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Postal Code[OM] Conversion File Plus (PCCF+) Version 6A, Reference Guide

June 2013 Postal Codes[OM]

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What's new?

The Postal Code^{OM} reference date for the Postal Code^{OM} Conversion File (PCCF) and the Postal Code^{OM} Conversion File Plus (PCCF+) is June 2013.

This is the first release with the 2011 Census geographies and 2013 Health Region boundaries.

The Postal Codes^{OM} are linked to the geographic areas used in the 2011 Census of Population. The reference date for these geographic areas is January 1, 2011.

The Postal Code^{OM} Conversion File Plus (PCCF+) Version 6A includes a population-weighting file calculated from 2011 Census population counts.

The program structure and user operation for Version 6 of the PCCF+ has been updated from previous versions. Specific changes are documented in this reference guide.

Detailed specifications on updates in Version 6 are outlined in the *Version updates* section of this reference manual.

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1. About this guide

This reference guide is intended for users of the Postal Code^{OM} Conversion File Plus (PCCF+) Version 6A, a companion product to the Postal Code^{OM} Conversion File (PCCF). The guide provides an overview of the files and software, the general methodology used in the creation, important technical information, and instruction on how to use the included SAS© programs.[1]

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2. Overview

The Postal Code^{OM} Conversion File Plus (PCCF+) is a SAS© control program and set of associated datasets derived from the Postal Code^{OM} Conversion File (PCCF), a 2011 Postal Code^{OM} population weight file, the Geographic Attribute File, Health Region boundary files, and other supplementary data. PCCF+ automatically assigns a range of Statistics Canada's standard geographic areas and other geographic identifiers based on Postal Codes^{OM}. The PCCF+ differs from the PCCF in that it uses population-weighted random allocation for Postal Codes^{OM} that link to more than one geographic area. Options are available for institutional Postal Codes^{OM} and Postal Codes^{OM} in British Columbia moved by Canada Post Corporation. Procedures are included to link partial Postal Codes^{OM} to geographic identifiers to the extent possible. Problem records and diagnostics are provided in the program output along with reference information for possible solutions.

The geographic coordinates, which represent the standard geostatistical areas linked to each Postal Code^{OM} on the PCCF, are commonly used to map the distribution of data for spatial analysis (e.g., clients, activities). The location information is a powerful tool for marketing, planning, and research purposes.

In April 1983, the Geography Division released the first version of the PCCF, which linked Postal Codes^{OM} to 1981 Census geographic areas and included geographic coordinates. The PCCF+ was first created using the 1991 Census and has been updated regularly with population weight files calculated for each census from 1991 through 2011.

How to cite this guide

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3. About this product

Purpose of the product

The purpose of the Postal Code^{OM} Conversion File Plus (PCCF+) is to provide a link between six-character Postal Codes^{OM}, standard 2011 Census geographic areas (e.g., dissemination areas, census subdivisions, census tracts), supplementary administrative areas, immigrant terciles, and income quintiles.

Postal Codes^{OM} do not respect census geographic boundaries and so may be linked to more than one standard geographic area, or assigned to more than one set of coordinates. Therefore, one Postal Code^{OM} may be represented by more than one record.

The PCCF+ differs from the PCCF in that it uses a population-weighted matching process for some residential Postal Codes^{OM} where more than one administrative code is possible. The PCCF+ also provides routines for institutional Postal Codes^{OM} and for historic Postal Codes^{OM}.

The purpose of this product is *not* to validate Postal Codes^{OM}.

Definitions and concepts

Selected geographic terms and concepts are briefly defined in the glossary (*Appendix A*). More detail can be found in the *2011 Census Dictionary* (Catalogue no. 98-301-X) and the *2011 Illustrated Glossary* (Catalogue no. 92-195-X).

Additional reference guides include the *Postal Code^{OM} Conversion File (PCCF) Reference Guide, June 2013 Postal Codes^{OM}* (Catalogue no. 92-154-G), the *Geographic Attribute File, Reference Guide, Census year 2011* (Catalogue no. 92-151-G), the working paper *How Postal Codes Map to Geographic Areas* (Catalogue no. 92F0138MIE – No. 001), and *Health Regions: Boundaries and Correspondence with Census Geography* (Catalogue no. 82-402-X).

Content

This version (6A) of the PCCF+ contains a SAS© control program, data files for operation of the geocoding process, and several supplementary SAS© programs. Table 3.1 provides a list of these files with descriptions.

Table 3.1: List of files included with PCCF+

File name	Description
PCCFplus_FCCPplus_6A.sas	Primary PCCF+ SAS© control program for geocoding for residential and institutional
input_georef.sas	SAS© input file for geographic data files
input_pccf.sas	SAS© input file for PCCF data files
dist6a.sas	SAS© control program for calculating distance between points
explode.sas	SAS© control program to explode records with single Postal Codes^{OM}
fix_pcodes.sas	SAS© control program to fix common Postal Code^{OM} errors
histSESref_v6a.sas	SAS© control program to assign historic QAIPPE from 1981-2006
cpcref.airstage.v1306.txt	Canada Post airstage delivery list (6+ months per year)
cpcref.bldgnam.v1306.txt	Building names and addresses (non-residential) for manual resolution
cpcref.emgres.v1306.txt	Flag for possible residential Postal Code^{OM} despite institutional type
cpcref.instflg.v1306.txt	Flag for potential institutional or business Postal Codes^{OM}
cpcref.nadr.v1306.txt	Number of address records for each Postal Code^{OM}
georef.dablkpnt11.txt	Pointer file for dissemination area and dissemination block file
georef.gaf11.txt	Subset of geographic attribute file
georef.hrdef.txt	Combined health region definitions
georef.ses06.txt	Income quintiles and immigrant terciles (2006 dissemination area identifiers)

File name	Description
pccf1306.pccf.bcvuniq.txt	British Columbia Postal Codes[OM] moved by Canada Post in 1990s
pccf1306.pccf.dups.txt	Duplicate Postal Codes[OM] from PCCF
pccf1306.pccf.pointdup.txt	Pointer file for duplicate Postal Codes[OM]
pccf1306.pccf.rpo.txt	Rural post office codes
pccf1306.pccf.uniq.txt	Unique Postal Codes[OM]
pccf1306.wc2geog.txt	Geography associated with first 2 characters of FSA[©]
pccf1306.wc3dups.txt	Weighting for first 3 characters of Postal Code[OM] (FSA[©])
Pccf1306.wc3geog.txt	Geography for first 3 characters of Postal Code[OM] (FSA[©])
pccf1306.wc3point.txt	Pointer for 3-character weighting file (FSA[©])
pccf1306.wc4dups.txt	Weighting for first 4 characters of Postal Code[OM]
pccf1306.wc4point.txt	Pointer for 4-character weighting file
pccf1306.wc5dups.txt	Weighting for first 5 characters of Postal Code[OM]
pccf1306.wc5point.txt	Pointer for 5-character weighting file
pccf1306.wc6dups.txt	Weighting for Postal Code[OM]
pccf1306.wc6point.txt	Pointer for Postal Code[OM] weighting file

The PCCF+ is available as a standard package for Canada. Contact us by e-mail at infostats@statcan.gc.ca or by visiting our website at www.statcan.gc.ca.

General methodology

The Postal Code[OM] Conversion File Plus (PCCF+) is updated on a regular basis and is released annually. The regular maintenance of the file takes all Postal Code[OM] changes continually introduced by Canada Post Corporation as updated in the PCCF, as well as any updates to Health Regions, Census Subdivisions, or other administrative files. Every five years, after each census, the PCCF+ and the underlying population weight files are recalculated and aligned with the new census geographic areas.

The PCCF+ consists of a SAS® control program and a series of reference files derived from the PCCF, the geographic attribute file, a custom Postal Code[OM] population weight file, health region boundaries, and other sources. The PCCF+ automatically assigned a full range of geographic identifiers based on Postal Codes[OM]. PCCF+ has been developed over a number of years for research studies at Statistics Canada with considerable input from the broader research community. Via the program, any incorrect coding due to errors in the underlying reference files can be easily identified and corrected. The PCCF+ also incorporates user feedback for identification of multiple Postal Code[OM] links and for the correction of Postal Code[OM] errors.

At their place of residence, 24% of the Canadian population use Postal Codes[OM] which are ambiguous with respect to geographic location (Table 3.2). This is the biggest problem facing geographic coding from Canadian Postal Codes[OM]. For instance, about 20% of the population uses rural Postal Codes[OM] which each serve an average of about 1,100 persons), 3% use rural route services from urban post offices, and 1% use small post office boxes. Within urban Postal Codes[OM], a few classes are primarily used by businesses and institutions may or may not be valid as a place of residence (based on Delivery Mode Type – DMT). The remaining 76% of Canadian Postal Codes[OM] present little or no problem with respect to geographic coding and can usually be done with a high degree of precision (see reference manual for the Postal Code[OM] Conversion File for details). It is important to identify and deal with the various sorts of problems represented by each of the above categories, which PCCF+ can help accomplish.

Table 3.2 Active Postal Codes[OM] with multiple links

Geographic Area	Number of Active Postal Codes[OM]
Dissemination block	129,029
Dissemination area	75,350
Census tract	13,610
Census subdivision	6,162
Census division	1,178

Census metropolitan area	132
Province or territory	0

The primary functions of PCCF+ are summarised below:

- Identify community mail boxes and other sources of duplicate records on the PCCF (DMT A,B).
- Identify Postal Codes[OM] which may be used by other businesses or institutions (DMT E,G,M).
- Provide geographically unbiased coding for small PO boxes at urban post offices (DMT K) and for those using General Delivery at urban post offices (DMT J).
- Provide coding for institutions using large PO boxes (DMT M).
- Incorporate retired Postal Codes[OM], taking into account problems related to previous DMT.
- Provide translation across different vintages of census geography.
- Use the first one, two, three (FSA[©]), four, or five characters of the Postal Code[OM] to impute or partially impute census geographic coding.
- Allow coding of old Postal Codes[OM] in British Columbia that were moved by Canada Post in the mid-1990s.
- Provide additional information to correct erroneous or problematic Postal Codes[OM] and find geographic codes by other means.
- For Postal Codes[OM] which may or may not refer to a place of business (DMT E,G,M), flag records known to serve non-residential addresses and flag those known to serve / or have served residential addresses.
- For areas consisting primarily of collective dwellings, indicate the predominant dwelling type (hospital, nursing home, prison, etc…).

The default routine for PCCF+ is for geocoding records corresponding to *usual place of residence*, the optional institutional coding routine can be used to geocode Postal Codes[OM] corresponding to health facilities (long-term care facilities, nursing homes, hospitals, residential care homes) or other institutions. The general methodology for residential coding is outlined below, with procedures that apply only to institutional geocoding shown in italics.

1. Rural Postal Codes[OM] and Postal Codes[OM] served by rural route delivery or suburban services from urban post offices, or which indicate a group of post office boxes or a single post office box, are matched to a subset of the weighted conversion file – consisting of about 75,000 records for 12,000 different Postal Codes[OM]. As most such codes serve more than one dissemination area, the geographic codes are assigned randomly in proportion to the distribution of population with that Postal Code[OM], as seen in the weighting file. *For coding of office locations, etc., the institutional routine omits the rural Postal Codes[OM] from this step, so that they can all be assigned to the same dissemination area as the rural post office.*
2. Remaining Postal Codes[OM] which are unique on the PCCF (only linked to a single dissemination area, dissemination block, or block face) are matched to corresponding codes on the incoming file. There are about 560,000 of these unique codes for all Canada, including most urban Postal Codes[OM]. *For institutional geocoding, rural Postal Codes[OM] together with their corresponding post office geography are added at this point, as those records are also unique.*
3. Postal Codes[OM] which are not unique on the PCCF (over 260,000 different Postal Codes[OM] for which about 1.4 million PCCF records exist, including each of the multiple occurrences of the same Postal Code[OM]) are matched to the remaining records from the input file. Most urban Postal Codes[OM] and some rural Postal Codes[OM] which are not unique on the PCCF (in the sense that they link to more than one dissemination area, dissemination block, or block-face) are nonetheless not ambiguous in terms of higher levels of geography such as census division, census subdivision, census metropolitan area, or census tract.

To avoid "many-to-many" matching, the matching in this part of the program is done in two steps:

a. Each remaining input record (not already matched to the weighting file or to the PCCF unique file) is matched by Postal Code[OM] to a pointer file which contains a single record for each Postal Code[OM] which occurs more than once on the PCCF. The pointer file shows how many times the Postal Code[OM] occurs and the observation number of the first occurrence of that Postal Code[OM] on the pointer file.
b. The information on the pointer file is used to match successive records with the next occurrence of that Postal Code[OM] on the pointer file. This has the effect of distributing events for such Postal Codes[OM] across all possible dissemination areas, dissemination blocks, or block-faces which are served by that Postal Code[OM] – with equal weight assigned to each PCCF record.

4. Missing dissemination block codes are assigned based on population-weighted imputation from the dissemination area code, if available.
5. Error records are then identified and processed as follows:
   a. Any record with a Postal Code[OM] which did not match on any of the 6 characters to the PCCF is identified as an error record (LINK=0).
   b. Records with Postal Codes[OM] which matched to the PCCF or weighting file, but whose DMT is M or X are also identified as error records (LINK=1), since the PCCF only indicates their post office location.
   c. The geographic codes for error records are set to missing values.
   d. Using auxiliary files, an attempt is then made to assign highly probable census metropolitan area, census division, and census codes, plus census tract and dissemination area for urban Postal Codes[OM]. Coding will be suggested based on the first 5, 4 or 3 characters of the Postal Code[OM], or failing that, based on the first 2 characters of the Postal Code[OM]. The province may also be assigned based on the first character of the Postal Code[OM].
6. All records with their corresponding geography (to the extent found) are output to the specified output file. If some or all geographic codes could not be determined, those fields are set to missing values in the output file.
7. A problem output file is created containing:
   a. Records with Postal Codes[OM] which could not be matched on all 6 characters (LINK type 0: error);
   b. Records with Postal Codes[OM] for a DMT which is only linked to post office location on the PCCF (LINK type 1: error), and for which census location data were not available on the weighted conversion file;
   c. Records where the DMT frequently indicates a non-residential address (LINK types 3 and 4: warning);
   d. Records for Postal Codes[OM] known to indicate a non-residential address (LINK type 2: warning);
   e. Records which could have been assigned more than one census subdivision based on the unweighted PCCF (LINK type 5: note); and,
   f. Records which could have been assigned to more than one census subdivision based on the weighted conversion file (LINK type 6: note).
8. A summary of the geocoding process, including the number of records in each link type above is printed in the PDF output, together with suggestions as to what to do in each case. The summary also shows the distribution of records by the number of geographic codes which were assigned.

