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GeoSuite, Reference Guide



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GeoSuite, Reference Guide

GeoSuite is a tool for data retrieval, query, and tabular output. GeoSuite allows users to explore the links between all standard levels of geography and to determine geographic codes, names, and population and dwelling counts.

What's new

GeoSuite web was made available on-line on February 8th 2017. For the November 29th release, GeoSuite web has been updated with the following:

- GeoSuite web now contains 2011 and 2006 vintages,
- the Interim List of Changes to Municipal Boundary, Status and Name has been added to GeoSuite web to accompany the CSD layer. All columns can be filtered or exported, and
- the GeoSuite reference guide has been updated with a Help Guide to assist users with the Web version.

Aggregate dissemination area - In preparation for the 2016 Census, Statistics Canada has created a new subprovincial census dissemination geography called 'aggregate dissemination area' (ADA). The intent of the ADA geography is to ensure the availability of census data, where possible, across all regions of Canada.

Dissemination block (DB)

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

Positional accuracy strategies - 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. Thus, these efforts 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.

1. About this guide

This reference guide is intended for users of the 2016 Census GeoSuite products. The guide provides an overview of the product, the general methodology used to create it, and important technical information for users.

For the GeoSuite Web, there is no installation required.

For the GeoSuite downloadable version, installation instructions are provided in the Technical specifications (www.statcan.gc.ca/pub/92-150-g/92-150-g2016001-eng.htm#a5) section of this guide.

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2. Overview

GeoSuite is a powerful search tool based on the 2016 Census standard geographic areas. With GeoSuite, users may retrieve and query data, explore the links between geographic areas, obtain information on those areas and output data in tabular format. The data available include the 2016 Census population counts, the 2016 Census dwelling counts, representative point coordinates, land area, geographic codes, names and, in some cases, the 2011 Census population counts (both final and adjusted).

The 2016 Census GeoSuite product includes data for the following the 2016 Census standard geographic areas:

- Canada (CAN)
- province and territory (PR)
- economic region (ER)
- census division (CD)
- census consolidated subdivision (CCS)
- census subdivision (CSD)
- designated place (DPL)
- federal electoral district (FED), (2013 Representation Order)
- census metropolitan area (CMA), census agglomeration (CA) and census metropolitan influenced zone (MIZ)
- census tract (CT)
- population centre (POPCTR) and rural area (RA)
- aggregate dissemination area (ADA)
- dissemination area (DA)
- dissemination block (DB).

How to cite this guide

GeoSuite, Reference Guide, – Statistics Canada, Catalogue no. 92-150-G.

How to cite this product

GeoSuite, – Statistics Canada, Catalogue no. 92-150-X.

3. About this product

Purpose of the product

GeoSuite allows users to explore the links between 2016 Census standard levels of geography and to identify related geographic attributes, including codes, names, and unique identifiers. The types, classes, representative points, land area and population and dwelling counts are also available for most geographic levels. For GeoSuite downloadable version, a database is also provided and includes several tables, each containing a 2016 Census standard geographic area and its related attributes.

Definitions and concepts

For geographic terms and concepts refer to the Dictionary, Census of Population, 2016 (www5.statcan.gc.ca/olc-cel/olc.action?objId=98-301-X&objType=2&lang=en&limit=0) (Catalogue no. 98 301 X).

Content

GeoSuite contains information for all 2016 Census standard geographic areas, including related attributes, population counts, dwelling counts, land area and representative points.

In addition, new for 2017, the Interim List of Changes to Municipal Boundaries, Status, and Names, from January 2nd, 2016 to January 1st, 2017 has been added to the web application. For more information on this product, refer to Interim List of Changes to Municipal Boundaries, Status, and Names (www5.statcan.gc.ca/olc-cel/olc.action?objId=92F0009X&ObjType=2&lang=en&limit=0) (Catalogue no. 92F0009X).

Geographic unique identifiers

Geographic unique identifiers consist of a set of unique numbers that are used to identify and access individual 2016 Census standard geographic areas for the purpose of data storage, retrieval and display.

The systematic assignment of numeric codes to provinces and territories, census divisions and census subdivisions is described within the *Standard Geographical Classification*. This classification system is a hierarchical coding system that provides a unique identifier for each level within the geographic hierarchy. This coding system is developed by Statistics Canada and approved by provincial authorities. More details can be found in the Standard Geographical Classification (SGC), volume I – *Statistical Area Classification – Variants of SGC* (www5.statcan.gc.ca/olc-cel/olc.action?ObjId=12-571-X&ObjType=2&lang=en&limit=0) (Catalogue no. 12-571-X).

Census consolidated subdivision unique identifiers are derived from the component census subdivisions. Census consolidated subdivision unique identifiers coincide with the census subdivision component with the largest land area within a census consolidated subdivision.

The source of the geographic unique identifiers of federal electoral districts is the 2013 Representation Order, Elections Canada. All other geographic unique identifiers are developed by Statistics Canada.

Within GeoSuite, geographic unique identifiers are a concatenation of geographic codes that uniquely identify the 2016 Census standard geographic areas. For example, each dissemination area is assigned a four digit code that is unique within a census division. In order to uniquely identify each dissemination area, the four digit dissemination area code is preceded by the two digit province or territory code and the two digit census division code. This eight digit concatenated code is referred to as the dissemination area unique identifier.

Hierarchy of standard geographic areas

GeoSuite includes population centres as parts of provinces. For the 2016 Census, there are five population centres that cross provincial boundaries:

- Campbellton (New Brunswick/Quebec)
- Hawkesbury (Quebec/Ontario)

- Ottawa–Gatineau (Quebec/Ontario)
- Flin Flon (Manitoba/Saskatchewan)
- Lloydminster (Saskatchewan/Alberta)

If users of GeoSuite generate a list of all population centres located in the province of Manitoba, for example, only the Manitoba portion of the Flin Flon population centre will be included on the list. The portion of the Flin Flon population centre located in the province of Saskatchewan will be excluded.

GeoSuite also includes census metropolitan areas and census agglomerations as parts of provinces. For the 2016 Census, there is one census metropolitan area and three census agglomerations that cross provincial boundaries:

- Census Agglomeration of Campbellton (New Brunswick/Quebec)
- Census Agglomeration of Hawkesbury (Quebec/Ontario)
- Census Metropolitan Area of Ottawa–Gatineau (Quebec/Ontario)
- Census Agglomeration of Lloydminster (Saskatchewan/Alberta)

If users of GeoSuite generate a list of all census agglomerations located in the province of New Brunswick, for example, only the New Brunswick portion of the Campbellton census agglomeration will be included on the list. The portion of the Campbellton census agglomeration located in the province of Quebec will be excluded.

