boundaries.
CSDarea	Number (14.4)	2021 census subdivision land area.
CSDadj_2016	Character (1)	2016 census subdivision adjusted population flag.
a_flag	Character (1)	2016 census subdivision amendment flag.
CSDir_2016	Character (1)	2016 census subdivision Indian reserve refusal flag.
CSDir_2021	Character (1)	2021 census subdivision Indian reserve refusal flag.
CSDrplamx	Number (19.8)	Census subdivision representative point x coordinate in Lambert projection.
CSDrplamy	Number (19.8)	Census subdivision representative point y coordinate in Lambert projection.
CSDrplat	Number (11.6)	Census subdivision representative point latitude coordinate, in decimal degrees.
CSDrplong	Number (13.6)	Census subdivision representative point longitude coordinate, in decimal degrees.
PRuid	Character (2)	Uniquely identifies a province or territory.
CDcode	Character (2)	Census division code.
CSDcode	Character (3)	Census subdivision code.
ERcode	Character (2)	Uniquely identifies an economic region.
CCScode	Character (3)	Uniquely identifies a census consolidated subdivision.
CMAuid	Character (3)	Uniquely identifies a census metropolitan area, census agglomeration or census metropolitan influenced zone.
Designated place (DPL)		
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).
DPLdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 designated places.[1]
DPLname	Character (100)	Designated place name.
DPLtype	Character (3)	Designated place type.
DPLpop_2021	Number (9)	2021 designated place population.
DPLtdwell_2021	Number (9)	2021 designated place total private dwellings.
DPLurdwell_2021	Number (9)	2021 designated place private dwellings occupied by usual residents.
DPLpop_2016	Number (9)	2016 designated place population.
DPLpop_2016c	Number (9)	2016 designated place population count review.
DPLtdwell_2016c	Number (9)	2016 designated place total private dwellings count review.
DPLurdwell_2016c	Number (9)	2016 designated place private dwellings occupied by usual residents count review.
DPLpop_2016a	Number (9)	2016 designated place population adjusted on 2021 boundaries.
DPLtdwell_2016a	Number (9)	2016 designated place total private dwellings adjusted on 2021 boundaries.

Table 4.1
Record layout — GeoSuite

Attribute name	Data type	Description
DPLurdwell_2016a	Number (9)	2016 designated place private dwellings occupied by usual residents adjusted on 2021 boundaries.
DPLarea	Number (14.4)	2021 designated place land area.
DPLadj_2016	Character (1)	2016 designated place adjusted population flag.
DPLir_2016	Character (1)	2016 designated place Indian reserve refusal flag.
DPLir_2021	Character (1)	2021 designated place Indian reserve refusal flag.
DPLrplamx	Number (19.8)	Designated place representative point x coordinate in Lambert projection.
DPLrplamy	Number (19.8)	Designated place representative point y coordinate in Lambert projection.
DPLrplat	Number (11.6)	Designated place representative point latitude coordinate, in decimal degrees.
DPLrplong	Number (13.6)	Designated place representative point longitude coordinate, in decimal degrees.
PRuid	Character (2)	Uniquely identifies a province or territory.
DPLcode	Character (4)	Designated place code.
Economic region (ER)		
ERuid	Character (4)	Uniquely identifies an economic region (composed of the 2-digit province or territory unique identifier followed by the 2-digit economic region code).
ERdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 economic regions.[1]
ERname	Character (100)	Economic region name.
ERpop_2021	Number (9)	2021 economic region population.
ERtdwell_2021	Number (9)	2021 economic region total private dwellings.
ERurdwell_2021	Number (9)	2021 economic region private dwellings occupied by usual residents.
ERpop_2016	Number (9)	2016 economic region population.
ERpop_2016a	Number (9)	2016 economic region population adjusted on 2021 boundaries.
ERtdwell_2016a	Number (9)	2016 economic region total private dwellings adjusted on 2021 boundaries.
ERurdwell_2016a	Number (9)	2016 economic region private dwellings occupied by usual residents adjusted on 2021 boundaries.
ERarea	Number (14.4)	2021 economic region land area.
ERadj_2016	Character (1)	2016 economic region adjusted population flag.
ERir_2016	Character (1)	2016 economic region Indian reserve refusal flag.
ERir_2021	Character (1)	2021 economic region Indian reserve refusal flag.
PRuid	Character (2)	Uniquely identifies a province or territory.
ERcode	Character (2)	Uniquely identifies an economic region.
Census consolidated subdivision (CCS)		
CCSuid	Character (7)	Uniquely identifies a census consolidated subdivision (composed of the 2-digit province or territory unique identifier followed by the 2-digit census division code and the 3 digit census consolidated subdivision code).
CCSdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 census consolidated subdivisions.[1]
CCSname	Character (100)	Census consolidated subdivision name.
CCSpop_2021	Number (9)	2021 census consolidated subdivision population.
CCStdwell_2021	Number (9)	2021 census consolidated subdivision total private dwellings.
CCSurdwell_2021	Number (9)	2021 census consolidated subdivision private dwellings occupied by usual residents.
CCSpop_2016	Number (9)	2016 census consolidated subdivision population.
CCSpop_2016a	Number (9)	2016 census consolidated subdivision population adjusted on 2021 boundaries.
CCStdwell_2016a	Number (9)	2016 census consolidated subdivision total private dwellings adjusted on 2021 boundaries.