9. Frequency counts of the occurrence of each value of the main fields are output. This is done for both the geocoded output and for the problem subset.

Limitations

The PCCF contains multiple records for a Postal Code^{OM} when the Postal Code^{OM} straddles more than one block-face, dissemination block, or dissemination area. Note that the Canada Post Corporation source data used to create the PCCF contains some Postal Codes^{OM} which have links to multiple address ranges. For example, in the June 2013 file received from Canada Post Corporation, 889 Postal Codes^{OM} were linked to between 50 and 100 different address ranges, and 558 Postal Codes^{OM} were linked to 100 or more address ranges.

Civic addresses are not available for some Postal Codes^{OM} such as those associated with rural routes. Many of these Postal Codes^{OM} tend to straddle several dissemination areas and often cross boundaries of standard geographic areas such as census tracts or census subdivisions. It is difficult to identify the precise physical location of a rural Postal Code^{OM}.

Community mailboxes are a growing source for multiple records per Postal Code^{OM} on the PCCF. In newer urban delivery areas, Postal Codes^{OM} are assigned to a community mailbox that may cover partial dissemination blocks, both sides of a street, and different streets within 200 metres of the community mailbox. These situations often result in multiple links being established between a Postal Code^{OM} and block-faces, unlike the more traditional urban Postal Codes^{OM}, which correspond generally to a block-face.

The single link indicator (SLI) was created to assist users in dealing with Postal Codes^{OM} with multiple records. The method used to establish the single link indicator identifies the geographic area with the majority of dwellings assigned to a particular Postal Code^{OM}. *Users should be aware that only a partial correspondence between the Postal Code^{OM} and other geographic areas is achieved when using the single link indicator.* Note that the single link indicator is identified on both active and retired Postal Codes^{OM}. Users will find when working with both active and retired Postal Codes^{OM}, multiple SLIs will appear for a Postal Code^{OM} that has been retired and reintroduced.

The address associated with a Postal Code^{OM} does not always represent the location where those receiving mail using that Postal Code^{OM} actually reside. This is particularly the case in rural areas, where rural route service and post office pick-up are commonly used to deliver mail. The delivery mode type of 'W' (rural) and 'H' (rural route) on the PCCF identify Postal Codes^{OM} that are usually considered rural.

A typical rural route address, such as 'RR#6, Georgeville, Québec', does not provide sufficient address information to identify a precise physical location. A rural post office address such as 'PO BOX 4001 STN A VICTORIA BC' is also imprecise and not explicitly attached to the dwellings served by that Postal Code^{OM}. Consequently, rural Postal Codes^{OM} cannot be used in the same manner as most urban Postal Codes^{OM} can to precisely geo-reference a physical location.

Similarly, Postal Codes^{OM} with a delivery mode type of 'K' (group of post office boxes) or 'M' (one post office box) may be linked to the location of the postal installation on the PCCF, as opposed to the physical location of customers who rent a post office box. A new variable indicating whether a Postal Code^{OM} is linked to a post office location or to where the customers reside is now available in the PCCF.

The health region correspondence to census geography, which are coded as part of PCCF+, are based on 2011 and 2006 Census geographic units. The smallest geographic unit available has been used as the building block to define health regions. In general, the legislated limits respect these units, but not all respect dissemination areas or dissemination blocks once the legislated boundaries are digitized. In most provinces, the dissemination area was used to define health regions. However, in several instances, the actual physical legal limits split dissemination areas. In these cases, the dissemination block was used to improve the accuracy of these boundaries. The limits that did not respect Statistics Canada geometry (the splits) were digitized by utilizing maps, spatial layers and/or descriptions supplied by and with the cooperation of the authority for each province.

Comparison to other products/versions

Version 6 of the PCCF+ is a major revision of the source data files and user input / output of the SAS$^{©}$ program. The latest release uses 2011 Census geography, with the 2011 Census population weight file created using rounded 100% population counts. The PCCF+ source data files use Postal Codes^{OM} and associated data from Canada Post Corporation through to the end of June 2013. Health region boundaries have been updated through October 2013.

- Version 1 – 1986 Census; equal weight to duplicate records
- Version 2 – 1991 Census; 2B (20% sample) household weights for most duplicate records
- Version 3 – 1996 Census; 2A (100% count) population weights for most duplicate records
- Version 4 – 2001 Census; 2A (100% count) population weights for most duplicate records
- Version 5 – 2006 Census; 2A (100% count) population weights for most duplicate records
- Version 6 – 2011 Census; (100% count) population weights for most duplicate records

Using with other products

Output from PCCF+ can be linked to the 2011 Census geographic attribute file and other 2011 Census products using the geographic unique identifiers. For completely geocoded records with a 2011 dissemination block identifier, unique geographic identifiers are provided for other census periods (1981 through 2006) and thus can be linked to other Census products from those periods.

Successfully geocoded health region unique identifiers can be linked to 2013 health region boundaries. Using the 2011 dissemination block or 2006 dissemination block identifiers, geocoded records can be linked to health region boundaries from other periods as well.

Reference date

The reference date for Postal Codes^{OM} contained in this product is June 2013, the 2013 release of the Postal Code^{OM} Conversion File (PCCF). See the Postal Code^{OM} *Conversion File (PCCF), Reference Guide, June 2013* Postal Codes^{OM}. Statistics Canada Catalogue no. 92-154-G

The geographic reference date is a date determined by Statistics Canada to finalize the geographic framework for which the census data are collected, tabulated and reported. The geographic reference date for the 2011 Census is January 1, 2011. See the *Geographic Attribute File, Reference Guide, 2011 Census*. Statistics Canada Catalogue no. 92-151-G.

The reference date for health region boundaries as of October 2013, with correspondence to 2011 and 2006 Census geography. See *Health regions: boundaries and correspondence with census geography*. (2013) Statistics Canada Catalogue no. 82-402-X.

4. Technical specifications

The Postal Code^{OM} Conversion File Plus (PCCF+) is provided as a SAS© control program, a collection of text-based data files, with additional SAS© programs for tasks outlined in *Appendix C*. The use of PCCF+ for geocoding Postal Code^{OM} requires an input file, in SAS© data format (*.sas7bdat) that contains Postal Codes^{OM} and a unique identifier for each record. Operation of the PCCF+ results in an output file which contains the Postal Code^{OM}, unique identifier, and additional codes gained from geocoding.

This section provides the record layout for the SAS© output file, specifications of the output file, compatible software formats for the SAS© program, and detailed instructions for the installation and operation of PCCF+. Detailed record layouts for the data files associated with PCCF+ can be found in *Appendix B*.

Output file description

Table 4.1: Postal Code^{OM} Conversion File Plus (PCCF+) output file description and sources

Field Name	Source	Description
ID	User-supplied identifier	User-supplied unique identifier
PCODE	User-supplied Postal Code^{OM}	Postal Code^{OM}
DAuid	Geographic attribute file	Dissemination area unique identifier
DB	Geographic attribute file	Dissemination block code
DB_ir2011	Geographic attribute file	2011 Census Indian reserve refusal flag
CSDuid	Geographic attribute file	Census Subdivision unique identifier
CSDname	Geographic attribute file	Census Subdivision name
CMAPuid	Geographic attribute file	Census metropolitan/agglomeration area unique identifier
CMAtype	Geographic attribute file	Census metropolitan area type
CMAname	Geographic attribute file	Census metropolitan/agglomeration area name
CTname	Geographic attribute file	Census tract name
Tracted	Geographic attribute file	Flag for tracted / non-tracted area
SAC	Geographic attribute file	Statistical area classification code (includes CMA/CA)
SACtype	Geographic attribute file	Statistical area classification type (includes CMA/CA)
CCSuid	Geographic attribute file	Census consolidated subdivision code
FEDuid	Geographic attribute file	Federal electoral district (2003) unique identifier
FEDname	Geographic attribute file	Federal electoral district name
DPLuid	Geographic attribute file	Designated place identifier
DPLtype	Geographic attribute file	Designated place type
DPLname	Geographic attribute file	Designated place name
ERuid	Geographic attribute file	Economic region identifier
ERname	Geographic attribute file	Economic region name
CARuid	Geography Division	Census agricultural region identifier
CARname	Geography Division	Census agricultural region name
PopCtrRAPuid	Geographic attribute file	Population centre/rural area code
PopCtrRAname	Geographic attribute file	Population centre/rural area name
PopCtrRAtype	Geographic attribute file	Population centre/rural area type
PopCtrRAclass	Geographic attribute file	Population centre/rural area classification
CSize	PCCF+	Community size code (2011 CMA/CA population)
CSizeMIZ	PCCF+	Urban CMA/CA size and rural MIZ code
HRuid	Health Statistics Division	Health region unique identifier
HRename	Health Statistics Division	Health region name (English)

Field Name	Source	Description
HRfname	Health Statistics Division	Health region name (French)
SubHRuid	Health Statistics Division	Health subregion unique identifier
SubHRename	Health Statistics Division	Health subregion name (English)
SubHRfname	Health Statistics Division	Health subregion name (French)
SLI	PCCF	Single link indicator
Rep_Pt_type	PCCF	Representative point type (PCCF)
RPF	PCCF+	Representative point flag (PCCF+)
PCtype	PCCF	Postal Code^{OM} type
DMT	PCCF	Delivery mode type
H_DMT	PCCF+	Historic delivery mode type
DMTDIFF	PCCF+	Previous or alternate DMT (if applicable)
PO	PCCF	Delivery installation
QI	PCCF	Quality indicator
Lat	PCCF	Latitude of lowest level geographic area
Long	PCCF	Longitude of lowest level geographic area
Source	PCCF	Source of Postal Code^{OM} geocoding (PCCF)
Link_Source	PCCF+	Source of geographic coding (PCCF+)
Link	PCCF+	Link type
Prec	PCCF+	Precision of representative point
Comm_Name	PCCF	Canada Post community name
AirLift	Canada Post Corporation	Canada Post air stage community
InstFlag	PCCF+	Institutional flag
Resflag	PCCF+	Residence flag (for Postal Codes^{OM} DMT=E,G,M)
Hosp	PCCF+	Hospital Postal Code^{OM} flag
InuitLands	PCCF+	Inuit Nunangat land claims settlement areas
QAIPPE	PCCF+	Neighbourhood income quintile (within CMA/CA)
QNIPPE	PCCF+	Neighbourhood income quintile (national)
DAIPPE	PCCF+	DA income quintile (within CMA/CA)
DNIPPE	PCCF+	DA income quintile (national)
IMMTER	PCCF+	Immigrant (foreign-born) tercile (national)
DA06uid	PCCF+	2006 dissemination area identifier correspondence
DB06uid	PCCF+	2006 dissemination block identifier correspondence
DA01uid	PCCF+	2001 dissemination area identifier correspondence
EA96uid	PCCF+	1996 enumeration Area identifier correspondence
EA91uid	PCCF+	1991 enumeration Area identifier correspondence
EA86uid	PCCF+	1986 enumeration Area identifier correspondence
EA81uid	PCCF+	1981 enumeration Area identifier correspondence

Variable descriptions

Postal Code^{OM}

The Postal Code^{OM} is a six-character code defined and maintained by Canada Post Corporation for the purpose of sorting and delivering mail. The characters are arranged in the form 'ANA NAN', where 'A' represents an alphabetic character and 'N' represents a numeric character (e.g., K1A 0T6). The Postal Code^{OM} uses 18 alphabetic characters and 10 numeric characters. Six alphabetic characters (D, F, I, O, Q, and U) are not in use at the present time. The first position does not make use of the letters W or Z.

The first three characters of the Postal Code^{OM} ('ANA') represent a set of well-defined and stable areas known as forward sortation areas$^{©}$ (FSAs$^{©}$). The FSA$^{©}$ represents a specific area within a major geographical region, a province or a territory. As of June 2013, there were 1,641 FSAs$^{©}$ in use across Canada. There were 1,457 FSAs$^{©}$ with urban mail delivery service and 184 with rural mail delivery service. Rural Postal Codes^{OM} are identifiable by the presence of a zero (0) in the second position of the FSA$^{©}$ code. PCCF+ will ensure that rural Postal Codes^{OM} have a DMT of H (rural route service) or T (suburban route service). Urban Postal Codes^{OM} are composed of FSAs$^{©}$ with numerals 1 to 9 in the second position of the code.

The last three characters of the Postal Code^{OM} ('NAN') identify routes known as local delivery units (LDUs). In population centres, a single Postal Code^{OM} may correspond to the following types of LDU:

- a block-face (one side of a city street between consecutive intersections)
- a community mailbox (commonly called super mailboxes)
- an apartment building
- a business building
- a large firm or organization that does considerable business with Canada Post Corporation
- a federal government department, agency or branch
- a mail delivery route (rural, suburban or mobile)
- general delivery at a specific post office
- one or more post office boxes.

A community mailbox Postal Code^{OM} services both odd and even sides of the same street, or different streets, within a 200 metre radius of the community mailbox.

In rural FSAs$^{©}$, the LDU generally refers to services which originate from a post office or postal station. These include rural routes, general deliveries, post office boxes, and suburban services. Often, in rural FSAs$^{©}$, the Postal Code^{OM} identifies a specific rural community.

Dissemination area unique identifier (DAuid)

The DAuid uniquely identifies a dissemination area. It is composed of the two-digit province or territory code, the two-digit census division code and the four-digit dissemination area code.

In PCCF+, this identifier can take additional forms depending on how much is known about the subfields. The census division missing value is set to ‘00’ as ‘99’ is a valid code.

99999999	Province (2), census division (2), and dissemination area (4) are unknown
nn999999	Census division (2) and dissemination area (4) are unknown
nnnn9999	Dissemination area (4) is unknown

Dissemination block

A dissemination block (DB) is an area bounded on all sides by roads and/or boundaries of standard geographic areas. Dissemination blocks cover all the territory of Canada. This code should be combined with the dissemination area unique identifier to uniquely identify the dissemination block within the country. This field will be '00' for Postal Codes^{OM} linked only to dissemination areas (Rep_Pt_Type = 3) or census subdivisions (Rep_Pt_Type = 4) where the dissemination block is unknown or not imputed.

Dissemination block Indian Reserve refusal flag (DB_ir2011)

In 2011, there were a total of 31 Indian reserves and Indian settlements that were 'incompletely enumerated.' For these reserves or settlements, enumeration was either not permitted or was interrupted before it could be completed, or enumeration was not possible because of natural events (specifically forest fires in Northern Ontario).

Compared to previous censuses, there was a decrease in the number of band councils that did not give permission to enter their territory to conduct the census, from 18 Indian reserves and Indian settlements in 2006 to 14 in 2011.

There were 13 Indian reserves and Indian settlements where enumeration was not possible as a result of forest fires in Northern Ontario at the time of census collection. Collection for these communities was done at a later time.