2016 Census population and private dwellings

The population and dwelling counts contained within GeoSuite are from the 2016 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 10, 2016.

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.

2016 Census incompletely enumerated Indian reserves and Indian settlements flag

In 2016, there were a total of 14 Indian reserves and Indian settlements that were incompletely enumerated. For these reserves and settlements, dwelling enumeration was either not permitted or was interrupted before it could be completed.

This represents a decrease compared to the 31 Indian reserves and Indian settlements that were incompletely enumerated in the 2011 Census. Note that in 2011, of the 31 incompletely enumerated Indian reserves and Indian settlements, 13 were not enumerated as a result of forest fires in Northern Ontario at the time of census collection.

The 2016 Census population and dwelling counts are not available for the 14 incompletely enumerated Indian reserves and Indian settlements, and are not included in the 2016 Census tabulations. Data for geographic areas containing one or more of these reserves and settlements are noted accordingly. Because of the missing data, users are cautioned that for the affected geographic areas, comparisons (e.g., percentage change) between 2011 and 2016 may not be precise. The impact of the missing data for higher-level geographic areas (Canada, provinces

and territories, census metropolitan areas and census agglomerations) is very small. However, the impact can be significant for lower-level geographic areas (e.g., census divisions), 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 2016 Census and enumerated for the 2011 Census and vice versa.

2011 Census population by 2011 Census boundaries

The 2011 Census population counts are as they were enumerated during the 2011 Census, according to boundaries that were in effect as of January 1, 2011. These data are provided for all standard geographic areas.

2011 Census population by 2016 Census boundaries and the adjusted population flag

Users wishing to compare the 2016 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 2011 Census population counts are adjusted as needed to take into account boundary changes between the 2011 and the 2016 censuses. The 2011 Census population by 2016 Census boundaries is also known as the 2011 adjusted population. Where the 2011 adjusted population counts did not equal the 2011 final population counts, the adjusted population flag was set to 1.

Since data are provided by the 2016 Census boundaries and geographic structure, calculations on data from the 2016 Census GeoSuite product should only be done using the 2011 data adjusted to the 2016 boundaries.

In the case of census subdivisions, this flag is set to 1 to identify newly incorporated municipalities (census subdivisions).

Secondary province code

The secondary province (XPR) field is used to indicate which census metropolitan areas (CMAs), census agglomerations (CAs) and population centres (POPCTRs) cross provincial boundaries. The XPR field is read in conjunction with the PR (code) field to obtain the names of these provinces. For example, the population centre of Flin Flon crosses Manitoba and Saskatchewan. The PR code shows the code for Manitoba and the XPR code shows the code for Saskatchewan.

Positional data

GeoSuite contains the representative point coordinates for the dissemination areas, weighted by population data. The representative point coordinates were projected in Lambert conformal conic projection (NAD83).

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

The 2016 Census *GeoSuite* representative point coordinates are in the following geographic representation:

Datum: NAD83

Coordinates: Lambert conformal conic projection

The geographic coordinate system is the primary locational reference system for the earth. This system provides for the unique statement of location for features such as points, lines and polygons.

Comparison to other products/versions

GeoSuite contains geographic unique identifiers, names, and where applicable, types and classes applicable to the 2016 Census.

Using with other products

The 2016 Census standard geographic areas in GeoSuite can be linked to other 2016 Census products using the geographic unique identifiers.

It is important to note that GeoSuite includes all the dissemination blocks in Canada, while the *Dissemination Block Cartographic Boundary File* excludes dissemination blocks located entirely within coastal waters.

The 2016 Census dissemination block unique identifier included in GeoSuite can be used with the 2016 Census Correspondence Files (www5.statcan.gc.ca/olc-cel/olc.action?ObjId=92-156-X&ObjType=2&lang=en&limit=0) (Catalogue no. 92-156-X) to identify corresponding *2011 Census dissemination blocks*. The 2011 dissemination blocks unique identifiers can then be linked to the 2011 Census Geographic Attribute File (www5.statcan.gc.ca/olc-cel/olc.action?ObjId=92-151-X&ObjType=2&lang=en&limit=0) (Catalogue no. 92-151-X) or GeoSuite 2011 (www5.statcan.gc.ca/olc-cel/olc.action?ObjId=92-150-X&ObjType=2&lang=en&limit=0) (Catalogue no. 92-150-X) to retrieve the 2011 Census standard geographic areas and their attributes.

Reference date

Population and dwelling counts

The population and dwelling count data contained within GeoSuite refer to the 2016 Census of Population which was conducted on May 10, 2016.

Standard geographic areas

The geographic reference date is a date determined by Statistics Canada to finalize the geographic framework for which 2016 Census statistical data are collected, tabulated and reported. The reference date for the 2016 Census standard geographic areas is January 1, 2016. More specifically, the census reports data according to the geographic areas (e.g., municipalities and equivalents referred to as census subdivisions) that are in effect on January 1, 2016. For more information, refer to the geographic reference date (www12.statcan.gc.ca/census-recensement/2016/ref/dict/geo028-eng.cfm) definition from the *Dictionary, Census of Population, 2016*.

4. Technical specifications

Attribute domain values and descriptions

Downloadable version

The GeoSuite downloadable version contains all attributes that were included in the 2011 version and are described in the GeoSuite Help files (index and glossary).

Note: In the downloadable version the 2011 Census final population counts found in this variable were not consistent with the expected total 2011 Census final population counts for the provincial rural area. As a result, these 2011 Census final population counts were updated on June 1, 2017.