Table 4.1
Record layout — GeoSuite

Attribute name	Data type	Description
CCSurdwell_2016a	Number (9)	2016 census consolidated subdivision private dwellings occupied by usual residents adjusted on 2021 boundaries.
CCSarea	Number (14.4)	2021 census consolidated subdivision land area.
CCSadj_2016	Character (1)	2016 census consolidated subdivision adjusted population flag.
CCSir_2016	Character (1)	2016 census consolidated subdivision Indian reserve refusal flag.
CCSir_2021	Character (1)	2021 census consolidated subdivision Indian reserve refusal flag.
PRuid	Character (2)	Uniquely identifies a province or territory.
CDcode	Character (2)	Census division code.
CCScode	Character (3)	Uniquely identifies a census consolidated subdivision.
ERcode	Character (2)	Uniquely identifies an economic region.
Census metropolitan area (CMA), census agglomeration (CA) and census metropolitan influenced zone (MIZ)		
CMAPuid	Character (5)	Uniquely identifies a census metropolitan area, a census agglomeration or a census metropolitan influenced zone (composed of the 2-digit province or territory unique identifier followed by the 3-digit census metropolitan area code).
CMAdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 census metropolitan areas or census agglomerations.[1]
CMAPdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 Census metropolitan area or census agglomeration (provincial component).[1]
CMAname	Character (100)	Census metropolitan area, census agglomeration name or census metropolitan influenced zone.
CMApart	Character (1)	A one-character field identifying whether a census metropolitan area or census agglomeration straddles a provincial boundary.
CMApop_2021	Number (9)	2021 census metropolitan area, census agglomeration or census metropolitan influenced zone population.
CMAtdwell_2021	Number (9)	2021 census metropolitan area, census agglomeration or census metropolitan influenced zone total private dwellings.
CMAurdwell_2021	Number (9)	2021 census metropolitan area, census agglomeration or census metropolitan influenced zone private dwellings occupied by usual residents.
CMApop_2016	Number (9)	2016 census metropolitan area, census agglomeration or census metropolitan influenced zone population.
CMApop_2016a	Number (9)	2016 census metropolitan area, census agglomeration or census metropolitan influenced zone population adjusted on 2021 boundaries.
CMAtdwell_2016a	Number (9)	2016 census metropolitan area, census agglomeration or census metropolitan influenced zone total private dwellings adjusted on 2021 boundaries.
CMAurdwell_2016a	Number (9)	2016 census metropolitan area, census agglomeration or census metropolitan influenced zone private dwellings occupied by usual residents adjusted on 2021 boundaries.
CMAarea	Number (14.4)	2021 census metropolitan area, census agglomeration or census metropolitan influenced zone land area.
CMAadj_2016	Character (1)	2016 census metropolitan area, census agglomeration or census metropolitan influenced zone adjusted population flag.
CMAir_2016	Character (1)	2016 census metropolitan area, census agglomeration or census metropolitan influenced zone Indian reserve refusal flag.
CMAir_2021	Character (1)	2021 census metropolitan area, census agglomeration or census metropolitan influenced zone Indian reserve refusal flag.
PRuid	Character (2)	Uniquely identifies a province or territory.
CMAcode	Character (3)	Uniquely identifies a census metropolitan area, census agglomeration or census metropolitan influenced zone.
CMAtype	Character (1)	A one-character field identifying whether the unit is a census metropolitan area, a tracted census agglomeration, a non-tracted census agglomeration.
XPRuid	Character (2)	Indicate which census metropolitan areas or census agglomerations and population centres cross provincial boundaries.
Census tract (CT)		
CTuid	Character (10)	Uniquely identifies a census tract within a census metropolitan area or census agglomeration (composed of the 3-digit census metropolitan area or census agglomeration code followed by the 7-character census tract name).
CTdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 census tracts.[1]