The 2011 Census population and dwelling counts are not available for the 31 incompletely enumerated Indian reserves and Indian settlements, and are not included in 2011 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 2006 and 2011 are not precise. The impact of the missing data for higher-level geographic areas (Canada, provinces, census metropolitan areas and census agglomerations) is very small. However, the impact can be significant for smaller areas, where the incompletely enumerated Indian reserves and Indian settlements account for a higher proportion of the population.

Census subdivision unique identifier (CSDuid)

This uniquely identifies a census subdivision in the country. The province/territory, census division, and census subdivision (municipality) codes combine to represent the 2011 Standard Geographical Classification.

In PCCF+, this identifier can take additional forms depending on how much is known about the subfields. The census division missing value is set to ‘00’ as ‘99’ is a valid code.

9999999	Province (2), census division (2), and census subdivision (3) are unknown
nn99999	Census division (2) and census subdivision (3) are unknown
nnnn999	Census subdivision (3) is unknown

Census subdivision name (CSDname)

This contains the name of the census subdivision (municipality) in effect as of January 1, 2011.

Census Metropolitan / Agglomeration Area unique identifier (CMAPuid)

Uniquely identifies the provincial or territorial part of a census metropolitan area and census agglomeration (composed of the 2-digit province or territory unique identifier followed by the 3-digit census metropolitan area or census agglomeration area unique identifier).

In PCCF+, this identifier can take additional forms depending on how much is known about the subfields.

99999	Province (2) and census metropolitan / agglomeration area (3) are unknown
nn999	Census metropolitan / agglomeration area (3) is unknown

Census Metropolitan Area type (CMAtype)

A one-character field identifying whether the unit is a census metropolitan area, a tracted census agglomeration or a non-tracted census agglomeration.

Table 4.2: Census metropolitan area type

CMAtype	CMA Description
B	Census metropolitan area
D	Census agglomeration with no census tracts
G	Strong metropolitan influenced zone
H	Moderate metropolitan influenced zone
I	Weak metropolitan influenced zone
J	No metropolitan influenced zone
K	Census agglomeration with census tracts
L	Territories, outside census agglomeration

Census Metropolitan / Agglomeration Area name (CMAname)

This field contains the census metropolitan area or census agglomeration name.

Census tract name (CTname)

This identifies a census tract within a census metropolitan / agglomeration area. To uniquely identify each census tract in its corresponding census metropolitan area or tracted census agglomeration, the three-digit census metropolitan / agglomeration area code must precede the census tract 'name.' If a census tract is split into two or more parts due to a population increase, the number after the decimal point identifies the splits. For example, CT 0042.00 becomes CT 0042.01 and CT 0042.02. If CT 0042.01 is subsequently split, it becomes CT 0042.03 and CT 0042.04.

For areas within a census metropolitan / agglomeration area where the census tract is missing, the CTname is coded to 9999.99.

Tracted

Indicates whether a Postal Code^{OM} is within the tracted area (census metropolitan / agglomeration area). If the statistical area classification code and statistical area classification type are unable to be coded, the Tracted flag is set to 9 (missing).

Statistical Area Classification code (SAC)

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 (strong metropolitan influenced zone, moderate metropolitan influenced zone, weak metropolitan influenced zone or no metropolitan influenced zone), or the territories (Yukon, Northwest Territories and Nunavut).

Table 4.3: Statistical area classification code

SAC	SAC Description
000	Territories, outside of a census agglomeration
001 to 995	census metropolitan / agglomeration area unique identifier
996	Strong metropolitan influenced zone
997	Moderate metropolitan influenced zone
998	Weak metropolitan influenced zone
999	No metropolitan influenced zone
Blank	Missing

Statistical Area Classification type (SACtype)

This identifies the type of statistical area classification in which the census subdivision is located.

Table 4.4: Statistical area classification type

SACtype	SACtype Description
1	Census subdivision within census metropolitan area
2	Census subdivision within census agglomeration with at least one census tract

SACtype	SACtype Description
3	Census subdivision within census agglomeration having no census tracts
4	Census subdivision outside of census metropolitan area and census agglomeration having strong metropolitan influence
5	Census subdivision outside of census metropolitan area and census agglomeration having moderate metropolitan influence
6	Census subdivision outside of census metropolitan area and census agglomeration having weak metropolitan influence
7	Census subdivision outside of census metropolitan area and census agglomeration having no metropolitan influence
8	Census subdivision within the territories, outside of census agglomeration
9	Missing

Census consolidated subdivision unique identifier (CCSuid)

This identifies a census consolidated subdivision within a census division. The CDuid is combined with the census consolidated subdivision code to uniquely identify a census consolidated subdivision in the country.

Federal electoral district – 2003 Representation Order unique identifier (FEDuid)

This uniquely identifies a federal electoral district – 2003 representation order. The first two digits of the FEDuid identify the province or territory.

Federal electoral district – 2003 Representation Order names (FEDname)

Names for federal electoral districts.

Designated place unique identifier (DPLuid)

This identifies a designated place within a province or territory, combined with the province or territory code to uniquely identify a designated place.

Areas which are not a designated place are assigned a four-digit code that is a concatenation of '99' plus the two-digit province or territory code. For example, records in areas outside of a DPLuid in New Brunswick are assigned a DPLuid of '9913.'

Designated place type (DPLtype)

The following is a list of designated place types:

Table 4.5: Designated place types

DPLtype	DPLtype Description
CFA	Class IV area
DMU	Dissolved municipality
DPL	Designated place
IRI	Indian reserve / Réserve indienne
IST	Island trust
LNC	Localité non constituée
LSB	Local service board
LSD	Local service district
LUD	Local urban district
MDI	Municipalité dissoute
MDP	Municipal defined places
MET	Métis settlement
NM	Northern community
NVL	Nisga'a village
OHM	Organized hamlet
SE	Aboriginal settlement
UNP	Unincorporated place

UUC	Unincorporated urban centre
Blank	MIssing

Designated place name (DPLname)

Designated place name.

Economic region unique identifier (ERuid)

This identifies an economic region within a province or territory, combined with the province or territory code to uniquely identify an economic region.

Economic region name (ERname)

Economic region name.

CARuid

Census agricultural regions are used by the Census of Agriculture for disseminating agricultural statistics. Census agricultural regions are composed of groups of adjacent census divisions, except in Saskatchewan, where they are composed of groups of adjacent census consolidated subdivisions not respecting census division boundaries. Census agricultural regions are not defined for the territories. The census agricultural region code is unique only when preceded by the province code. CARuid=PR+CAR. CARname shows the name of each census agricultural region, including unofficial descriptive names for otherwise unnamed census agricultural regions. The Territories are coded 00, and 99 for missing values.

CARname

Census agricultural region name.

Population centre/rural area code (POP_CNTR_RAPuid)

Population centre codes are unique four-digit codes that are assigned sequentially upon the POP_CNTR_RA creation. These codes remain constant between censuses. If a population centre is retired due to amalgamation or failure to meet the population or density thresholds, then its code is retired.

Rural area codes are unique four-digit codes which are a concatenation of '99' plus the two-digit province or territory code. For example, records in rural areas in Manitoba are assigned '9946.' This field will be '0000' for Postal Codes[OM] linked to dissemination areas (Rep_Pt_Type = 3) and census subdivisions (Rep_Pt_Type = 4).

Population centre/rural area name (POP_CNTR_RAname)

Population centre and rural area name

Population centre/rural area type (POP_CNTR_RAtype)

For population centres, the type code indicates the relationship of the population centre to the census metropolitan area and census agglomeration structure.

Table 4.6: Population centre / rural area type

POP_CNTR_RAtype	POP_CNTR_RAtype Description
0	Rural area
1	Core
2	Fringe
4	Population centre outside census metropolitan / agglomeration areas
6	Secondary core
9	Missing

This field is '9' for Postal Codes[OM] linked to dissemination areas (Rep_Pt_Type = 3) and census subdivisions (Rep_Pt_Type = 4). There is no POP_CNTR_RA_type available for Postal Codes[OM] linked at the dissemination area or census subdivision level. POP_CNTR_RA_type is only available for Postal Codes[OM] linked at the more detailed dissemination block or block-face level.

Population centre and rural area classification (POP_CNTR_RAclass)

Table 4.7: Population centre and rural area classification

POP_CNTR_RAclass	POP_CNTR_RAclass Description
1	Rural area
2	Small population centre (1,000 to 29,999)
3	Medium population centre (30,000 to 99,999)
4	Large urban population centre (100,000 or greater)
9	Missing

CSize

Community Size is defined in terms of the 2006 census population in each census metropolitan area or census agglomeration, as shown above. Community size 1 consists of Toronto, Montreal and Vancouver census metropolitan areas. Community size 2 consists of Ottawa-Gatineau, Edmonton, Calgary, Québec, Winnipeg and Hamilton census metropolitan areas. Community size 3 includes all 18 other census metropolitan areas plus 7 of the larger census agglomerations. Community size 4 includes all 106 other census agglomerations. Community Size 5—"rural and small town Canada"--includes all places not included in any census metropolitan area or census agglomeration. (i.e., places with an urban area population less than about 10,000, plus rural areas). Note that the lower threshold has been increased, since Ottawa-Hull is much closer in size to Edmonton and Calgary than to Montreal, Vancouver or Toronto.

Note that almost all records with a valid FSA[©] (whether or not the rest of the Postal Code[OM] is valid) can be assigned to a census metropolitan area or census agglomeration, and thus to a community size category. According to Statistics Canada's recommended definition, rural and small town Canada (*Plessis et al, 2001*) is defined as CSIZE='5'.

Table 4.8: Community size classification

CSize	CSize Description
1	1,500,000 +
2	500,000 – 1,499,999
3	100,000 – 499,999
4	10,000 – 99,999 (any CMACA < 100,000)
5	Less than 10,000 (any non-CMACA)
9	Missing

CSizeMIZ

This variable is a combination of the CSize variable for urban areas, and of the SACtype variable for rural areas. See the definitions of each for more information.

Table 4.9: Community size classification, with MIZ

CSize	CSize Description
1	1,500,000 +
2	500,000 – 1,499,999
3	100,000 – 499,999
4	10,000 – 99,999 (any CMACA < 100,000)
5	Non-CMACA; Strong MIZ
6	Non-CMACA; Moderate MIZ
7	Non-CMACA; Weak / No MIZ, Territories
8	Non-CMACA; Unknown MIZ

9	Unknown if CMACA or not
Blank	Missing

HRuid

Health regions are sub-provincial areas defined by provincial departments of health. In some cases, those definitions may split dissemination areas or blocks between two or more health regions, but to simplify the coding here, each dissemination area and block has been uniquely assigned to a single health region. Since each health region covers many dissemination areas, most of which are not split, this simplification should have little effect on the number of events coded to each health region. The two-character health region code is only unique within a given province (HRuid=Province (2) + health region (2)).

Where a province only uses a single digit to represent a health region, a zero has been added preceding that digit. Note that the definitions used were generally those in effect on 31 December 2013, but the definitions may be changed by provinces at any time, particularly in provinces without a long history of producing data by health region.

HRename

English health region name.

HRfname

French health region name.

SubHRuid

Health districts are geographically-defined areas which are smaller than health regions. They are defined by several but not all provincial departments of health. In most but not all cases, health districts are subdivisions of health regions. In all cases, a health district code is only unique within a given province. In Quebec, Ontario and Alberta, the health district code is only unique within the province and health region (SUBHRuid=PR+HR+SUB). Where a province uses only one or two characters to represent a health district, the second and/or third characters will be blank.

SubHRename

English health sub-region name.

SubHRfname

French health sub-region name.

Single link indicator (SLI)

The single link indicator (SLI) provides a geographic record for mapping a Postal Code^{OM} representative point. It can be used to establish a one-to-one relationship between Postal Codes^{OM} and dissemination areas, dissemination blocks, or block-faces. The SLI has the value of '1' to flag one record of an active Postal Code^{OM}. Every set of retired records for a Postal Code^{OM}, for a given retirement date, has one SLI equal to '1.' The SLI value '0' indicates additional records.

Representative point type (Rep_Pt_Type)

This identifies whether the record uses a block-face, dissemination block, dissemination area or census subdivision representative point as the coordinate.

Table 4.10: Representative point types in June 2013 PCCF

Rep_Pt_Type	Rep_Pt_Type Description	Number of active records on PCCF
1	Block-face	1,469,512
2	Dissemination block	153,857
3	Dissemination area	148,145
4	Census subdivision	6,463

Total	1,777,977

A representative point is a point that represents a line or a polygon. The point is centrally located along the line, and centrally located or population weighted in the polygon.

Representative points are generated for block-faces, dissemination blocks, dissemination areas, census subdivisions, population centres, and designated places. These points support the mapping of Postal Codes[OM] to geographic areas.

Representative points are located by the following methods using the Spatial Data Infrastructure:

Block-face representative points

The block-face representative points are computed along addressable and non-addressable streets, midway (or approximately midway) between two consecutive features intersecting a street. The features can be other streets or boundaries of standard geographic areas.

The points are set back a perpendicular distance of 10, 5, 1 or 0.5 metres from the street centre line to ensure that all points have unique coordinates, and are located in the correct block and on the correct side of the street.

Geographic area representative points

The representative points for dissemination blocks, dissemination areas, census subdivisions, population centres, and designated places are generated in conjunction with their respective cartographic boundary file. The most detailed dissemination hydrography in the cartographic boundary file is used. The points are initially calculated and stored based on the Lambert conformal conic projection; they are also transformed to latitude/longitude coordinates.

Topology checks are applied to ensure that the points fall within the appropriate geographic area. Since some dissemination blocks and designated places are located in water only, their representative point falls in water.

Representative points can also be used for data retrieval, data analysis and mapping. All representative points are calculated based on the x,y coordinates of the Lambert conformal conic map projection, but are disseminated in latitude/longitude coordinates.

RPF

This variable expands on the above Rep_Pt_Type variable, by including information on geocoding from PCCF+.

Table 4.11: Representative point flag

RPF	RPF Description
1	Block-face representative point
2	Dissemination block representative point determined by PCCF
3	Dissemination block representative point imputed within dissemination area (Source=F,D)
4	Dissemination block representative point imputed by Postal Code[OM] (Source=C)
5	Dissemination area representative point imputed within Postal Code[OM] dissemination blocks, dissemination areas, census subdivisions, population centres, and designated places (Source=C)
6	Dissemination area representative point imputed by partial Postal Code[OM] (Source=I,4,5)
8	FSA[©] representative point imputed from FSA[©] or partial FSA[©] (Source=3,2,1)
9	Representative point missing

Postal Code[OM] type (PCtype)

This indicates the type of addresses used to identify the points of call served by the Postal Code[OM]. This field was introduced by Canada Post Corporation after the creation of the original PCCF. Where

possible, a value has been imputed by Statistics Canada for retired Postal Codes^{OM} using historical address information and delivery mode type.