Web version

Table 4.1
GeoSuite – Variable acronyms and names

Geographic area variable acronym	Name
PR	Province or territory
DPL	Designated place
FED	Federal electoral district
ER	Economic region
CD	Census division
ADA	Aggregate dissemination area
CCS	Census consolidated subdivision
CSD	Census subdivision
DA	Dissemination area
DB	Dissemination block
PN	Place name
CMA	Census metropolitan area / Census agglomeration (Note: This geographic area variable acronym is used for census metropolitan area / census agglomeration and for non-census metropolitan area / census agglomeration.)
POPCTRA	Population centre and/or Rural area
CT	Census tract
*DISga	Dissolved geographic area
*SAC	Standard area classification
*XPR	Secondary province code
Attribute name	
uid	Unique identifier
pop	Population
tdwell	Total private dwellings
urdwell	Private dwellings occupied by usual residents
area	Land area
ir	Incompletely enumerated Indian reserve or Indian settlement
code	Code
name	Name
adj	Adjusted population flag
type	Type
aflag	Amendment flag
rplamx	Representative point Lambert x
rplamy	Representative point Lambert y
rplat	Representative point latitude
rplong	Representative point longitude
source	Locator source
part	Part (whether an area straddles a provincial boundary)
class	Area class

Table 4.1
GeoSuite – Variable acronyms and names

Geographic area variable acronym	Name
Year	
_2016	Represents 2016 data
_2011	Represents 2011 data
_2006	Represents 2006 data
_2001	Represents 2001 data
Population / dwelling attribute	
(Nothing at the end of the year)	Final count
a	Adjusted count
c	Population count review

Census division type (CDtype)

For information on the census division type, refer to the census division (www12.statcan.gc.ca/census-recensement/2016/ref/dict/geo008-eng.cfm) definition and Table 1.4, Census division types by province and territory, 2016 Census, (www12.statcan.gc.ca/census-recensement/2016/ref/dict/tab/t1_4-eng.cfm) from the *Dictionary, Census of Population, 2016*, on the census website.

Census subdivision type (CSDtype)

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

For information on the census subdivision type, refer to the census subdivision (www12.statcan.gc.ca/census-recensement/2016/ref/dict/geo012-eng.cfm) definition and Table 1.5, Census subdivision types by province and territory, 2016 Census (www12.statcan.gc.ca/census-recensement/2016/ref/dict/tab/t1_5-eng.cfm), from the *Dictionary, Census of Population, 2016*, on the census website.

Census metropolitan area and census agglomeration type (CMAtype)

For information on the census metropolitan area and census agglomeration type, refer to the census metropolitan area and census agglomeration (www12.statcan.gc.ca/census-recensement/2016/ref/dict/geo009-eng.cfm) definitions and Table 1.10, Census metropolitan area and census agglomeration types by province and territory, 2016 Census (www12.statcan.gc.ca/census-recensement/2016/ref/dict/tab/t1_10-eng.cfm) from the *Dictionary, Census of Population, 2016*, on the census website.

Statistical Area Classification type (SACtype)

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

For information on the statistical area classification type refer to the Statistical Area Classification (www12.statcan.gc.ca/census-recensement/2016/ref/dict/geo045-eng.cfm) definition and Table 1.11, Statistical Area Classification values by province and territory, 2016 Census (www12.statcan.gc.ca/census-recensement/2016/ref/dict/tab/t1_11-eng.cfm), from the *Dictionary, Census of Population, 2016*, the census website.

Statistical Area Classification code (SACcode)

The Statistical Area Classification code is a three-digit code that groups census subdivisions according to whether they are a component of a census metropolitan area, a census agglomeration or a census metropolitan influenced zone (MIZ). The MIZ categories, which denote the degree of influence that CMAs and CAs have on these zones, are: strong (996), moderate (997), weak (998), no influence (999), or located in the territories (000) where the Statistical Area Classification is not applicable.

For information on statistical area classification, refer to the Statistical Area Classification (www12.statcan.gc.ca/census-recensement/2016/ref/dict/geo045-eng.cfm) definition from the *Dictionary, Census of Population, 2016*. In addition, more details can be found in the *Standard Geographical Classification (SGC), volume I – Statistical Area Classification – Variants of SGC* (www.statcan.gc.ca/bsolc/olc-cel/olc-cel?lang=eng&catno=12-571-X) (Catalogue no. 12-571-X).

Population centre and rural area type (POPCTRRAtype)

For information on population centre and rural area type, refer to the population centre (www12.statcan.gc.ca/census-recensement/2016/ref/dict/geo049a-eng.cfm) and rural area (www12.statcan.gc.ca/census-recensement/2016/ref/dict/geo042-eng.cfm) definitions and Table 1.12, Population centre type values by province and territory, 2016 Census (www12.statcan.gc.ca/census-recensement/2016/ref/dict/tab/t1_12-eng.cfm), from the *Dictionary, Census of Population, 2016*, on the census website.

Population centre and rural area size classes (POPCTRRAClass)

For information on population centre and rural area type, refer to the population centre (www12.statcan.gc.ca/census-recensement/2016/ref/dict/geo049a-eng.cfm) and rural area (www12.statcan.gc.ca/census-recensement/2016/ref/dict/geo042-eng.cfm) definitions and Table 1.13, Population centre size class values by province and territory, 2016 Census (www12.statcan.gc.ca/census-recensement/2016/ref/dict/tab/t1_13-eng.cfm) from the *Dictionary, Census of Population, 2016*, on the census website.

Designated place type (DPLtype)

For information on designated place type refer to the designated place (www12.statcan.gc.ca/census-recensement/2016/ref/dict/geo018-eng.cfm) definition and Table 1.6, Designated place types by province and territory, 2016 Census (www12.statcan.gc.ca/census-recensement/2016/ref/dict/tab/t1_6-eng.cfm) from the *Dictionary, Census of Population, 2016*, on the census website.

File specifications

Not applicable

Software formats

Not applicable

System requirements (downloadable version)

The 2016 GeoSuite (MS-Access) downloadable version requires the following minimum system requirements:

- Pentium 233-megahertz or higher
- Windows XP or higher
- Microsoft Mouse or compatible
- 64 MBRAM
- 200 MB of free space

Installation instructions (downloadable version)

The 2016 Census GeoSuite product requires approximately 200 MB of disk space to install both the software and data. It can be installed on computers running Windows™ XP or higher.

To install:

- Download the English or French install file (.zip) from the Statistics Canada website.
- The language preference is for the installation instructions only. GeoSuite is a bilingual product and will prompt you to choose your language preference each time you run the program. The language preference for the installation is based on the selected language to download the file from the website.

Note: It is recommended that the installation language preference chosen be the same as your operating system.

- Extract the files in the downloaded install file. These files are compressed (.zip) and must be extracted (uncompressed) before installation can continue. Your Windows version should display an option to extract compressed files.
- Double-click to install file 'Install GeoSuite' included in the now uncompressed GeoSuite install files. This will launch the GeoSuite installation.
- GeoSuite will install automatically in your Program Files, unless you modify the location.
- Follow the instructions on the screen.
- GeoSuite setup will inform you when the installation is complete. Click OK to finish the installation procedure.

When you install GeoSuite, a 'GeoSuite 2016' program group is created. The GeoSuite 2016 database (.mdb) is included in this program group.

Limitations (downloadable version)

GeoSuite (MS-Access) downloadable version was tested on several system configurations with different screen resolutions. This version of GeoSuite is not intended to be compatible with mobile internet devices.