Table 4.1
Record layout — GeoSuite

Attribute name	Data type	Description
CTname	Character (7)	Every census tract is assigned a 7.2-character numeric 'name' (including leading zeros, a decimal point and trailing zeros).
CTpop_2021	Number (9)	2021 census tract population.
CTtdwell_2021	Number (9)	2021 census tract total private dwellings.
CTurdwell_2021	Number (9)	2021 census tract private dwellings occupied by usual residents.
CTpop_2016	Number (9)	2016 census tract population.
CTpop_2016a	Number (9)	2016 census tract population adjusted on 2021 boundaries.
CTtdwell_2016a	Number (9)	2016 census tract total private dwellings adjusted on 2021 boundaries.
CTurdwell_2016a	Number (9)	2016 census tract private dwellings occupied by usual residents adjusted on 2021 boundaries.
CTarea	Number (14.4)	2021 census tract land area.
Ctadj	Character (1)	Census tract adjusted population flag.
CTir_2016	Character (1)	2016 census tract Indian reserve refusal flag.
CTir_2021	Character (1)	2021 census tract Indian reserve refusal flag.
PRuid	Character (2)	Uniquely identifies a province or territory.
CMAuid	Character (3)	Uniquely identifies a census metropolitan area, census agglomeration or census metropolitan influenced zone.
CTcode	Character (4)	Uniquely identifies a census tract.
Population centre (POPCTR) and rural area (RA)		
POPCTRRAuid	Character (4)	Uniquely identifies a population centre and rural area (composed of the 4-digit population centre code).
POPCTRRAdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 population centres.[1]
POPCTRRAPuid	Character (6)	Uniquely identifies the provincial parts of each population centre and rural area (composed of the 2-digit province or territory unique identifier followed by the 4-digit population centre unique identifier).
POPCTRRAPdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 population centres and rural areas (provincial component).[1]
POPCTRRAname	Character (100)	Population centre and rural area name.
POPCTRRAtype	Character (1)	Population centre and rural area type.
POPCTRRAclass	Character (1)	Distinguishes between small population centres, medium population centres, large urban population centres and rural areas.
POPCTRRApop_2021	Number (9)	2021 population centre and rural area population.
POPCTRRAtdwell_2021	Number (9)	2021 population centre and rural area total private dwellings.
POPCTRRAurdwell_2021	Number (9)	2021 population centre and rural area private dwellings occupied by usual residents.
POPCTRRApop_2016	Number (9)	2016 population centre and rural area population.
POPCTRRApop_2016a	Number (9)	2016 population centre and rural area adjusted population.
POPCTRRAtdwell_2016a	Number (9)	2016 population centre and rural area adjusted total private dwellings.
POPCTRRAurdwell_2016a	Number (9)	2016 population centre and rural area adjusted private dwellings occupied by usual residents.
POPCTRRAarea	Number (14.4)	2021 population centre and rural area land area.
POPCTRRAadj_2016	Character (1)	Population centre and rural area population adjusted population flag.
POPCTRRAir_2016	Character (1)	2016 population centre and rural area Indian reserve refusal flag.
POPCTRRAir_2021	Character (1)	2021 population centre and rural area Indian reserve refusal flag.
PRuid	Character (2)	Uniquely identifies a province or territory.
XPRuid	Character (2)	Indicate which census metropolitan areas or census agglomerations and population centres cross provincial boundaries.
CMAuid	Character (3)	Uniquely identifies a census metropolitan area, census agglomeration or census metropolitan influenced zone.