Table 4.12: Postal Code^{OM} types

PCtype	PCtype Description
1	Street address with letter carrier service
2	Street address with route service
3	Post office box
4	Route service
5	General delivery
0	Unknown

Delivery mode type (DMT)

This is the delivery mode type as defined by Canada Post Corporation. Note that Statistics Canada assigns a DMT of 'W' to rural Postal Codes^{OM}, which are left blank by Canada Post Corporation.

Table 4.13: Delivery mode type

DMT	Description	Number of Postal Codes^{OM}	Number of Records
A	Delivery to block-face address	786,187	1,390,060
B	Delivery to an apartment building	21,596	23,806
E	Delivery to a business building	9,975	11,811
G	Delivery to a large volume receiver	8,056	10,347
H	Delivery via a rural route	636	29,527
J	General delivery	580	969
K	Delivery to a post office box (not a Community Mail Box)	7,618	14,587
M	Delivery to a large volume receiver (post office box)	5,115	9,528
T	Delivery via a suburban service	281	12,573
W	Rural Postal Codes^{OM} (the second digit of the Postal Code^{OM} is '0')	5,352	268,826
X	Delivery via a mobile route	0	0
Z	Postal Code^{OM} is retired (no further delivery to this code)	3,321	5,943
Total		**848,717**	**1,777,977**

Note: Some Postal Codes^{OM} may have more than one delivery mode type.
Note: Totals refer to the number of Postal Codes^{OM} and active Postal Code^{OM} records on the PCCF

Additional notes for DMT when interpreting PCCF+ results:

W Rural Postal Codes^{OM} (regardless of type of service) always have a DMT of W. Where more than 1 census subdivision is served by the rural post office, this will result in a note to that effect on the problem file. No action is recommended in such cases, since manual coding would defeat the population-weighted allocation.

A Ordinary household (including community mail boxes) served by letter carrier. The most common DMT; usually no problem.

B Apartment building (large) served by letter carrier. No problem with this DMT.

E Business buildings served by letter carrier. This DMT results in a warning message, with the suggestion to check Postal Code^{OM}/address, to see if they refer to a legitimate residence or office location. In most cases, the residential flag field will indicate whether the Postal Code^{OM} is probable or improbable as a place of residence. The building name and brief address are shown on the problem file. The legitimacy of a Postal Code^{OM} with this DMT may also depend

on the nature of the records being coded: appropriate codes for offices are not necessarily appropriate for residences.

G Large Volume Receiver served by letter carrier (includes many institutions). This DMT results in a warning message, with the suggestion to check Postal Code^{OM}/address, to see if they refer to a legitimate residence or office location. In most cases, the residential flag field will indicate whether the Postal Code^{OM} is probable or improbable as a place of residence. The building, company or institution name and brief address will be shown on the problem file. The legitimacy of Postal Codes^{OM} with this DMT may also depend on the nature of the records being coded: appropriate codes for offices are not necessarily appropriate for residences. For example, a Postal Code^{OM} for a nursing home may be reasonable for coding the place of usual residence on a death record, but it would be highly suspicious on a birth record. Even if it is a legitimate place of residence, consider whether an event at such a place is pertinent to your study. For example, if the study uses neighbourhood income as a proxy for individual or family-level socioeconomic position, it may not make sense to include college or university residences.

H Rural route delivery from urban post office. For most rural routes, the weighted conversion file shows the 2011 Census population weights associated with each Postal Code^{OM} / dissemination area combination. As rural routes serve large areas (more than one census subdivision or census division) may be linked to a Postal Code^{OM} with this DMT, in which case the record will be output to the problem file with a note to that effect. If the LINK_SOURCE is not equal to 'C', then only province and census metropolitan area will be imputed from FSA$^{©}$, since the service area of these Postal Codes^{OM} extends out into adjacent rural FSAs$^{©}$.

J General delivery. Residence location may be available from census data (weighted conversion file, LINK_SOURCE=C). Otherwise, this DMT will result in an error, and the only geographic codes assigned would be based on population-weighted imputation within the FSA$^{©}$ (LINK_SOURCE =I) or on "most likely" values for the FSA$^{©}$ (LINK_SOURCE =3).

K Group of post office boxes. Residence location may be available from census data (WCF). Otherwise, this DMT will result in an error, and the only geographic codes assigned would be based on population-weighted imputation within the FSA$^{©}$ (LINK_SOURCE =I) or on "most likely" values for the FSA (LINK_SOURCE =3).

M Single post office box. If present on the weighted conversion file (LINK_SOURCE =C), will be fully coded. In most cases, the RESFLAG field will indicate whether the Postal Code^{OM} is probable or improbable as a place of residence. The building, company or institution name and brief address will be shown on the problem file. If not present on the weighted conversion file, Postal Codes^{OM} with this DMT will result in an error, since the PCCF only links Postal Codes^{OM} with this DMT to post office location. In that case the only geographic codes which could be assigned would be imputed from population-weighted imputation within the FSA$^{©}$ (LINK_SOURCE =I), or on based on "most likely" values for the FSA (LINK_SOURCE =3).

R Miscellaneous delivery services. Residence location may be available from census data (weighted conversion file). Otherwise, this DMT will result in an error, as the regular PCCF only links these to post office location, and the only geographic codes which could be assigned would be based on "most likely" values for the FSA$^{©}$. *DMT R is no longer used by Canada Post Corporation, but it may appear in the field for previous DMT.*

T Suburban service delivery (rare). Residence location may be available from the weighted conversion file. Otherwise, this DMT will result in an error, as the regular PCCF only links these to post office location, and the only geographic codes which could be assigned would be based on "most likely" values for the FSA$^{©}$.

DMT=X is only linked to post office location, and thus results in an error message as well as output to the problem file. However, since in such cases the first three characters of the Postal Code^{OM} are known to be valid, then a "most likely" province and census metropolitan area may often be imputed.

X Mobile route (urban industrial areas; rare). This DMT will result in an error, as the regular PCCF only links these to post office location, and the only geographic codes which could be assigned would be based on "most likely" values for the FSA$^{©}$.

W Rural Postal Codes^{OM}. Usually geography for records with rural Postal Codes^{OM} will be derived from the weighted conversion file (LINK_SOURCE =C).

Z Retired Postal Codes^{OM}. Usually the DMTDIFF field will show the previous DMT for retired Postal Codes^{OM}. If so, the LINK_SOURCE and other diagnostic codes make use of the DMTDIFF. However, if DMTDIFF is blank, then there is a slight chance that a currently retired Postal Code^{OM} may have formerly had a DMT of E, G, M or X, so this condition will result in output of the record to the problem file with a warning message to that effect.

9 Not applicable. No exact match to the PCCF or weighted conversion file, hence DMT is unknown. These will result in an error message as well as output to the problem file. A full or partial set of geographic codes may still be assigned based on the first 1, 2 or 3 characters of the Postal Code^{OM} (LINK_SOURCE =1, 2, 3, 4, 5 or I).

Special note concerning Delivery Mode Types H, J, K, M, R and T: Except on rare occasions, it is not necessary to manually recode records with a DMT of H (for rural route delivery from an urban post office), J (General Delivery – pick up from an urban post office counter), K (pick-up from group of urban post office boxes), or T (suburban service delivery from an urban post office). Most Postal Codes^{OM} with those DMTs can now be assigned a full set of geographic codes by reference to the weighted conversion file (LINK_SOURCE =C). That also applies to many Postal Codes^{OM} with DMT of M (pick up from a single large urban post office box) and R (miscellaneous services; no longer used by Canada Post Corporation).

Historic delivery mode type (H_DMT)

The historic delivery mode retains the previous delivery mode type value, if known. Blank = Not applicable or unknown.

Historic delivery mode type difference (DMTDIFF)

This field is for the previous Delivery mode type (DMT) if different from the current DMT. This usually occurs when the current DMT=Z (retired). Blank=Not applicable or unknown.

Delivery installation (PO)

This indicates whether the record represents coding to a post office where the mail can be accessed. The value '1' indicates this record was coded to a post office or other postal installation and the value '2' indicates 'unknown.' The value '0' indicates this record was coded to the area serviced by the Postal Code^{OM}.

Postal Code^{OM} type (PCtype) 3 and 5 Postal Codes^{OM} represent mail service that can be accessed at the post office or other postal installation. Where possible, these records are coded to the appropriate post office or other postal installation.

Quality indicator (QI)

The quality indicator provides an indicator of the quality of the geocoding that links the Postal Code^{OM} and its address information and that of the Geography Division's Spatial Data Infrastructure. The QI is established at the record level and is currently available only for the Postal Codes^{OM} that were geocoded using the automated geocoding system. A QI of 'AAA' indicates the highest quality and a QI of 'CCC' indicates the lowest quality.

The final quality indicator output after geocoding is complete is a concatenation such that:

QI = QI_1 | QI_2 | QI_3

The quality indicator (QI_1)

QI_1 indicates the quality of the general area where geocoding occurred. It is an indicator of our certainty that the Postal Code^{OM} is linked to the correct census subdivision.

QI is assigned as follows:

A good, verifiable geocoding, search area verified by more than one source

B good, search area based on 2011 Census data

C satisfactory approximation based on place name match to census subdivision alone

N unknown

The quality indicator (QI_2)

QI_2 indicates the level of confidence of the match to the correct street. This is not available for Postal Code^{OM} type (PCtype) 3, 4 and 5 records, when delivery installation (PO) = 0 or 2, since they do not represent service to a particular civic address; when PO = 1 QI_2 represents the confidence of the match to a delivery installation address.

QI is assigned as follows:

A good, match on street name, type, and direction

B good, but match only on street name and type

C satisfactory match on street name only or street name and direction

N unknown

The quality indicator (QI_3)

QI_3 indicates the level of confidence of the match to the correct address range. This is not available for PCtype 3, 4 and 5 records, when PO = 0 or 2, since they do not represent service to a particular civic address; when PO = 1 QI_3 represents the confidence of the match to a delivery installation address.

QI is assigned as follows:

A good, if the parity was matched on both addresses on the Spatial Data Infrastructure

B good, but the parity was matched on one address only on the Spatial Data Infrastructure

C satisfactory, if the parity was not matched but the ranges overlap

N unknown

For more information, please see the working paper entitled *How* Postal Codes^{OM} *Map to Geographic Areas* (Catalogue no. 92F0138MIE2007001).

Latitude (LAT)

This is the latitude, in decimal degrees, of the dissemination area, dissemination block, or block-face representative point. The decimal point is explicit. In cases where a dissemination area or block are not imputed, but the FSA© is known, the FSA© centroid will be used.

Longitude (LONG)

This is the longitude, in decimal degrees, of the dissemination area, dissemination block, or block-face representative point. The decimal point is explicit. In cases where a dissemination area or block are not imputed, but the FSA© is known, the FSA© centroid will be used.

Source

The source indicates the primary source of the geocoding used for the PCCF.

Table 4.14: Source of geocoding (PCCF)

Source	Source Description
1	Automated geocoding directly to 2011 Census geographic areas
2	Geocoded using 2011 Census response

3	Converted from geocoding done to 2006 Census geographic areas
4	Manually geocoded
9	Missing

Link_Source

This field provides additional information on the source of geographic coding related to the PCCF+ matching process. The possible values of this field are as follows:

Table 4.15: Source of geographic coding (PCCF+)

Link_Source	Link_Source Description
F	A full set of geographic codes and latitude/longitude were derived from an exact match to a PCCF unique record.
D	A full set of geographic codes and latitude/longitude were derived from an exact match to a PCCF duplicate record.
C	A full set of geographic codes and latitude/longitude were derived from an exact match to a WCF record (for DMT of H, J, K, some M, R, T, W, or Z).
5	Full geography was imputed from the first 5 characters of a Postal Code^{OM} (when DMT=9) , using census population weights.
4	Full geography was imputed from the first 4 characters of a Postal Code^{OM} (when DMT=9) , using census population weights.
I	Full geography was imputed from the first 3 characters of a Postal Code^{OM} (when DMT=9 or most M) , using census population weights.
3	A partial set of geographic codes was assigned based on only the first 3 characters of this Postal Code^{OM} (if 90% certain). Latitude and longitude of the FSA$^{©}$ centroid were assigned.
2	A partial set of geographic codes were assigned based on only the first 2 characters of this Postal Code^{OM}. All of the records with this LINK_SOURCE are due to unknown (non-existent) Postal Codes^{OM}.
1	A province code was assigned based on only the first character of this Postal Code^{OM}. No other geographic codes or latitude and longitude were assigned. All of the records with this LINK_SOURCE are due to unknown (non-existent) Postal Codes^{OM}.
0	The first character of this Postal Code^{OM} is not in the set used for Canadian Postal Codes^{OM}. No geographic codes assigned.
V	A full set of geographic codes and latitude/longitude were derived from an exact match to a unique record for a Postal Code^{OM} with an FSA$^{©}$ of V1H or V9G, including geography from the period prior to the rebirth of those FSAs in their new locations. This LINK_SOURCE only occurs where the option is used to recode British Columbia FSAs$^{©}$ which were moved by Canada Post.

Link

The link type code identifies the type of problems encountered in coding. The link type codes (LINK) and corresponding messages (MESSAGE) are arranged in hierarchical order, starting with 0 for the most serious problems, and going to 9 for no problem at all (not even a Warning or Note). If more than one type of problem was present, only the worst type is shown.

Table 4.16: Linkage type code (PCCF+)

Link	Source Description
0	Error: No match to PCCF (unique, duplicate, or weighted conversion file).
1	Error: Linked to PO geography
2	Warning: Non-residential. DMT=E, G or M and InstFlag=- (probable non-residential).
3	Warning: Business building (usually not a legitimate residence). DMT=E and InstFlag =blank.
4	Warning: Commercial or institutional (check if legitimate residence, and if pertinent

Link	Source Description
	to your study). DMT=G or M and InstFlag =blank.
5	Note: Retired Postal Code^{OM} – expected and normal on administrative files. No further action required (slight chance of DMT problem prior to retirement, only if DMT=Z, and DMTDIFF=blank).
6	Note: Multiple match to census subdivision. Census subdivision assigned by random allocation among possible census subdivisions shown in PCCF, with equal weight to each dissemination area or block served. No further action required.
7	Note: Multiple match to census subdivisions. Census subdivision assigned by random allocation among possible census subdivisions shown in WCF, based on distribution of population by Postal Code^{OM} and dissemination area at the time of the 2001 census (no further action required).
9	Not applicable (no error, warning or note). *Such records do not appear on the problem file*.