GeoSuite web version is compatible and can be used with mobile internet devices.

File naming convention (downloadable version)

The 2016 Census GeoSuite product .zip file follows a standard naming convention. The file name includes: census year_catalogue number_language, file format.

The 2016 Census GeoSuite product is named as follows:

English file name: 2016_92-150-XBB_eng.zip

French file name: 2016_92-150-XBB_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 GeoSuite.

All data in GeoSuite were originally extracted from Statistics Canada's Spatial Data Infrastructure (SDI).

Pertinent information about the methods used in the production of the data in GeoSuite is provided below. For brevity, the lineage is described in terms of the various types of attribute information found in the database.

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 to create the GeoSuite database reside on Statistics Canada's Spatial Data Infrastructure (SDI) and were derived directly from data stored in the NGD environment. Attribute information was retrieved from SDI and tables were created for each 2016 Census standard geographic level. Each GeoSuite table contains attribute information for all higher level geographies, where applicable. Common attributes, such as codes and unique identifiers, link all standard levels of geography in order to provide the user with connections that represent relationships found in the complete geographic hierarchy.

Geographic areas, unique identifiers, names, types and classes

Statistics Canada disseminates the 2016 Census statistical data by standard geographic area. These areas are either administrative or statistical.

Administrative areas are defined, with a few exceptions, by federal and provincial statutes. These include:

- Canada (CAN)
- province and territory (PR)
- federal electoral district (FED) (2013 Representation Order)
- census division (CD)
- census subdivision (CSD)
- designated place (DPL).

Statistical areas are defined by Statistics Canada and are used to collect and disseminate Census statistical data. These include:

- economic region (ER)
- census consolidated subdivision (CCS)
- census metropolitan area (CMA), census agglomeration (CA) and census metropolitan influenced zone (MIZ)
- census tract (CT)
- population centre (POPCTR) and rural area (RA)

- aggregate dissemination area (ADA)
- dissemination area (DA)
- dissemination block (DB).

Geographic names refer to the names given to standard geographic areas. Geographic names, however, are not given to all standard geographic areas. Named standard geographic areas include provinces and territories, economic regions, census divisions, census consolidated subdivisions, census subdivisions, census metropolitan areas, census agglomerations, designated places, populations centres and federal electoral districts. Although census tracts do not have alphabetic names, they do have numeric names consisting of seven characters, which include leading zeros, a decimal point and trailing zeros.

For provinces and territories, GeoSuite contains both English and French names. The sources used for the names of the provinces and territories are the statutes of the respective provinces and territories.

The source of the geographic names of federal electoral districts is the 2013 Representation Order, Elections Canada.

For those census divisions and census subdivisions that respect the administrative fabric within the provinces and territories, the sources of the names and types are the provincial and territorial governments. Statistics Canada receives input from the provincial and territorial governments concerning all boundary, name and type changes to their respective municipal structures. The 2016 Census reflects the administrative structure within provinces and territories that was in effect on January 1, 2016, the geographic reference date of the 2016 Census.

Where no provincial or territorial administrative areas exist, census divisions and census subdivisions and their associated names and types are created in consultation with provincial and territorial authorities. The names of Indian reserves and settlements are provided to Statistics Canada by Indigenous and Northern Affairs Canada (formerly Indian and Northern Affairs Canada).

For census consolidated subdivisions, names are derived from their component census subdivisions. Census consolidated subdivision names coincide with the name of the census subdivision component with the largest land area within the consolidated census subdivision.

Census metropolitan area and census agglomeration names are usually based on the name of the principal population centre or largest city at the time the CMA or CA was first formed.

Place names are not considered part of the standard geographic hierarchy. The primary sources of Statistics Canada's place names are:

- names reported by the census representatives during the past censuses
- historical census subdivision records (name changes or dissolutions)
- names approved by the provincial and territorial authorities (federally represented by the Geographical Names Board of Canada [GNBC]).

Information on the delineation criteria for the 2016 Census standard geographic areas as well as the sources of geographic names is provided in the *Dictionary, Census of Population, 2016* (www5.statcan.gc.ca/olc-cel/olc.action?objId=98-301-X&objType=2&lang=en&limit=0) (Catalogue no. 98-301-X).

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.

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 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.

The only positional data contained within the 2016 *GeoSuite* are the representative point coordinates of dissemination areas. Within Statistics Canada’s Spatial Data Infrastructure, representative point coordinates were generated using ArcGIS® software in conjunction with dissemination area boundaries. The most detailed hydrography available was used in identifying cartographic boundaries and calculating representative point coordinates in Statistics Canada’s native format. Efforts were made to ensure that representative point coordinates do not fall in water, where possible. 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 dissemination blocks, census subdivision unique identifiers, names and types).

The geographic unique identifiers, names, types and classes contained within the 2016 GeoSuite, along with the relationships between all standard geographic areas, were verified against Statistics Canada’s Spatial Data Infrastructure. The Figure 1.1, Hierarchy of standard geographic areas for dissemination, 2016 Census illustrates the relationships between all geographic areas.

2016 Census land area

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

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 was 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, calculated land areas may differ due to geometry shifts. Geometric shifts are caused by a change in the underlying land and hydrography features and by improvements in the absolute positional accuracy within areas.

Logical consistency

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

Internal consistency

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

Population and dwelling count data

The 2016 Census population and dwelling count data were verified to ensure that they sum properly to all higher level 2016 Census standard geographic areas.

Consistency with other products

The population and dwelling count data in the 2016 Census GeoSuite product are consistent with those disseminated in other 2016 Census products.

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 GeoSuite product contains one record for each of the 489,905 dissemination blocks. Refer to the number of geographic areas by province and territory for the 2016 Census.

6. Help Guide

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1a

1b

What's new 🔔

Useful links 🔗

GeoSuite

Search geography by name or code ⬆

Data vintage 2016 **Select:** 2016 2011 2006 🔄

Division No. 2, Subd. E, Newfoundland and Labrador ✖ 🔍 ⚙

Search result for: Division No. 2, Subd. E, CCS (1002001) ⬆

2016 Census	Geographic level	2011 Census	More information
CCS:	Division No. 2, Subd. E		
Unique Identifier (UID):	1002001		
Population:	20,372		
Total private dwellings:	11,497		
Private dwellings occupied by usual residents:	8,737		
Land area (Km ²):	6,099.0792		
IR refusal:	No		

For more information, including an explanation of any type of adjustment(s) that may have occurred, see the [More information](#) tab in the Search result panel.