Table 4.1
Record layout — GeoSuite

Attribute name	Data type	Description
Dissemination area (DA)		
DAuid	Character (8)	Uniquely identifies a dissemination area (composed of the 2-digit province or territory unique identifier followed by the 2-digit census division code, and the 4-digit dissemination area code).
DAdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 dissemination areas.[1]
DApop_2021	Number (9)	2021 dissemination area population.
DAtdwell_2021	Number (9)	2021 dissemination area total private dwellings.
DAurdwell_2021	Number (9)	2021 dissemination area private dwellings occupied by usual residents.
DAarea	Number (14.4)	2021 dissemination area land area.
DAir_2021	Character (1)	2021 dissemination area Indian reserve refusal flag.
DArplamx	Number (15.4)	Dissemination area representative point x coordinate in Lambert projection.
DArplamy	Number (15.4)	Dissemination area representative point y coordinate in Lambert projection.
DArplat	Number (11.6)	Dissemination area representative point latitude coordinate, in decimal degrees.
DArplong	Number (13.6)	Dissemination area representative point longitude coordinate, in decimal degrees.
PRuid	Character (2)	Uniquely identifies a province or territory.
CDcode	Character (2)	Census division code.
ADAcode	Character (4)	Aggregate dissemination area code.
DAcode	Character (4)	Dissemination area code.
ERcode	Character (2)	Uniquely identifies an economic region.
CCScode	Character (3)	Uniquely identifies a census consolidated subdivision.
CSDcode	Character (3)	Census subdivision code.
CMAuid	Character (3)	Uniquely identifies a census metropolitan area, census agglomeration or census metropolitan influenced zone.
CTname	Character (7)	Every census tract is assigned a 7.2-character numeric 'name' (including leading zeros, a decimal point and trailing zeros).
CTcode	Character (4)	Uniquely identifies a census tract.
Dissemination block (DB)		
DBuid	Character (11)	Uniquely identifies a dissemination block (composed of the 2-digit province or territory unique identifier followed by the 2-digit census division code, the 4-digit dissemination area code, and the 3-digit dissemination block code).
DBdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 dissemination blocks.[1]
DBpop_2021	Number (9)	2021 dissemination block population.
DBtdwell_2021	Number (9)	2021 dissemination block total private dwellings.
DBurdwell_2021	Number (9)	2021 dissemination block private dwellings occupied by usual residents.
DBarea	Number (14.4)	2021 dissemination block land area.
DBir_2021	Character (1)	2021 dissemination block Indian reserve refusal flag.
PRuid	Character (2)	Uniquely identifies a province or territory.
DBcode	Character (3)	Dissemination block code.
CDcode	Character (2)	Census division code.
ADAcode	Character (4)	Aggregate dissemination area code.
DAcode	Character (4)	Dissemination area code.
FEDcode	Character (3)	Federal electoral district code.
ERcode	Character (2)	Uniquely identifies an economic region.
CCScode	Character (3)	Uniquely identifies a census consolidated subdivision.