Prec

Precision of representative point (latitude / longitude). 0 is the least precise coding, 9 is the most precise. For spatial linkage it is recommended to review this precision before linkage of all records.

Table 4.17: Precision of representative point

Prec	Prec Description
0	No geographic coding
1	Province imputed from 1st character
2	Imputed from 1st 2 characters
3	Imputed from FSA, no population weighting
4	Imputed from FSA, population weighted
5	1 or more dissemination areas (DMT=H-Z)
6	1 or more dissemination areas (DMT=A,B,E,G)
7	1 dissemination area (DMT=A,B,E,G)
8	1 dissemination block (DMT=A,B,E,G)
9	Block-face (DMT=A,B,E,G)

Community name (Comm_Name)

The community name, as defined by Canada Post Corporation, denotes any city, town or village in Canada that is recognised as a valid mailing address. Canada Post Communities were numbered sequentially after arranging in alphabetical order within provinces and territories. The numbering of communities will clearly change anytime there is an addition or deletion of a community, or a change in spelling of a community name.

AirLift

An air stage office is a post office to or from which all mail must be airlifted for more than six (6) months of every year as a viable surface transportation alternative is not available. These offices are generally confined to remote or isolated communities. An office designated an air stage office is deemed to be air stage for the whole year.

InstFlag

This field is used to help identify records likely to be for institutional residents. It is usually blank. The categories should not be expected to correspond to the classification of facilities used by the Health Statistics Division, provincial or territorial authorities. See the problem file for the building name and address of these large volume receivers.

Table 4.18: Institutional flag

InstFlag	InstFlag Description
E	School or university residence

InstFlag	InstFlag Description
H	Hospitals
I	Hospitals (derived from building name)
N	Nursing homes
S	Seniors residences
P	Prisons, jails
U	Other
Blank	Not applicable or missing

ResFlag

If the delivery mode type (DMT)is E, G or M, then RESFLG indicates Postal Codes^{OM} for possible or improbable residence addresses, or Postal Codes^{OM} for which the residential or non-residential nature is undetermined. If the DMT is not in E, G or M, then RESFLG will be blank. See the problem file output for Canada Post building name and address information, if available.

Table 4.19: Residential flag

ResFlag	ResFlag Description
@	Possible residence
+	Probable residence
-	Improbable residence
?	DMT= E,G or M but residence is undetermined
Blank	Not in DMT= E,G, or M

Hosp

Indicates whether the Postal Code^{OM} corresponds to a hospital. This field is derived from building names and addresses.

InuitLands

Inuit Nunangat land claims settlement regions.

Table 4.20: Land claims settlement regions

InuitLands	InuitLands Description
0	Not coded
1	Inuvialuit Settlement Region
2	Nunavut Territory
3	Nunatsiavut
4	Nunavik
9	Outside of Inuit Nunangat

QAIPPE

Neighbourhood income per person equivalent (IPPE) is a household size-adjusted measure of household income, based on **2006 Census** summary data at the DA level, and using person-equivalents implied by the 2006 low income cut-offs (LICOs). Note that the 2001 single person equivalents were 1.00 for 1 person, 1.24 for 2 persons, 1.53 for 3 persons, 1.94 for 4 or 5 persons, and 2.44 for 6 or more persons sharing the same household (regardless of age). For a description of how IPPE was calculated previously based on 1991 census summary data and single-person equivalents from the 1991 LICOs, see *Ng et al. (1993)*.

Within each census metropolitan / agglomeration area or provincial residual area not in any census metropolitan / agglomeration area, the dissemination area average IPPE was used to rank all dissemination areas, and then the population was divided into approximate fifths, thus creating community-specific income quintiles based on IPPE. The quintiles were defined within each area in order to better reflect the relative nature of this measure, to minimize the effect on household welfare of large differences in housing costs, and to ensure that each census metropolitan / agglomeration area would have about an equal percentage of the population in each income quintile. Where

dissemination area income data were suppressed because of small sample size, imputations based on reported income from adjacent dissemination areas were substituted.

4.21: Neighbourhood income per person equivalent

QAIPPE	QAIPPE Description
1	Lowest quintile for the income per-person equivalent
2	Medium-low quintile
3	Middle quintile
4	Medium-high quintile
5	Highest quintile
9	Missing

QNIPPE

This variable is calculated similarly to the QAIPPE, with the *national* distribution for income quintiles is considered rather than area-based (census metropolitan / agglomeration area) distributions.

DAIPPE

Calculated the same as the QAIPPE, expressed as deciles instead of quintiles.

DNIPPE

Calculated the same as the QNIPPE, expressed as deciles instead of quintiles.

IMMTER

The Immigrant (foreign-born) Tercile (IMMTER) variable divides the immigrant (and non-permanent resident) population (from the **2006 Census**) into three approximately equal parts, with roughly 2 million immigrants in each tercile. For Canada as a whole, the percentage immigrant in the highest immigrant tercile (IMMTER=3) is about 63 %; in the middle tercile it is about 37 %, and in the lowest tercile it is about 10%. Note that the immigrant terciles are defined for Canada as a whole (nationally), so provincial and regional subsets of data are unlikely to have one third of the immigrant population in each tercile. See *Carriere et al. 2012*.

Table 4.22: Immigrant (foreign-born) tercile

IMMTER	IMMTER Description
1	Lowest tercile for foreign-born population
2	Middle tercile for foreign-born population
3	Highest tercile for foreign-born population
9	Missing

DA06uid

This field shows the 2006 dissemination area (PR+CD+DA), based on the 2011 dissemination block to 2006 dissemination area correspondence file.

DB06uid

This field shows the 2006 dissemination area (PR+CD+DA+BLK), based on the 2011 dissemination block to 2006 dissemination block correspondence file.

DA01uid

This field shows the 2001 dissemination area (PR+CD+DA), based on the 2011 dissemination block to 2001 dissemination area correspondence file.

EA96uid

This field shows the 1996 enumeration area (PR+FED+EA), based on the 2011 dissemination block to 1996 enumeration area correspondence file.

EA91uid

This field shows the 1991 enumeration area (PR+FED+EA), based on the 2011 dissemination block to 1991 enumeration area correspondence file.

EA86uid

This field shows the 1986 enumeration area (PR+FED+EA), based on the 2011 dissemination block to 1986 enumeration area correspondence file.

EA81uid

This field shows the 1981 enumeration area (PR+FED+EA), based on the 2011 dissemination block to 1981 enumeration area correspondence file.

File specifications

The current version of the Postal Code^{OM} Conversion File Plus (PCCF+) includes the PCCF+ SAS© program (PCCFplus_FCCPplus_v6a.sas), data files, and supplementary SAS© programs.

The PCCF+ geocoding program and supplementary programs requires SAS© version 9 or higher. Programs were developed using SAS© Version 9.3.1 for Windows Vista.

Data files are in ASCII text format and do not include any software nor instructions on how to use the product beyond the provision of record layouts in *Appendix B*. SAS© input programs are also included as part of the PCCF+ installation folders.

Software formats

Not applicable

System requirements

Use of the PCCF+ requires a Microsoft Windows® based system capable of running SAS© version 9 or higher, or SAS© Enterprise Guide version 4 or higher.

Installation instructions

To install PCCF+ and perform automated geocoding based on Postal Codes^{OM} using PCCF+, instructions are provided below.

Set up PCCF+

The main component of the PCCF+ consists of a single SAS© control file as well as 24 reference files primarily derived from the PCCF, the geographic attribute file, and the weighted conversion file. To use the PCCF+ all files and folders in must be copied to a directory accessible to SAS©. An example is provided in Figure 4.1.

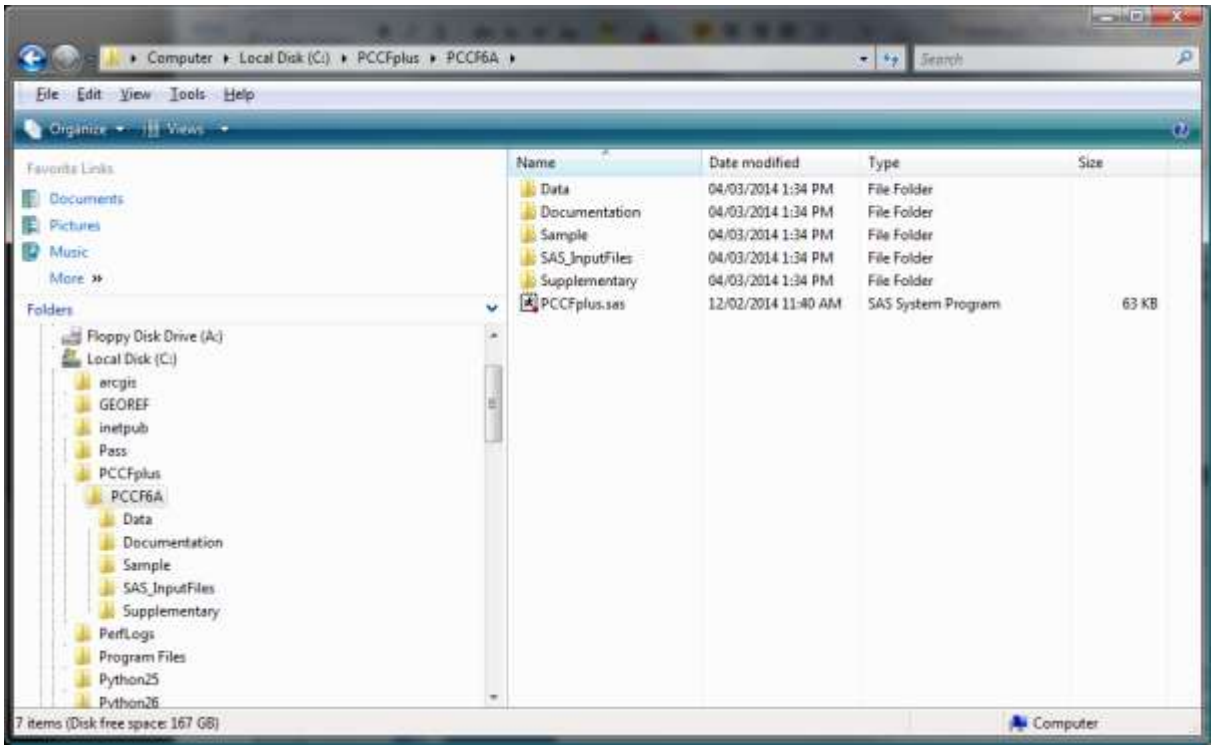


Figure 4.1: Example installation folder for PCCF+ Version 6a.

1. Specification of the input file

Input data must be a SAS© data file, sorted or unsorted, with **each** logical record containing a unique identifier (ID) and a Postal Code[OM] (PCODE) if available. The Postal Code[OM] must be formatted to be 6 characters with no spaces or hyphens. A supplementary program is provided that formats Postal Codes[OM] and corrects common errors (for example: 0 instead of O and vice-versa). Table 4.23 shows an example layout for the input file.

The ID should be in character format, up to 15 characters in length. Records may have the same PCODE, but should have different IDs. Records with the same ID but different PCODEs will each be assigned geographic codes (that may differ). For records with the same ID and PCODE combination, only one example of each will be retained. ***It is important to note that in constructing input data, duplicate PCODEs should be retained and provided separate IDs***.

Table 4.23: Example record layout for a PCCF+ SAS© input file.

Position	Size	Type	Field Name	Description
1	15	C	ID	User-supplied unique identifier
16	6	C	PCODE	Postal Code[OM]

2. Specifying macro variables in the PCCF+ SAS© program

The PCCF program has 7 macro variables that need to be confirmed before running. These variables are described in detail at the top of the SAS© program, but are also outlined here.

- Installation directory (`installDir`) – The directory where the PCCF+ program and source files are located. PCCF+ can be stored on any local or network directory; however, the directory most **not** contain any spaces but can contain hyphens or underscores.
  Example: `%let installDir = C:\PCCFplus_FCCPplus\;`

- Input data library (`inData`) – The folder path where the input dataset is located. This can be any directory accessible to SAS©.
  Example: `libname inData = "C:\PCCFplus_FCCPplus\input\";`
- Input data file (`inFile`) – The name of the input SAS© data file to be coded. This will need to be produced according to the specifications above.
  Example: `%let inFile = inputDataSet;`
- Output file name (`outName`) – The name of the output SAS© file (layout provided above). This is the geocoded file and includes *all* records, including those where there was a problem in geocoding. PCCF+ will automatically create an additional SAS© file for problem records, which has the same name as the geocoded output with the additional of a `_problem` suffix.
  Example: `%let outName = outputDataSet;`
- PDF listing output (`pdfOutput`) – The path and filename for the coding output summary. This summarises the geocoding process and identifies any potential problems and errors in geocoding.
  Example: `%let pdfOutput = "C:\PCCFplus_FCCPplus\output\output01.pdf";`
- Code version (`codeVersion`) – Whether to run residential (`codeVersion=0`) or institutional (`codeVersion=1`) geocoding. Residential coding is the default version, but if the data contain Postal Codes[OM] of individuals living in institutional facilities (including nursing homes, hospitals, residences) then the option for institutional geocoding is provided.
- British Columbia coding (`codeBC`) – Whether to use current (`codeBC=0`) or old BC Postal Codes[OM] locations (`codeBC=1`). If the input data contain any Postal Codes[OM] beginning with V1H or V9G from 1997 or earlier, this option will need to be used as Canada Post moved these two FSA at this time. PCCF+ will automatically summarise the number of records associated with these FSA and flag them as potential problems.

3. Running PCCF+

Once the macro variables listed above have been specified, PCCF+ can be run using the SAS© submit command. When submitting for the first time, it is recommended to closely watch the log window for any errors that appear immediately. In this case, the program can be halted and any errors corrected.

Once the geocoding process has completed, the first step is to examine the log for any additional warnings or errors. These are usually indicated in red or green respectively and should be addressed before examining the results.

4. Interpreting PCCF+ Results

PCCF+ produces two output files, one for all the geocoded data (including problem records), and a subset that contains only the problem records (errors, warnings, and notes). The first of these output files contains the ID, Postal Code[OM], the geographic codes that were successfully determined, and additional diagnostic codes that can aid in understanding how the coding proceeded for each case.

The second output file, indicated by the suffix _problem, contains a subset of the output records for any cases that had warnings, errors, or notes. To facilitate correction it is sorted by the type of problem (errors, followed by warnings, followed by notes), then by DMT, then by Postal Code[OM]. In the unlikely event that none of the input records were identified as potential problems then the problem file would be empty.