Chart results for: Division No. 2, Subd. E, CCS (1002001) ⬆

Category	2011	2016
Population	~20,372	~20,372
Private dwellings	~11,497	~11,497
Occupied dwellings	~8,737	~8,737

For more information, including an explanation of any type of adjustment(s) that may have occurred, see the [More information](#) tab in the Search result panel.

Hierarchy of standard geographic areas for dissemination, 2016 Census ⬆

Map result for: Division No. 2, Subd. E, CCS (1002001) 🗺 ⬆

Display results for: CSD ⬆

PR ER CD CCS CSD

Variable description 🔔
Show/hide columns ⚙
Export ⬇

CSDuid ⬆ ⬇ ⬇	CSDname ⬆ ⬇ ⬇	CSDtype ⬆ ⬇ ⬇	SACtype ⬆ ⬇ ⬇	CSDpop_2016 ⬆ ⬇ ⬇	CSDtdwell_2016 ⬆ ⬇ ⬇	CSDurdwell_2016 ⬆ ⬇ ⬇	CSDpop_2011c ⬆ ⬇ ⬇

Interim List ⬆

Change code description 🔔
Show/hide columns ⚙
Export ⬇

Gaining CSDuid ⬆ ⬇ ⬇	Gaining CSDname ⬆ ⬇ ⬇	Gaining CSDtype ⬆ ⬇ ⬇	Gaining Change Code ⬆ ⬇ ⬇	Gaining Action ⬆ ⬇ ⬇	Losing CSDuid ⬆ ⬇ ⬇	Losing CSDname ⬆ ⬇ ⬇	Losing CSDtype ⬆ ⬇ ⬇	Losing Change Code ⬆ ⬇ ⬇	Losing Action ⬆ ⬇ ⬇

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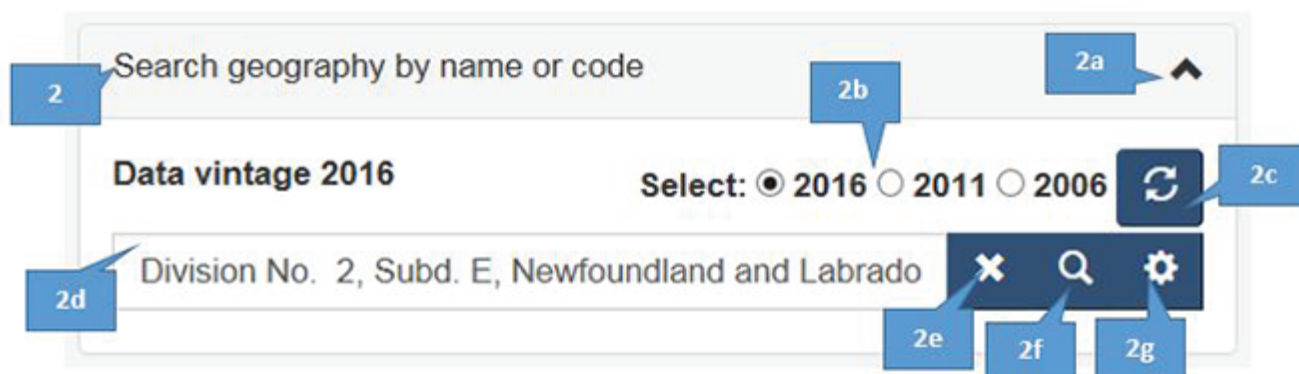
Figure 1
GeoSuite Header



Description for Figure 1

- What's new: what is new for this release.
- Useful links: helpful links to reference material as well as other census products.

Figure 2
"Search geography by name or code" Window



Description for Figure 2

- Box collapse: collapsing and expanding windows.
- Data vintage: select the data vintage in which you would like to retrieve data for then click on the refresh button (the default is currently set to Census 2016).
- Refresh button : user must click on this button to refresh the page.
- Search bar: type the name or the code of the area you wish to get information for.
- Reset parameters: the default parameter is Canada.
- Search: activate search.
- Search filter: add or remove geography layers for the search results.

Figure 3
“Search result for:” Window

(The “Search results for:” window will be updated based on the name or code entered in the “Search geography by name or code” window, and/or the selection chosen in the “Display results for:” window and/or the “Map results for:” window.)

Search result for: Division No. 2, Subd. E, CCS (1002001)

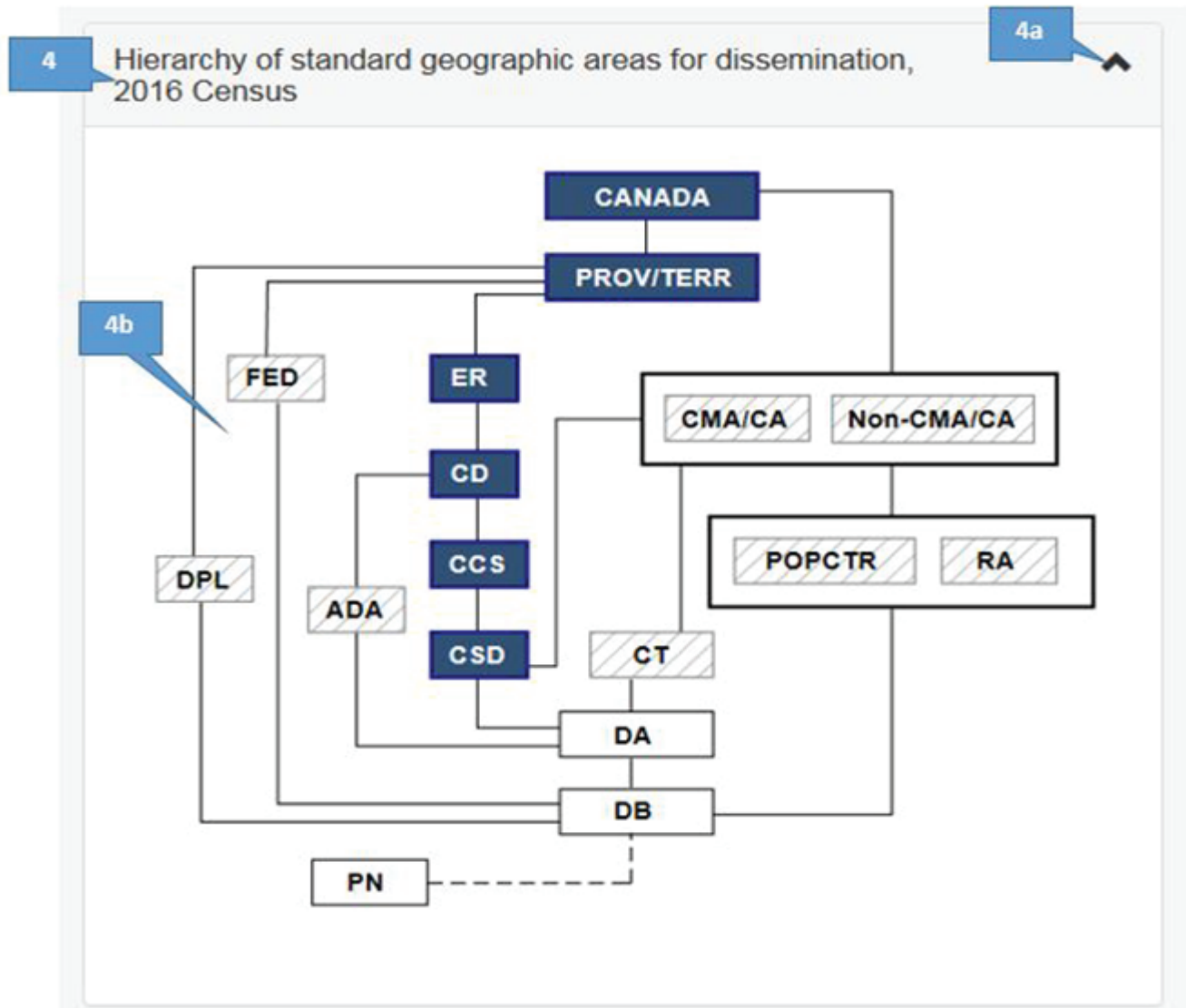
2016 Census	Geographic level	2011 Census	More information
CCS:	Division No. 2, Subd. E		
Unique Identifier (UID):	1002001		
Population:	20,372		
Total private dwellings:	11,497		
Private dwellings occupied by usual residents:	8,737		
Land area (Km ²):	6,099.0792		
IR refusal:	No		