Table 4.1
Record layout — GeoSuite

Attribute name	Data type	Description
CSDcode	Character (3)	Census subdivision code.
CMAuid	Character (3)	Uniquely identifies a census metropolitan area, census agglomeration or census metropolitan influenced zone.
CTname	Character (7)	Every census tract is assigned a 7.2-character numeric 'name' (including leading zeros, a decimal point and trailing zeros).
CTcode	Character (4)	Uniquely identifies a census tract.
POPCTRRAuid	Character (4)	Uniquely identifies a population centre and rural area (composed of the 4-digit population centre code).
DPLcode	Character (4)	Designated place code.
Aggregate dissemination area (ADA)		
ADAuid	Character (8)	Uniquely identifies an aggregate dissemination area (composed of the 2-digit province or territory unique identifier followed by the 2-digit census division code, and the 4-digit aggregate dissemination area code).
ADAdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 aggregate dissemination areas.[1]
ADApop_2021	Number (9)	2021 aggregate dissemination area population.
ADAtdwell_2021	Number (9)	2021 aggregate dissemination area total private dwellings.
ADAurdwell_2021	Number (9)	2021 aggregate dissemination area private dwellings occupied by usual residents.
ADApop_2016	Number (9)	2016 aggregate dissemination area population.
ADApop_2016a	Number (9)	2016 aggregate dissemination area population adjusted on 2021 boundaries.
ADAtdwell_2016a	Number (9)	2021 aggregate dissemination area total private dwellings adjusted on 2021 boundaries.
ADAurdwell_2016a	Number (9)	2021 aggregate dissemination area private dwellings occupied by usual residents adjusted on 2021 boundaries.
ADAarea	Number (14.4)	2021 aggregate dissemination area land area.
ADAadj_2016	Character (1)	Aggregate dissemination area adjusted population flag.
ADAir_2016	Character (1)	2016 aggregate dissemination area Indian reserve refusal flag.
ADAir_2021	Character (1)	2021 aggregate dissemination area Indian reserve refusal flag.
ADArplamx	Number (19.8)	Aggregate dissemination area representative point x coordinate in Lambert projection.
ADArplamy	Number (19.8)	Aggregate dissemination area representative point y coordinate in Lambert projection.
ADArplat	Number (11.6)	Aggregate dissemination area representative point latitude coordinate, in decimal degrees.
ADArplong	Number (13.6)	Aggregate dissemination area representative point longitude coordinate, in decimal degrees.
PRuid	Character (2)	Uniquely identifies a province or territory.
CDcode	Character (2)	Census division code.
ERcode	Character (2)	Uniquely identifies an economic region.
ADAcode	Character (4)	Aggregate dissemination area code.
Place name (PN)		
PNuid	Character (6)	All place names are assigned a unique 6 digit code.
PNdguid	Character (21)	Dissemination Geography Unique Identifier for 2021 place names.[1]
PNname	Character (100)	Name of the place name.
PNsource	Character (1)	Describes the origin of the representative point.
dissolved_ga	Character (1)	This variable flags localities that are dissolved census subdivisions, designated places, population centres and unincorporated places.
PNrplamx	Number (19.4)	Place name representative point x coordinate in Lambert projection.
PNrplamy	Number (19.4)	Place name representative point y coordinate in Lambert projection.
PNrplat	Number (11.6)	Place name representative point latitude coordinate, in decimal degrees.

Table 4.1
Record layout — GeoSuite

Attribute name	Data type	Description
PNrplong	Number (13.6)	Place name representative point longitude coordinate, in decimal degrees.
PRuid	Character (2)	Uniquely identifies a province or territory.
FEDcode	Character (3)	Federal electoral district code.
ERcode	Character (2)	Uniquely identifies an economic region.
CDcode	Character (2)	Census division code.
CCScode	Character (3)	Uniquely identifies a census consolidated subdivision.
CSDcode	Character (3)	Census subdivision code.
CMAuid	Character (3)	Uniquely identifies a census metropolitan area, census agglomeration or census metropolitan influenced zone.
DPLcode	Character (4)	Designated place code.
POPCTRRAuid	Character (4)	Uniquely identifies a population centre and rural area (composed of the 4-digit population centre code).

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

Each disseminated geography includes the UID or code of their related higher level of geographies. For the CDs, the ER code is available. In 2021, one CD (CDUID 3524) belongs to two ERs. Since only one ER can be related to a given CD in GeoSuite, the most populated ER (ERUID 3530) has been assigned.

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.

Designated place type (DPLTYPE)

For information on designated place types, refer to the "Designated place type (DPLTYPE), 2021 Census" table.