The output problem file includes the following fields:

- ID - Input record identifier
- PCODE - Input Postal Code[OM]
- MESSAGE - Text message indicating an error, warning, or note
- SLI - If the Postal Code[OM] was coded to the single-link
- Rep_Pt_Type - Representative point type
- RPF - Representative point flag
- PCtype - Postal Code[OM] type

- DMT - Delivery mode type
- H_DMT - Previous delivery mode type
- DMTDIFF - If a historic delivery mode type differed from the current type
- PO - Delivery installation
- QI - Quality indicator
- Source - Source of Postal Code^{OM} geocoding (PCCF)
- Link_Source - Source of geographic coding (PCCF+)
- Link - Link type
- Prec - Precision code
- DAuid - Dissemination area code (if coded)
- DB - Dissemination block (if coded)
- DB_ir2011 - Indian reserve refusal flag
- CSDuid - Census subdivision identifier (if coded)
- CSDname - Census subdivision name
- CMAPuid - Census metropolitan / agglomeration area unique identifier (if coded)
- CMAname - Census metropolitan / agglomeration area name
- CTname - Census tract (if coded)
- InstFlag - Institutional flag
- ResFlag - Residence flag (for DMT=E,G,M)
- nCSD - Number of census subdivisions for this Postal Code^{OM}
- BldgName - Building name and address, for business or institutional
- NumAdr - Number of addresses associated with this Postal Code^{OM}

Detailed descriptions of these variables are included in the *Variable descriptions* section.

File naming convention

The naming convention for the Postal Code^{OM} Conversion File Plus (PCCF+) is bilingual and reflects the version of PCCF+. Each primary version number (2 through 6) reflects a major update with geocoding to a different census period. Version 6 was developed using 2011 Census geography and version 5 was created using 2006 Census geography, and so on. The revision, indicated by a letter indicates the update version. PCCF+ is updated regularly to reflect new Postal Code^{OM} updates, updates to health region boundaries, and other programming updates suggested by users.

The SAS$^{©}$ control program file name for this release is PCCFplus_FCCPplus_v6a.sas.

5. Data quality

Linkage data quality elements provide information on the fitness-for-use of a linkage 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 lineage, positional accuracy, attribute accuracy, logical consistency and completeness. This information is provided to users for all linkage data products.

Lineage

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

The Postal Code^{OM} Conversion File Plus (PCCF+) is updated regularly via two processes. The first updates are done every five years, after each census, to align the source files to the latest census geographic areas and calculate new Postal Code^{OM} weights. The second is ongoing maintenance of the source files with updated Postal Codes^{OM} from Canada Post Corporation (CPC), updated health regions, and other updated coding as required. Updates to each revision are described in the *Version updates* section of this reference manual.

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 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.

Geographic coordinates included in PCCF+ source files are either from the PCCF, from the Geographic Attribute File, or from FSA$^{©}$ centroids. Postal Code^{OM} geographic coordinates (latitude and longitude) assigned to Postal Codes^{OM} are taken from the PCCF flat file. Where Postal Codes^{OM} are incompletely coded, coordinates are taken from dissemination block, dissemination area, or FSA$^{©}$ centroids, each calculated from the corresponding geographic product.

For more information on the method used to calculate representative points, see the documentation for the PCCF.

Attribute accuracy

Attribute accuracy refers to the accuracy of the quantitative and qualitative information attached to each feature (such as population for a population centre, street name, census subdivision name and code).

The PCCF+ produces a flat file that includes data elements from the PCCF, geographic attribute file, health region boundaries, and other correspondence files. For some Postal Codes^{OM} there is not a one-to-one match to geographic attributes. In these cases, possible matches are drawn either through population-weighting or via a random selection process. For more details see the *Technical specifications* section.

Tests are run to ensure that certain basic data relationships were consistent within the set of records in the PCCF+.

Logical consistency

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

In some cases, especially in rural areas, the Postal Code^{OM} service areas do not respect dissemination area boundaries. These multiple records for a Postal Code^{OM} reflect the relationship between the Postal Code^{OM} and census geographic areas. Also, a Postal Code^{OM} can be linked to

more than one block-face or dissemination block within the same dissemination area. The PCCF+ uses several methods to geocode Postal Codes^{OM} with multiple matches, using either a population-weighting or a random allocation approach. Details of these methods are outlined in the *Technical specifications* section.

Consistency with other products

The Postal Code^{OM} Conversion File Plus (PCCF+) maintains consistency with several other Statistics Canada products. These include:

- Postal Code^{OM} Conversion File (PCCF)
- Geographic Attribute File (GAF)
- 2011 Census Forward Sortation Area Boundary File
- Health Region Boundaries
- Canada Post Air Stage Offices
- Correspondence files for standard geographical identifiers

The PCCF+ is updated regularly to reflect changes to these products, with details of updates provided in the *Version updates* section.

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.

Completeness for the PCCF+ is the degree to which all potential Postal Codes^{OM} are accounted for and all geographic codes and attributes are linked to a geocoded Postal Code^{OM}. The PCCF+ combines all active Postal Codes^{OM} as well as all retired Postal Codes^{OM} within the geocoding process.

Indicators are provided on geocoded output for the quality of links, the precision of geographic coordinates, and other flags for errors and warnings. The details of these codes are provided in the *Technical specifications* section.

Appendix A: Glossary

Adjusted counts

'Adjusted counts' refer to previous census population and dwelling counts that were adjusted (i.e., recompiled) to reflect current census boundaries, when a boundary change occurs between the two censuses.

Block-face

A block-face is one side of a street between two consecutive features intersecting that street. The features can be other streets or boundaries of standard geographic areas.

Block-faces are used for generating block-face representative points, which in turn are used for geocoding and census data extraction when the street and address information are available.

Census agricultural region

Census agricultural regions (CARs) are composed of groups of adjacent census divisions. In Saskatchewan, census agricultural regions are made up of groups of adjacent census consolidated subdivisions, but these groups do not necessarily respect census division boundaries.

Census consolidated subdivision

A census consolidated subdivision (CCS) is a group of adjacent census subdivisions. Generally, the smaller, more densely-populated census subdivisions (towns, villages, etc.) are combined with the surrounding, larger, more rural census subdivision, in order to create a geographic level between the census subdivision and the census division.

Census division

Census division is the general term for provincially legislated areas (such as county, *municipalité régionale de comté* and regional district) or their equivalents. Census divisions are intermediate geographic areas between the province/territory level and the municipality (census subdivision).

Census metropolitan area and census agglomeration

A census metropolitan area (CMA) or a census agglomeration (CA) is formed by one or more adjacent municipalities centred on a population centre (known as the core). A CMA must have a total population of at least 100,000 of which 50,000 or more must live in the core. A CA must have a core population of at least 10,000. To be included in the CMA or CA, other adjacent municipalities must have a high degree of integration with the core, as measured by commuting flows derived from previous census place of work data.

If the population of the core of a CA declines below 10,000, the CA is retired. However, once an area becomes a CMA, it is retained as a CMA even if its total population declines below 100,000 or the population of its core falls below 50,000. Small population centres with a population count of less than 10,000 are called fringe. All areas inside the CMA or CA that are not population centres are rural areas.

When a CA has a core of at least 50,000, it is subdivided into census tracts. Census tracts are maintained for the CA even if the population of the core subsequently falls below 50,000. All CMAs are subdivided into census tracts.

Census metropolitan influenced zone

The census **m**etropolitan **i**nfluenced **z**one (MIZ) is a concept that geographically differentiates the area of Canada outside census metropolitan areas (CMAs) and census agglomerations (CAs). Census subdivisions (CSDs) within provinces that are outside CMAs and CAs are assigned to one of four categories according to the degree of influence (strong, moderate, weak or no influence) that the CMAs or CAs have on them. CSDs within the territories that are outside CAs are assigned to a separate category.

Census subdivisions within provinces are assigned to a MIZ category based on the percentage of their resident employed labour force that commutes to work in the core(s) of CMAs or CAs. CSDs with the same degree of influence tend to be clustered. They form zones around CMAs and CAs that progress through the categories from 'strong' to 'no' influence as distance from the CMAs and CAs increases. As many CSDs in the territories are very large and sparsely populated, the commuting flow of the resident employed labour force is unstable. For this reason, CSDs in the territories that are outside CAs are assigned to a separate category that is not based on their commuting flows.

Census subdivision

Census subdivision (CSD) is the general term for municipalities (as determined by provincial/territorial legislation) or areas treated as municipal equivalents for statistical purposes (e.g., Indian reserves, Indian settlements and unorganized territories).

Census tract

Census tracts (CTs) are small, relatively stable geographic areas that usually have a population between 2,500 and 8,000 persons. They are located in census metropolitan areas and in census agglomerations that had a core population of 50,000 or more in the previous census.

A committee of local specialists (for example, planners, health and social workers, and educators) initially delineates census tracts in conjunction with Statistics Canada. Once a census metropolitan area (CMA) or census agglomeration (CA) has been subdivided into census tracts, the census tracts are maintained even if the core population subsequently declines below 50,000.

Coordinate system

A coordinate system is a reference system based on mathematical rules for specifying positions (locations) on the surface of the earth. The coordinate values can be spherical (latitude and longitude) using angular units of measure such as degrees, minutes and seconds or planar (Lambert conformal conic) using linear units such as metres.

Cartographic boundary files, digital boundary files, representative points and road network files are disseminated in Lambert conformal conic projection.

Core, fringe and rural area

The terms 'core,' 'fringe' and 'rural area' replace the terms 'urban core,' 'urban fringe' and 'rural fringe' for the 2011 Census. These terms distinguish between population centres (POPCTRs) and rural areas (RAs) within a census metropolitan area (CMA) or census agglomeration (CA).

A CMA or CA can have two types of cores: the core and the secondary core. The core is the population centre with the highest population, around which a CMA or a CA is delineated. The core must have a population (based on the previous census) of at least 50,000 persons in the case of a CMA, or at least 10,000 persons in the case of a CA.

The secondary core is a population centre within a CMA that has at least 10,000 persons and was the core of a CA that has been merged with an adjacent CMA.

The term 'fringe' includes all population centres within a CMA or CA that have less than 10,000 persons and are not contiguous with the core or secondary core.

All territory within a CMA or CA that is not classified as a core or fringe is classified as rural area.

Datum

A datum is a geodetic reference system which includes an ellipsoid and an origin against which the latitude and longitude of all other points on the earth's surface are referenced. A datum may often be associated with a particular ellipsoid (mathematical reference model of the earth).

Designated place

A designated place (DPL) is normally a small community or settlement that does not meet the criteria established by Statistics Canada to be a census subdivision (an area with municipal status) or a population centre.

Designated places are created by provinces and territories, in cooperation with Statistics Canada, to provide data for submunicipal areas.

Dissemination area

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

Dissemination block

A dissemination block (DB) is an area bounded on all sides by roads and/or boundaries of standard geographic areas. The dissemination block is the smallest geographic area for which population and dwelling counts are disseminated. Dissemination blocks cover all the territory of Canada.

Economic region

An economic region (ER) is a grouping of complete census divisions (CDs) (with one exception in Ontario) created as a standard geographic unit for analysis of regional economic activity.

Ecumene

Ecumene is a term used by geographers to mean inhabited land. It generally refers to land where people have made their permanent home, and to all work areas that are considered occupied and used for agricultural or any other economic purpose. Thus, there can be various types of ecumenes, each having its own unique characteristics (population ecumene, agricultural ecumene, industrial ecumene, etc.).

Federal electoral district

A federal electoral district (FED) is an area represented by a member of the House of Commons. The federal electoral district boundaries used for the 2011 Census are based on the 2003 Representation Order.

Geocoding

Geocoding is the process of assigning geographic identifiers (codes or x,y coordinates) to map features and data records. The resulting geocodes permit data to be linked geographically to a place on the earth.

Households, Postal Codes^{OM} and place of work data are linked to block-face representative points (coordinates) when the street and address information is available; otherwise, they are linked to dissemination block (DB) representative points. In some cases, Postal Codes^{OM} and place of work data are linked to dissemination area (DA) representative points when they cannot be linked to DBs. As well, place of work data are linked to census subdivision representative points when the data cannot be linked to DAs.

Geographic code

A geographic code is a numerical identifier assigned to a geographic area. The code is used to identify and access standard geographic areas for the purposes of data storage, retrieval and display.

Geographic reference date

The geographic reference date is a date determined by Statistics Canada for the purpose of finalizing the geographic framework for which census data will be collected, tabulated and reported. For the 2011 Census, the geographic reference date is January 1, 2011.

Geographical region of Canada

The geographical regions of Canada are groupings of provinces and territories established for the purpose of statistical reporting. The six geographical regions of Canada are: Atlantic, Quebec, Ontario, Prairies, British Columbia and Territories.

Land area

Land area is the area in square kilometres of the land-based portions of standard geographic areas. Land area data are unofficial and are provided for the sole purpose of calculating population density.

Map projection

A map projection is the process of transforming and representing positions from the earth's three-dimensional curved surface to a two-dimensional (flat) surface. The process is accomplished by a direct geometric projection or by a mathematically derived transformation.

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.

National Geographic Database

The National Geographic Database (NGD) is a shared database between Statistics Canada and Elections Canada. The database contains roads, road names and address ranges. It also includes separate reference layers containing physical and cultural features, such as hydrography and hydrographic names, railroads and power transmission lines.

Place name

'Place name' refers to selected names of active and retired geographic areas as well as names from the Canadian Geographical Names Data Base. Place names include names of census subdivisions (municipalities), designated places and population centres, as well as the names of some local places.

Population centre

A population centre (POPCTR) has a population of at least 1,000 and a population density of 400 persons or more per square kilometre, based on the current census population count. All areas outside population centres are classified as rural areas. Taken together, population centres and rural areas cover all of Canada.

Population centres are classified into three groups, depending on the size of their population:

small population centres, with a population between 1,000 and 29,999

medium population centres, with a population between 30,000 and 99,999

large urban population centres, with a population of 100,000 or more

Population centre population includes all population living in the cores, secondary cores and fringes of census metropolitan areas (CMAs) and census agglomerations (CAs), as well as the population living in population centres outside CMAs and CAs.

Population density

Population density is the number of persons per square kilometre.

Postal Code^{OM}

The Postal Code^{OM} is a six-character code defined and maintained by Canada Post Corporation for the purpose of sorting and delivering mail.

Province or territory

'Province' and 'territory' refer to the major political units of Canada. From a statistical point of view, province and territory are basic areas for which data are tabulated. Canada is divided into

10 provinces and 3 territories.

Reference map

A reference map shows the location of the geographic areas for which census data are tabulated and disseminated. The maps display the boundaries, names and unique identifiers of standard geographic areas, as well as major cultural and physical features, such as roads, railroads, coastlines, rivers and lakes.

Representative point

A representative point is a coordinate point that represents a line or a polygon. The point is centrally located along the line, and centrally located or population weighted in the polygon.