For more information, including an explanation of any type of adjustment(s) that may have occurred, see the [More Information](#) tab in the *Search result* panel.

Description for Figure 3

- Box collapse: collapsing and expanding windows.
- 2016 Census* tab: displays information relative to the data vintage selected in the *Search geography by name or code*: window.
- Geographic level* tab: Displays higher geography for the selected area.
- 2011 Census*: displays information relative to the previous census based on the vintage selected.
- Footer: is displayed when a note on the data is available in the *More information* tab.
- More information* tab: Is displayed when a note on the data is available.

Figure 4
“Hierarchy of standard geographic areas for dissemination, 2016 Census” Window

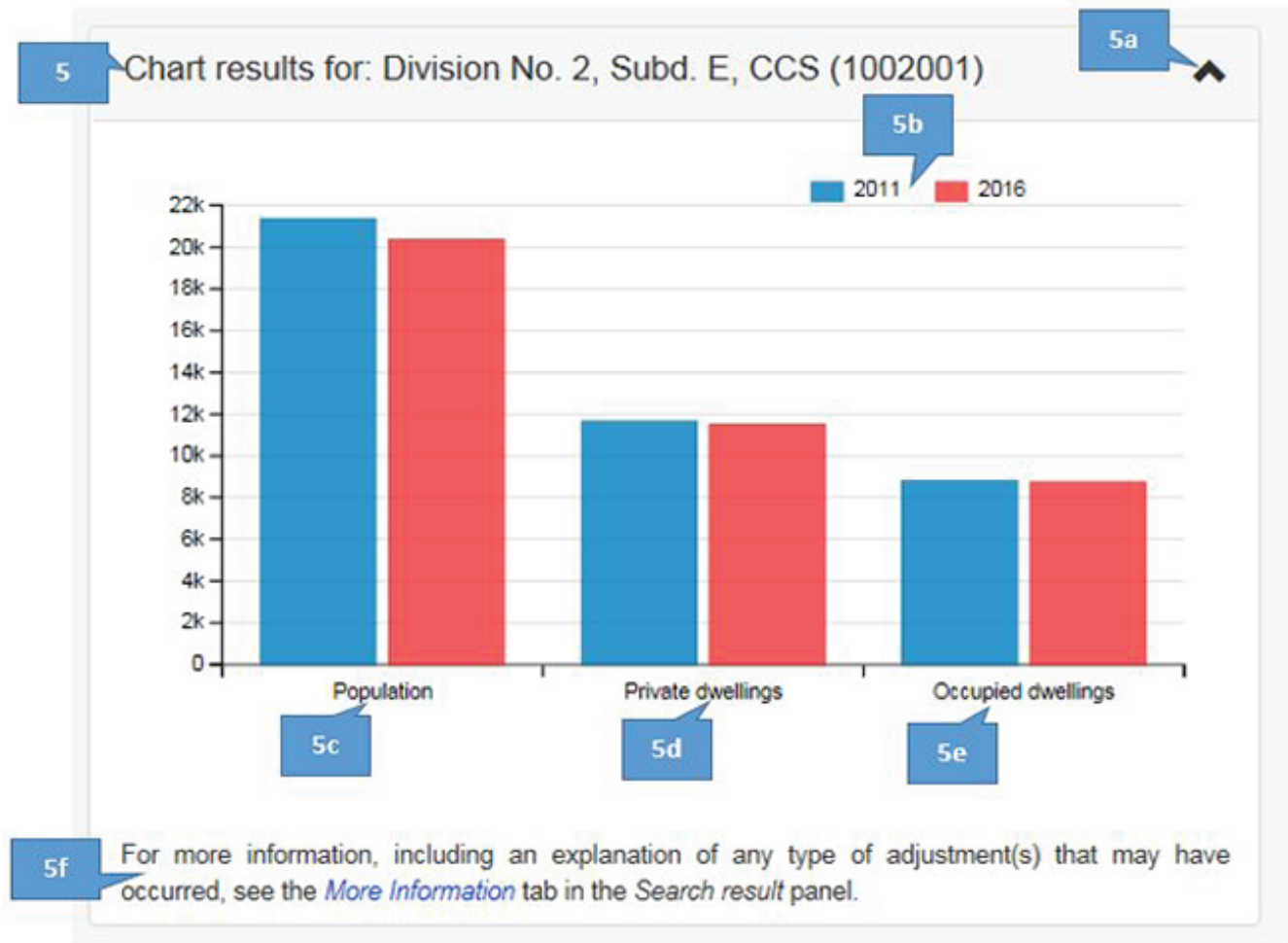


Description for Figure 4

- Box collapse: collapsing and expanding windows.
- Select higher or lower geography layers (when boxes have grey lines in them, these layers are not available for that selected area.)