Statistical Area Classification type (SACTYPE)

The Statistical Area Classification type is a one-digit code that identifies whether a CSD is a component of a CMA, a CA, a MIZ or in the territories.

For information on Statistical Area Classification types, refer to the "Statistical Area Classification type (SACTYPE), 2021 Census" table.

Statistical Area Classification code (SACCODE)

The Statistical Area Classification code is a three-digit code that groups CSDs according to whether they are a component of a CMA, CA or MIZ. MIZ categories denote the degree of influence that the CMAs and/or CAs have on these zones.

For information on Statistical Area Classification codes, refer to the "Statistical Area Classification code (SACCODE), 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.

Population centre and rural area type (POPCTRRATYPE)

For information on population centre and rural area types, refer to the "Population centre and rural area type (POPCTRRATYPE), 2021 Census" table.

Population centre and rural area size classes (POPCTRRACLASS)

For information on population centre and rural area size classes, refer to the "Population centre and rural area size classes (POPCTRRACLASS), 2021 Census" table.

Locator source (LOCSOURCE)

The locator source describes the origin of the representative point. For the *2021 GeoSuite Data Package,* the Geographical Names Board of Canada (GNBC) is the locator source of all place names.

Dissolved geographic area (DISSOLVEDGA)

For the *2021 GeoSuite Data Package*, no dissolved CSDs, DPLs, POPCTRs and unincorporated places were included in the data.

File specifications

The content of the *2021 GeoSuite Data Package* is approximately 230 megabytes.

Software formats

This reference guide does not provide details on specific software packages that are available for use in comma separated value format (.csv). Users are advised to contact the appropriate software vendor for information. Users should be aware that the comma separated value (.csv) files contain leading zeroes which not all spreadsheet software recognize. If the software does not load the leading zeroes, users should import the files as a text/csv instead, in order to view the files properly.

File extension and accented character information

The .csv files are compressed into a WinZip® file (file extension .zip).

Geographic representation

Not applicable

File naming convention

The *2021 GeoSuite Data Package* file follow a standard naming convention. The file name includes the census year, catalogue number, language and file format.

The compressed files are named as follows:

- 2021_92-150-X_eng.zip
- 2021_92-150-X_fra.zip

5. Data quality

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

Lineage

Lineage describes the history of the 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 files.

All data in the *2021 GeoSuite Data Package* 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 only positional data contained within the *2021 GeoSuite Data Package* are the representative point coordinates. Within Statistics Canada's SDI, representative point coordinates were generated using ArcGIS® software in conjunction with the different geographic boundaries. The representative point coordinates were initially calculated based on the Lambert conformal conic projection; they were then transformed to latitude and longitude coordinates.

Attribute accuracy

Attribute accuracy refers to the accuracy of the quantitative and qualitative information attached to each feature (such as population counts for DBs, CSD UIDs (CSDUIDs), names and types).

The UIDs, DGUIDs names, types and classes contained within the *2021 GeoSuite Data Package*, along with the relationships between all standard geographic areas, were verified against Statistics Canada's SDI and found to accurately reflect them.

Blank fields are displayed within the *2021 GeoSuite Data Package* where population and dwelling counts have been suppressed due to incompletely enumerated Indian reserves and Indian settlements. Population counts for Indian reserve refusal CSDs are not included in any census counts, therefore the blank population counts at the DB levels are consistent with the 2021 Census statistical data.

Logical consistency

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

Consistency between data at various geographic levels was verified. Verification procedures ensured that counts at lower geographic levels sum to higher geographic levels. The verification procedures also ensured that higher geographic levels include the appropriate geographic units.

Consistency with other products

The population and dwelling count data in the *2021 GeoSuite Data Package* are consistent with those disseminated in other 2021 Census products. The UIDs and DGUIDs used in the *2021 GeoSuite Data Package* 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 *2021 GeoSuite Data Package* contains one record for each of the 498,786 DBs. It also contains the appropriate number of geographic areas for each standard geographic level. The data in Table 1.1, "Geographic areas by province and territory, 2021 Census," were verified within the *2021 GeoSuite Data Package.*