Representative points are generated for block-faces, as well as for selected geographic areas – province/territory (PR), federal electoral district (FED), economic region (ER), census division (CD), census metropolitan area/census agglomeration (CMA/CA), census subdivision (CSD), population centre (POPCTR), designated place (DPL), census tract (CT), dissemination area (DA) and dissemination block (DB).

Households, Postal Codes^{OM} and place of work data are linked to block-face representative points (coordinates) when the street and address information is available; otherwise, they are linked to dissemination block (DB) representative points. In some cases, Postal Codes^{OM} and place of work data are linked to dissemination area (DA) representative points when they cannot be linked to DBs. As well, place of work data are linked to census subdivision (CSD) representative points when the data cannot be linked to DAs.

Rural area

Rural areas (RAs) include all territory lying outside population centres (POPCTRs). Taken together, population centres and rural areas cover all of Canada.

Rural population includes all population living in rural areas of census metropolitan areas (CMAs) and census agglomerations (CAs), as well as population living in rural areas outside CMAs and CAs.

Spatial Data Infrastructure

The Spatial Data Infrastructure (SDI) is an internal maintenance database that is not disseminated outside of Statistics Canada. It contains roads, road names and address ranges from the National Geographic Database (NGD), as well as boundary arcs of standard geographic areas that do not follow roads, all in one integrated line layer. The database also includes a related polygon layer consisting of basic blocks (BB; basic blocks are the smallest polygon units in the database, and are formed by the intersection of all roads and the arcs of geographic areas that do not follow roads), boundary layers of standard geographic areas, and derived attribute tables, as well as reference layers containing physical and cultural features (such as hydrography, railroads and power transmission lines) from the NGD.

The SDI supports a wide range of census operations, such as the maintenance and delineation of the boundaries of standard geographic areas (including the automated delineation of dissemination blocks and population centres) and geocoding. The SDI is also the source for generating many geography products for the 2011 Census, such as cartographic boundary files and road network files.

Spatial data quality elements

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

Standard Geographical Classification

The Standard Geographical Classification (SGC) 2011 is Statistics Canada's main classification of geographic areas in Canada. It is designed to classify statistical information by geographic areas. The classification consists of four levels: geographical regions of Canada, provinces and territories, census divisions (such as counties and regional municipalities) and census subdivisions (such as municipalities). The four geographic levels are hierarchically related; a seven-digit code is used to show this relationship.

Statistical Area Classification

The Statistical Area Classification (SAC) groups census subdivisions according to whether they are a component of a census metropolitan area, a census agglomeration or a census **m**etropolitan **i**nfluenced **z**one (MIZ). The MIZ classifies all CSDs in provinces and territories that are outside census metropolitan areas and census agglomerations.

The Statistical Area Classification is a variant of the Standard Geographical Classification (SGC). Census subdivisions (CSDs) form the lowest level of the classification variant. The next level consists of individual census metropolitan areas (CMAs), census agglomerations (CAs) and census metropolitan influenced zones (MIZs). The highest level consists of three categories that cover all of the land mass of Canada:

- Census metropolitan areas
- Census agglomerations
- Outside census metropolitan areas and census agglomerations.

The SAC provides unique numeric identification (codes) for these hierarchically-related geographic areas. It was established for the purpose of reporting statistics.

Thematic map

A thematic map shows the spatial distribution of one or more specific data themes for selected geographic areas. The map may be qualitative in nature (e.g., predominant farm types) or quantitative (e.g., percentage population change).

Appendix B: Record Layouts for PCCF+ input/output files

PCCF+ output file (HLTHOUT)

B.1: Output file produced from PCCF+ geocoding.

Position	Size	Type	Field Name	Description
1	15	C	ID	User-supplied unique identifier
16	6	C	PCODE	Postal Code^{OM}
22	8	C	DAuid	Dissemination area unique identifier
30	2	C	DB	Dissemination block code
32	1	C	DB_ir2011	2011 Census Indian reserve refusal flag
33	7	C	CSDuid	Census Subdivision unique identifier
40	55	C	CSDname	Census Subdivision name
95	5	C	CMAPuid	Census Metropolitan/Agglomeration Area unique identifier
100	1	C	CMAtype	Census Metropolitan Area type
101	100	C	CMAname	Census Metropolitan/Agglomeration Area name
201	7	C	CTname	Census tract name
208	1	C	Tracted	Flag for tracted / non-tracted area
209	3	C	SAC	Statistical Area Classification code (includes census metropolitan / agglomeration area)
212	1	C	SACtype	Statistical Area Classification type (includes census metropolitan / agglomeration area)
213	7	C	CCSuid	Census Consolidated Subdivision code
220	5	C	FEDuid	Federal electoral district (2003) unique identifier
225	85	C	FEDname	Federal electoral district name
310	6	C	DPLuid	Designated place identifier
316	3	C	DPLtype	Designated place type
319	85	C	DPLname	Designated place name
404	4	C	ERuid	Economic Region identifier
408	85	C	ERname	Economic Region name
493	4	C	CARuid	Census Agricultural Region identifier
497	50	C	CARname	Census Agricultural Region name
547	6	C	PopCtrRAPuid	Population centre/rural area code
553	100	C	PopCtrRAname	Population centre/rural area name
653	1	C	PopCtrRAtype	Population centre/rural area type
654	1	C	PopCtrRAclass	Population centre/rural area classification
655	1	C	CSize	Community size code (2011 census metropolitan / agglomeration area population)
656	1	C	CSizeMIZ	Urban census metropolitan / agglomeration area size and rural MIZ code
657	4	C	HRuid	Health Region unique identifier
661	60	C	HRename	Health Region name (English)
721	60	C	HRfname	Health Region name (French)
781	4	C	SubHRuid	Health Subregion unique identifier
785	60	C	SubHRename	Health Subregion name (English)
845	60	C	SubHRfname	Health Subregion name (French)
905	1	C	SLI	Single link indicator
906	1	C	Rep_Pt_type	Representative point type (PCCF)
907	1	C	RPF	Representative point flag (PCCF+)
908	1	C	PCtype	Postal Code^{OM} type
909	1	C	DMT	Delivery mode type
910	1	C	H_DMT	Historic delivery mode type
911	1	C	DMTDIFF	Previous or alternate DMT (if applicable)
912	1	C	PO	Delivery installation
913	3	C	QI	Quality indicator
916	8	N	Lat	Latitude of lowest level geographic area

Position	Size	Type	Field Name	Description
924	8	N	Long	Longitude of lowest level geographic area
932	1	C	Source	Source of Postal Code^{OM} geocoding (PCCF)
933	1	C	Link_Source	Source of geographic coding (PCCF+)
934	1	C	Link	Link type
935	1	C	Prec	Precision
936	30	C	Comm_Name	Canada Post community name
966	1	C	AirLift	Canada Post air stage community
967	1	C	InstFlag	Institutional flag
968	1	C	Resflag	Residence flag (for Postal Codes^{OM} DMT=E,G,M)
969	1	C	Hosp	Hospital Postal Code^{OM} flag
970	1	C	InuitFlag	Coding for Inuit Nunangat land claims regions
971	8	N	QAIPPE	Neighbourhood income quintile (within census metropolitan / agglomeration area)
979	8	N	QNIPPE	Neighbourhood income quintile (national)
987	8	N	DAIPPE	Dissemination area income quintile (within census metropolitan / agglomeration area)
995	8	N	DNIPPE	Dissemination area income quintile (national)
1003	8	N	IMMTER	Immigrant (foreign-born) tercile (national)
1011	8	C	DA06uid	2006 dissemination area identifier correspondence
1019	10	C	DB06uid	2006 dissemination block identifier correspondence
1029	8	C	DA01uid	2001 dissemination area identifier correspondence
1037	8	C	EA96uid	1996 enumeration area identifier correspondence
1045	8	C	EA91uid	1991 enumeration area identifier correspondence
1053	8	C	EA86uid	1986 enumeration area identifier correspondence
1061	8	C	EA81uid	1981 enumeration area identifier correspondence

PCCF+ output problem file (GEOPROB)

B.2: Output file produced for problem records

Position	Size	Type	Field Name	Description
1	15	C	ID	User-supplied unique identifier
16	6	C	PCODE	Postal Code^{OM}
22	80	C	MESSAGE	Error, warning, or note on problem record
102	1	C	SLI	Single link indicator
103	1	C	Rep_Pt_Type	Representative point type
104	1	C	RPF	Representative point flag
105	1	C	PCtype	Postal Code^{OM} type
106	1	C	DMT	Delivery mode type
107	1	C	H_DMT	Historic delivery mode type
108	1	C	DMTDIFF	Previous or alternate DMT (if applicable)
109	1	C	PO	Delivery installation
110	3	C	QI	Quality indicator
113	1	C	Source	Source of Postal Code^{OM} geocoding (PCCF)
114	1	C	Link_Source	Source of geographic coding (PCCF+)
115	1	C	Link	Link type
116	1	C	Prec	Geographic coding precision (0=least precise, 9=most precise) (PCCF+)

Position	Size	Type	Field Name	Description
117	8	C	DAuid	Dissemination area unique identifier
125	2	C	DB	Dissemination block code
127	1	C	DB_ir2011	2011 Census Indian reserve refusal flag
128	7	C	CSDuid	Census subdivision unique identifier
135	55	C	CSDname	Census subdivision name
190	5	C	CMAPuid	Census metropolitan/agglomeration area unique identifier
195	100	C	CMAname	Census metropolitan/agglomeration area name
295	7	C	CTname	Census tract name
302	1	C	InstFlag	Institutional flag
303	1	C	ResFlag	Residence flag (for Postal Codes[OM] DMT=E,G,M)
304	8	N	nCSD	Number of CSDs for each Postal Code[OM] (1-9+)
312	60	C	BldgName	Building name and address
372	8	N	NumAdr	Number of address ranges at this Postal Code[OM]

Air stage office (AIRSTAGE)

B.3: CPC airstage delivery list (6+ months per year)

Position	Size	Type	Field Name	Description
1	6	C	PCODE	Postal Code[OM]
7	2	C	PR	Province
9	30	C	Comm_Name	Canada Post community name

Building name and addresses (BLDGNAM)

B.4: Building names and addresses (non-residential) for manual resolution.

Position	Size	Type	Field Name	Description
2	3	N	NumAdr	Number of address ranges at this Postal Code[OM]
5	1	N	Hosp	Indication of hospital, health centre, etc…
6	6	C	PCODE	Postal Code[OM]
13	1	C	DMT	Delivery Mode Type (DMT)
15	97	C	NameAdr	Building name and address
112	26	C	City	City name
139	2	C	PR	Province

Residential Postal Code[OM] file (EGMRES)

B.5: Flag for possible residential Postal Code[OM] despite institutional type

Position	Size	Type	Field Name	Description
1	6	C	PCODE	Postal Code[OM]
7	1	C	ResFlag	Flag for primarily residential
8	1	C	Hosp	Hospital, health centre, etc…
9	1	C	DMT	Delivery Mode Type
10	60	C	BldgName	Building Name

Institutional flag (INSTFLAG)

B.6: Flag for potential institutional or business Postal Codes[OM].

Position	Size	Type	Field Name	Description
1	10	C	DBuid	Dissemination block unique identifier
12	1	C	InstFlag	Flag for primarily institutional Postal Codes[OM]

Address range file

B.7: Number of address records for each Postal Code^{OM}.

Position	Size	Type	Field Name	Description
1	6	C	PCODE	Postal Code^{OM}
8	1	C	DMT	Delivery Mode Type
9	3	N	NumAdr	Number of address ranges per Postal Code^{OM}

British Columbia old FSA file (BCVUNIQ)

B.8: British Columbia Postal Codes^{OM} moved by CPC in mid 1990s.

Position	Size	Type	Field Name	Description
1	6	C	PCODE	Postal Code^{OM}
7	3	C	FSA	Forward Sortation Area
10	2	C	PR	Province code
12	4	C	CDuid	Census Division unique identifier
14	2	C	CD	Census Division code
16	7	C	CSDuid	Census Subdivision unique identifier
23	70	C	CSDname	Census Subdivision name
93	3	C	CSDtype	Census Subdivision type
96	3	C	CCScode	Census Consolidated Subdivision code
99	3	C	SAC	Statistical Area Classification code (includes census metropolitan / agglomeration area)
102	1	C	SACtype	Statistical Area Classification type (includes census metropolitan / agglomeration area)
103	7	C	CTname	Census Tract name
110	2	C	ERuid	Economic Region identifier
112	4	C	DPLuid	Designated Place identifier
116	5	C	FEDuid	Federal Electoral District (2003) unique identifier
121	4	C	POP_CNTR_RA	Population centre/rural area code
125	1	C	POP_CNTR_RA_type	Population centre/rural area type
126	8	C	DAuid	Dissemination area unique identifier
130	4	C	DA	Dissemination area code
134	2	C	DB	Dissemination block code
136	1	C	Rep_Pt_Type	Representative Point Type
137	9.6	N	LAT	Latitude of lowest level geographic area
148	11.6	N	LONG	Longitude of lowest level geographic area
161	1	C	SLI	Single Link Indicator
162	1	C	PCtype	Postal Code^{OM} type
163	30	C	Comm_Name	Canada Post Community Name
193	1	C	DMT	Delivery Mode Type
194	1	C	H_DMT	Historic Delivery Mode Type
195	1	C	DMTDIFF	Previous or alternate DMT (if applicable)
196	8	C	Birth_Date	Birth date of Postal Code^{OM} (yyyymmdd)
204	8	C	Ret_Date	Retirement date of Postal Code^{OM} (yyyymmdd)
212	1	C	PO	Delivery installation
213	3	C	QI	Quality indicator
216	1	C	Source	Source of Postal Code^{OM} geocoding (PCCF)
217	1	C	POP_CNTR_RA _SIZE_CLASS	Population centre/rural area classification

PCCF+ duplicates file (PCCFDUPS)

B.9: Duplicate Postal Codes^{OM} from PCCF.