Figure 5
“Chart results for:” Window

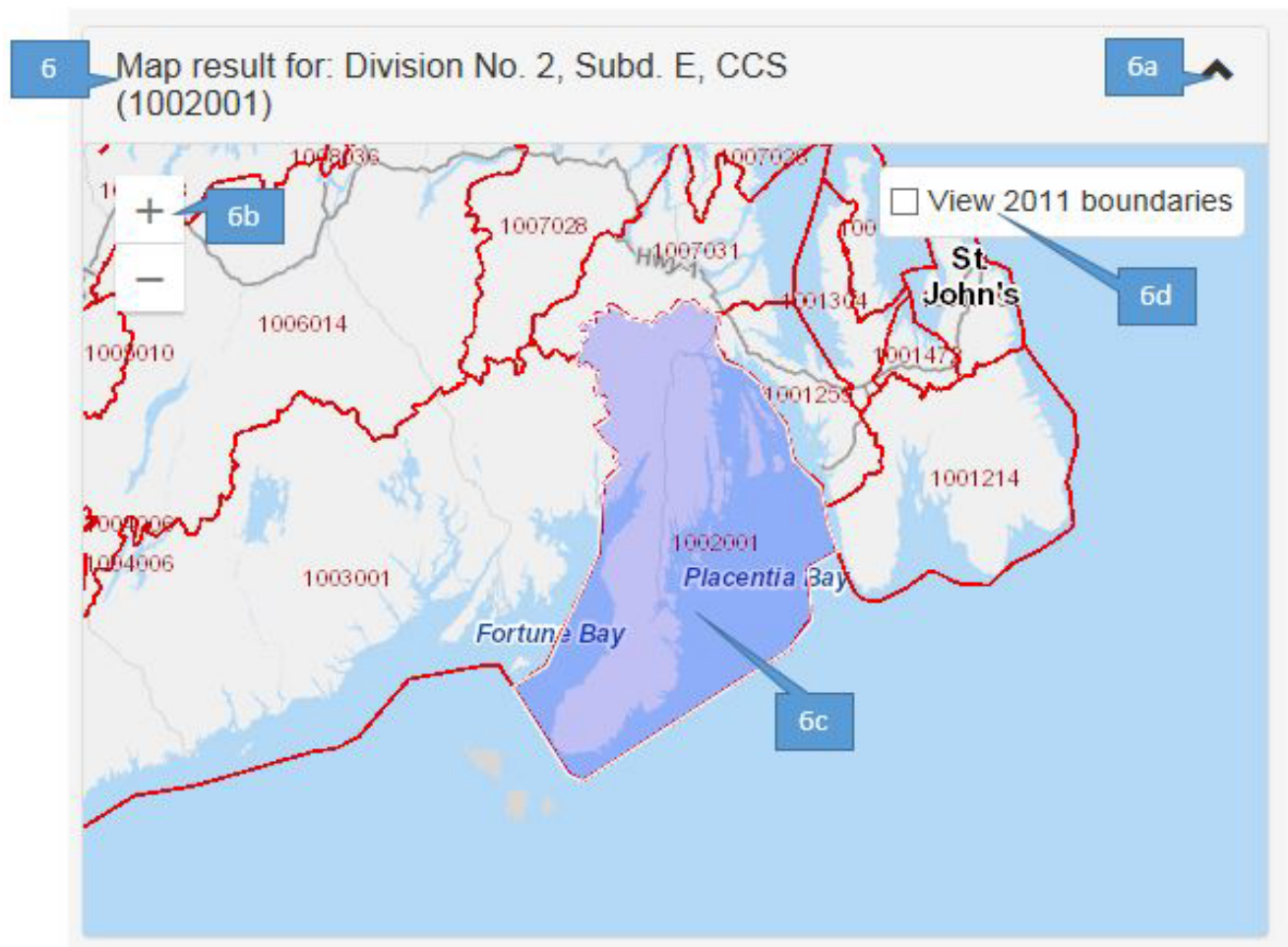
(The “Chart results for:” window will be updated based on the name or code entered in the “Search geography by name or code” window, and/or the selection chosen in the “Display results for:” window and/or the “Map results for:” window.)



Description for Figure 5

- Box collapse: collapsing and expanding windows.
- Vintage: previous census is blue and current census is reddish. Based on the vintage selected in the *Search geography by name or code*: window.
- Population*: population counts.
- Private dwellings*: total private dwellings counts.
- Occupied dwellings*: private dwellings occupied by usual residents counts.
- Footer: is displayed when a note on the data is available in the *More information* tab.

Figure 6
“Map results for:” Window



Description for Figure 6

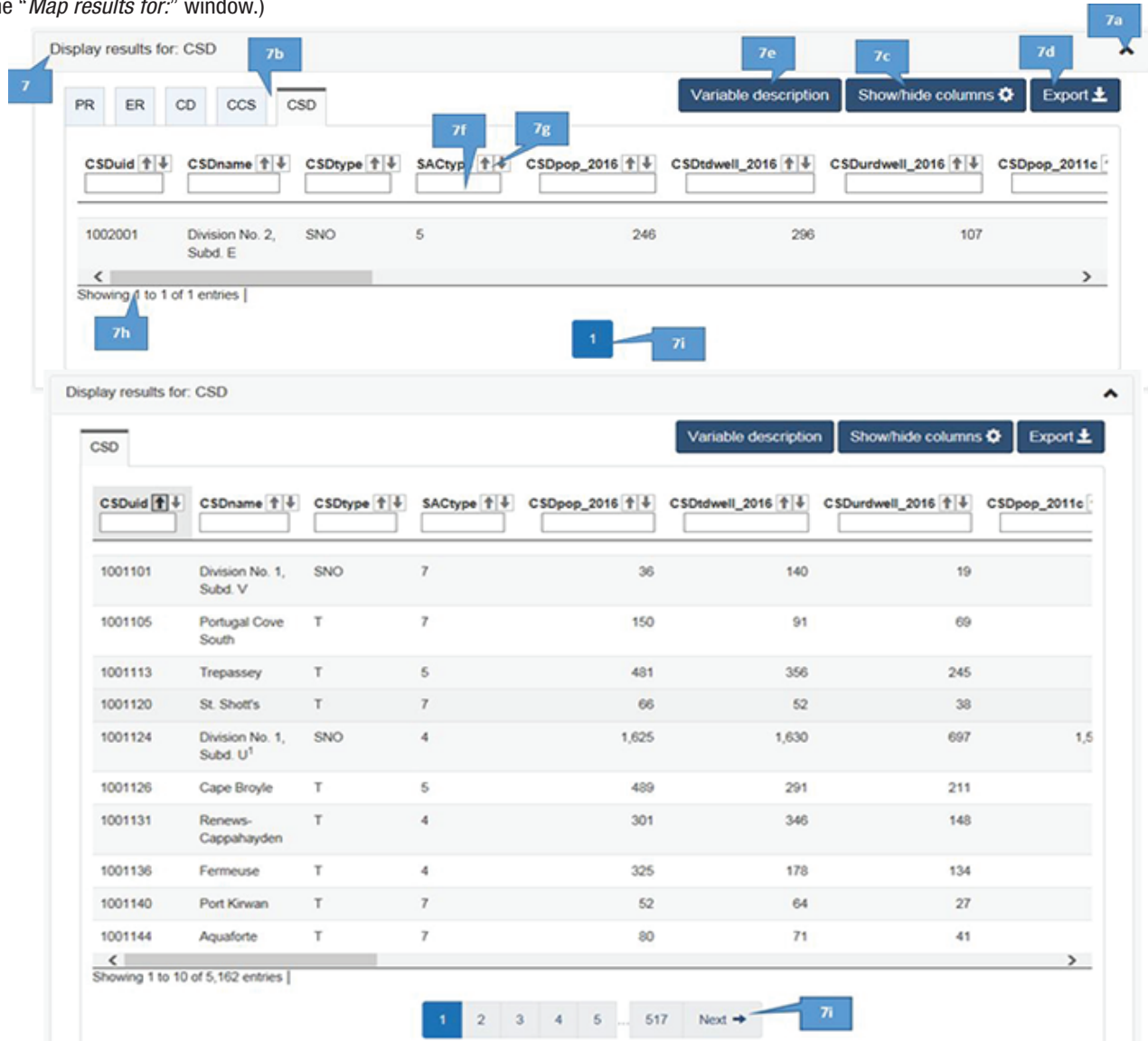
- Box collapse: collapsing and expanding windows.
- Zoom in/Zoom out: zoom in or zoom out of the map.
- Visual representation of the search area selected.
- View 2011 boundaries*: view the previous Census boundaries based on the vintage selected in the *Search geography by name or code*: window.

Note: User may click in a surrounding area in the map and all windows will be updated accordingly.

Figure 7

“Display results for:” Window

(The “Search results for:” window will be updated based on the name or code entered in the “Search geography by name or code” window, and/or the selection chosen in the “Hierarchy of standard geographic areas for dissemination, 2016 Census:” window and/or the “Map results for:” window.)



Description for Figure 7

- Box collapse: collapsing and expanding windows.
- Layer tab: higher to lower geography layers based on selected areas.
- Show/hide columns: add or remove columns fields from the display.
- Export: save and/or export data from the grid. (*Export All* contains all the records for that layer and *Export selection* contain only data that is relevant to the geographic search in progress).
- Variable description: gives acronym names and descriptions.
- Filter boxes: search using mathematical operators such as =, <, > as well as values.
- Sort: sort ascending or descending order.
- Showing entries: showing a specified number of record being displayed based on total entries.
- Navigation button: navigate through all pages of the grid using *Next*, *Previous* or the page number. See example below:

Display results for: CSD

Variable description Showhide columns Export

CSDuid	CSDname	CSDtype	SACtype	CSDpop_2016	CSDdwell_2016	CSDurdwell_2016	CSDpop_2011c
1001101	Division No. 1, Subd. V	SNO	7	36	140	19	
1001105	Portugal Cove South	T	7	150	91	69	
1001113	Trepassey	T	5	481	356	245	
1001120	St. Shott's	T	7	66	52	38	
1001124	Division No. 1, Subd. U ¹	SNO	4	1,625	1,630	697	1,5
1001126	Cape Broyle	T	5	489	291	211	
1001131	Renews-Cappahayden	T	4	301	346	148	
1001136	Fermeuse	T	4	325	178	134	
1001140	Port Kirwan	T	7	52	64	27	
1001144	Aqualorte	T	7	80	71	41	

Showing 1 to 10 of 5,162 entries |

1 2 3 4 5 ... 517 Next → 71

Figure 8
"Interim List" window (when CSD geography level is chosen)

The screenshot shows the 'Interim List' window with a table of CSD changes. The table has columns for Gaining CSD (CSDuid, CSDname, CSDtype, code, Action) and Losing CSD (CSDuid, CSDname, CSDtype, code, Action). The data rows show various CSDs and their changes, such as 'Type change' and 'Name change'. The window includes a toolbar with buttons for 'Change code description', 'Show/hide columns', and 'Export'. A pagination bar at the bottom shows 'Showing 1 to 10 of 55 entries' and a navigation button labeled '1'.

Gaining CSDuid	Gaining CSDname	Gaining CSDtype	Gaining Change code	Gaining Action	Losing CSDuid	Losing CSDname	Losing CSDtype	Losing Change code	Losing Action
2494240	Saint-Honoré	V	3	Type change	Saint-Honoré	MÉ			
2498025	Natashquan	MÉ	3	Type change	Natashquan	CT			
2433035	Saint-Gilles	MÉ	3	Type change	Saint-Gilles	PE			
2467010	Saint-Philippe	V	3	Type change	Saint-Philippe	MÉ			
2411005	Saint-Clément	MÉ	3	Type change	Saint-Clément	PE			
2463005	Sainte-Marie-Salomé	MÉ	3	Type change	Sainte-Marie-Salomé	PE			
4706028	Grand Coulee	T	3	Type change	Grand Coulee	VL			
4811021	Thorsby	T	3	Type change	Thorsby	VL			
5947016	North Coast A	RDA	2	Name change	Skeena-Queen Charlotte A	RDA			
5947032	North Coast E	RDA	2	Name change	Skeena-Queen Charlotte E	RDA			

Description for Figure 8

- Box collapse: collapsing and expanding windows.
- Show/hide columns: add or remove columns fields from the display.
- Export: save and/or export data from the grid. *Export All* is the only one available at the moment.
- Filter boxes: search using mathematical operators such as =, <, > as well as values.
- Sort: sort ascending or descending order.
- Showing entries: showing a specified number of record being displayed based on total entries.
- Navigation button: navigate through all pages of the grid using *Next*, *Previous* or the page number. Same as for *Display results for:* window.
- Change code description: Link to the *Interim List of Changes to Municipal Boundaries, Status, and Names*

Appendices

See definitions of the geography universe from the Dictionary, Census of Population, 2016 (www12.statcan.gc.ca/census-recensement/2016/ref/dict/az2-eng.cfm?topic=az2)

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

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

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