Position	Size	Type	Field Name	Description
1	6	C	PCODE	Postal Code^{OM}
7	3	C	FSA	Forward Sortation Area
10	2	C	PR	Province code
12	4	C	CDuid	Census Division unique identifier
14	2	C	CD	Census Division code
16	7	C	CSDuid	Census Subdivision unique identifier
23	70	C	CSDname	Census Subdivision name
93	3	C	CSDtype	Census Subdivision type
96	3	C	CCScode	Census Consolidated Subdivision code
99	3	C	SAC	Statistical Area Classification code (includes census metropolitan / agglomeration area)
102	1	C	SACtype	Statistical Area Classification type (includes census metropolitan / agglomeration area)
103	7	C	CTname	Census Tract name
110	2	C	ERuid	Economic Region identifier
112	4	C	DPLuid	Designated Place identifier
116	5	C	FEDuid	Federal Electoral District (2003) unique identifier
121	4	C	POP_CNTR_RA	Population centre/rural area code
125	1	C	POP_CNTR_RA_type	Population centre/rural area type
126	8	C	DAuid	Dissemination area unique identifier
130	4	C	DA	Dissemination area code
134	2	C	DB	Dissemination block code
136	1	C	Rep_Pt_Type	Representative Point Type
137	9.6	N	LAT	Latitude of lowest level geographic area
148	11.6	N	LONG	Longitude of lowest level geographic area
161	1	C	SLI	Single Link Indicator
162	1	C	PCtype	Postal Code^{OM} type
163	30	C	Comm_Name	Canada Post Community Name
193	1	C	DMT	Delivery Mode Type
194	1	C	H_DMT	Historic Delivery Mode Type
195	1	C	DMTDIFF	Previous or alternate DMT (if applicable)
196	8	C	Birth_Date	Birth date of Postal Code^{OM} (yyyymmdd)
204	8	C	Ret_Date	Retirement date of Postal Code^{OM} (yyyymmdd)
212	1	C	PO	Delivery installation
213	3	C	QI	Quality indicator
216	1	C	Source	Source of Postal Code^{OM} geocoding (PCCF)
217	1	C	POP_CNTR_RA_ SIZE_CLASS	Population centre/rural area classification
218	1	N	nCD	Number of census divisions for each Postal Code^{OM} (1-9+)
219	1	N	nCSD	Number of census subdivisions for each Postal Code^{OM} (1-9+)
220	1	N	nDA	Number of dissemination areas for each Postal Code^{OM} (1-9+)

Duplicate pointer file (POINTDUP)

B.10: Pointer file for duplicate Postal Codes^{OM}.

Position	Size	Type	Field Name	Description
1	6	C	PCODE	Postal Code^{OM}
7	4	N	nPCODE	Number of records for this Postal Code^{OM}
11	8	N	ObsDup	Observation number for first occurrence on duplicates file

Rural Post Office (RPO)

B.11: Coding for rural post offices.

Position	Size	Type	Field Name	Description
1	6	C	PCODE	Postal Code^{OM}
7	3	C	FSA	Forward Sortation Area (FSA$^{©}$)
10	2	C	PR	Province code
12	4	C	CDuid	Census Division unique identifier
14	2	C	CD	Census Division code
16	7	C	CSDuid	Census Subdivision unique identifier
23	70	C	CSDname	Census Subdivision name
93	3	C	CSDtype	Census Subdivision type
96	3	C	CCScode	Census Consolidated Subdivision code
99	3	C	SAC	Statistical Area Classification code (includes census metropolitan / agglomeration area)
102	1	C	SACtype	Statistical Area Classification type (includes census metropolitan / agglomeration area)
103	7	C	CTname	Census Tract name
110	2	C	ERuid	Economic Region identifier
112	4	C	DPLuid	Designated Place identifier
116	5	C	FEDuid	Federal Electoral District (2003) unique identifier
121	4	C	POP_CNTR_RA	Population centre/rural area code
125	1	C	POP_CNTR_RA_type	Population centre/rural area type
126	8	C	DAuid	Dissemination area unique identifier
130	4	C	DA	Dissemination area code
134	2	C	DB	Dissemination block code
136	1	C	Rep_Pt_Type	Representative Point Type
137	9.6	N	LAT	Latitude of lowest level geographic area
148	11.6	N	LONG	Longitude of lowest level geographic area
161	1	C	SLI	Single Link Indicator
162	1	C	PCtype	Postal Code^{OM} type
163	30	C	Comm_Name	Canada Post Community Name
193	1	C	DMT	Delivery Mode Type
194	1	C	H_DMT	Historic Delivery Mode Type
195	1	C	DMTDIFF	Previous or alternate DMT (if applicable)
196	8	C	Birth_Date	Birth date of Postal Code^{OM} (yyyymmdd)
204	8	C	Ret_Date	Retirement date of Postal Code^{OM} (yyyymmdd)
212	1	C	PO	Delivery installation
213	3	C	QI	Quality indicator
216	1	C	Source	Source of Postal Code^{OM} geocoding (PCCF)
217	1	C	POP_CNTR_RA _SIZE_CLASS	Population centre/rural area classification

Unique Postal Codes^{OM} (PCCFUNIQ)

B.12: Unique Postal Codes^{OM}.

Position	Size	Type	Field Name	Description
1	6	C	PCODE	Postal Code^{OM}
7	3	C	FSA	Forward Sortation Area
10	2	C	PR	Province code
12	4	C	CDuid	Census Division unique identifier
14	2	C	CD	Census Division code
16	7	C	CSDuid	Census Subdivision unique identifier
23	70	C	CSDname	Census Subdivision name
93	3	C	CSDtype	Census Subdivision type
96	3	C	CCScode	Census Consolidated Subdivision code
99	3	C	SAC	Statistical Area Classification code (includes census metropolitan / agglomeration area)
102	1	C	SACtype	Statistical Area Classification type (includes census metropolitan / agglomeration area)
103	7	C	CTname	Census Tract name
110	2	C	ERuid	Economic Region identifier
112	4	C	DPLuid	Designated Place identifier
116	5	C	FEDuid	Federal Electoral District (2003) unique identifier
121	4	C	POP_CNTR_RA	Population centre/rural area code
125	1	C	POP_CNTR_RA_type	Population centre/rural area type
126	8	C	DAuid	Dissemination area unique identifier
130	4	C	DA	Dissemination area code
134	2	C	DB	Dissemination block code
136	1	C	Rep_Pt_Type	Representative Point Type
137	9.6	N	LAT	Latitude of lowest level geographic area
148	11.6	N	LONG	Longitude of lowest level geographic area
161	1	C	SLI	Single Link Indicator
162	1	C	PCtype	Postal Code^{OM} type
163	30	C	Comm_Name	Canada Post Community Name
193	1	C	DMT	Delivery Mode Type
194	1	C	H_DMT	Historic Delivery Mode Type
195	1	C	DMTDIFF	Previous or alternate DMT (if applicable)
196	8	C	Birth_Date	Birth date of Postal Code^{OM} (yyyymmdd)
204	8	C	Ret_Date	Retirement date of Postal Code^{OM} (yyyymmdd)
212	1	C	PO	Delivery installation
213	3	C	QI	Quality indicator
216	1	C	Source	Source of Postal Code^{OM} geocoding (PCCF)
217	1	C	POP_CNTR_RA _SIZE_CLASS	Population centre/rural area classification

Postal Code^{OM} geography, 2-character (WC2GEOG)

B.13: Geography associated with first 2 characters of FSA.

Position	Size	Type	Field Name	Description
1	2	C	FSA2	First two characters of FSA$^{©}$
4	5	N	nPCODE	Number of Postal Codes^{OM} in 2-character FSA$^{©}$ portion
10	3	C	CMA	Most common census metropolitan / agglomeration area at FSA portion
14	5.1	N	pFSACMA	Percent of FSA$^{©}$ Postal Codes^{OM} at that census metropolitan / agglomeration area
20	4	C	CDuid	Most common census division at FSA$^{©}$ portion

Position	Size	Type	Field Name	Description
25	5.1	N	pFSACD	Percent of FSA© Postal Codes^{OM} at that census metropolitan / agglomeration area
31	7	C	CSDuid	Most common census subdivision at FSA© portion
39	5.1	N	pFSACSD	Percent of FSA© Postal Codes^{OM} at that CSD
44	3	C	CMA2	Second most common census metropolitan / agglomeration area at FSA© portion
47	5.1	N	pFSACMA2	Percent of FSA© Postal Codes^{OM} at that census metropolitan / agglomeration area
52	4	C	CDuid2	Second most common census division at that FSA© portion
56	5.1	N	pFSACD2	Percent of FSA© Postal Codes^{OM} at that census division
61	7	C	CSDuid2	Second most common census subdivision at that FSA© portion
68	5.1	N	pFSACSD2	Percent of FSA© Postal Codes^{OM} at that census subdivision
73	1	C	Tracted	Whether the majority of census tract within the FSA© portion are tracted

Forward Sortation Area duplicates (WC3DUPS)

B.14: Weighting for first 3 characters of Postal Code^{OM} (FSA).

Position	Size	Type	Field Name	Description
1	3	C	FSA	Forward Sortation Area
7	10	C	DBuid	Dissemination block unique identifier
17	4	N	DBpop2011	2011 Census dissemination block population
21	7	C	CSDuid	Census Subdivision unique identifier
28	3	C	SAC	Statistical Area Classification type
31	7	C	CTname	Census Tract name
38	1	C	Tracted	Within tracted census metropolitan / agglomeration area
39	4	C	DPL	Designated Place code
43	5	C	FEDuid	Federal Electoral District unique identifier (2003)
48	9.6	N	LAT	Latitude of FSA© centroid
59	11.6	N	LONG	Longitude of FSA© centroid

Forward Sortation Area pointers (WC3POINT)

B.15: Pointer for 3-character weighting file (FSA).

Position	Size	Type	Field Name	Description
1	6	C	FSA	Forward Sortation Area
7	7	N	FirstObs	Pointer for first observation on wc3dups
14	5	N	nOBS	Total number of observations for FSA©
19	1	N	nCD	Number of census divisions in FSA©
20	1	N	nCSD	Number of census subdivisions in FSA©
21	6	N	FSApop	Population of FSA©

Forward Sortation Area geography (WC3GEOG)

B.16: Geography associated with FSA.

Position	Size	Type	Field Name	Description
1	3	C	FSA	Forward Sortation Area
4	5	N	nPCODE	Number of Postal Codes^{OM} in FSA$^{©}$
10	3	C	CMA	Most common census metropolitan / agglomeration area at FSA$^{©}$
14	5.1	N	pFSACMA	Percent of FSA$^{©}$ Postal Codes^{OM} at that census metropolitan / agglomeration area
20	4	C	CDuid	Most common census division at FSA$^{©}$
25	5.1	N	pFSACD	Percent of FSA$^{©}$ Postal Codes^{OM} at that census metropolitan / agglomeration area
31	7	C	CSDuid	Most common census subdivision at FSA$^{©}$
39	5.1	N	pFSACSD	Percent of FSA$^{©}$ Postal Codes^{OM} at that CSD
45	9.6	C	LAT	Latitude of FSA$^{©}$ centroid
54	11.6	N	LONG	Longitude of FSA$^{©}$ centroid
65	3	C	CMA2	Second most common census metropolitan / agglomeration area at FSA$^{©}$
68	5.1	N	pFSACMA2	Percent of FSA$^{©}$ Postal Codes^{OM} at that census metropolitan / agglomeration area
73	4	C	CDuid2	Second most common census division at that FSA$^{©}$
77	5.1	N	pFSACD2	Percent of FSA$^{©}$ Postal Codes^{OM} at that census division
82	7	C	CSDuid2	Second most common census subdivision at that FSA$^{©}$
89	5.1		pFSACSD2	Percent of FSA$^{©}$ Postal Codes^{OM} at that census subdivision
94	1		Tracted	Whether the majority of CT within the FSA$^{©}$ are tracted

Postal Code^{OM} duplicates, 4-character (WC4DUPS)

B.17: Weighting for first 4 characters of Postal Code^{OM}.

Position	Size	Type	Field Name	Description
1	4	C	PCODE4	4-character Postal Code^{OM} portion
7	8	C	DAuid	Dissemination area unique identifier
15	7	C	CSDuid	Census subdivision unique identifier
22	3	C	SAC	Statistical Area Classification
25	7	C	CTname	Census Tract name
32	1	C	Tracted	Whether the majority of census tract within the 4-character Postal Code^{OM} are tracted
33	9.6	N	LAT	Latitude of dissemination area centroid
44	11.6	N	LONG	Longitude of dissemination area centroid
57	1	C	Rep_Pt_Type	Representative Point Type
58	1	N	nDA	Number of dissemination areas for 4-character Postal Code^{OM}
59	1	N	nCD	Number of census divisions for 4-character Postal Code^{OM}
60	1	N	nCSD	Number of census subdivisions for 4-character Postal Code^{OM}
61	3.2	N	PC4DAWT	Dissemination area level weight for 4-character Postal Code^{OM}

Postal Code^{OM} pointers, 4-character (WC4POINT)

B.18: Pointer for 4-character weighting file.

Position	Size	Type	Field Name	Description
1	4	C	PCODE4	4-character Postal Code^{OM} portion
7	7	N	FirstObs	Pointer for first observation on wc4dups
14	5	N	nOBS	Total number of observations for PCODE4
19	3.2	N	TWT	Total weight

Postal Code^{OM} duplicates, 5-character (WC5DUPS)

B.19: Weighting for first 5 characters of Postal Code^{OM}.

Position	Size	Type	Field Name	Description
1	5	C	PCODE5	5-character Postal Code^{OM} portion
7	8	C	DAuid	Dissemination area unique identifier
15	7	C	CSDuid	Census subdivision unique identifier
22	3	C	SAC	Statistical Area Classification
25	7	C	CTname	Census Tract name
32	1	C	Tracted	Whether the majority of census tract within the 5-character Postal Code^{OM} are tracted
33	9.6	N	LAT	Latitude of dissemination area centroid
44	11.6	N	LONG	Longitude of dissemination area centroid
57	1	C	Rep_Pt_Type	Representative Point Type
58	1	N	nDA	Number of dissemination areas for 5-character Postal Code^{OM}
59	1	N	nCD	Number of census divisions for 5-character Postal Code^{OM}
60	1	N	nCSD	Number of census subdivisions for 5-character Postal Code^{OM}
61	3.2	N	PC5DAWT	Dissemination area level weight for 5-character Postal Code^{OM}

Postal Code^{OM} pointers, 5-character (WC5POINT)

B.20: Pointer for 5-character weighting file.

Position	Size	Type	Field Name	Description
1	5	C	PCODE5	5-character Postal Code^{OM} portion
7	7	N	FirstObs	Pointer for first observation on wc5dups
14	5	N	nOBS	Total number of observations for PCODE5
19	3.2	N	TWT	Total weight

Postal Code^{OM} duplicates (WC6DUPS)

B.21: Weighting for Postal Code^{OM}.

Position	Size	Type	Field Name	Description
1	6	C	PCODE	Postal Code^{OM}
7	8	C	DAuid	Dissemination area unique identifier
15	7	C	CSDuid	Census subdivision unique identifier
22	3	C	SAC	Statistical Area Classification
25	7	C	CTname	Census tract name
32	1	C	Tracted	Whether the majority of census tracts within the Postal Code^{OM} are tracted
33	9.6	N	LAT	Latitude of dissemination area centroid

Position	Size	Type	Field Name	Description
44	11.6	N	LONG	Longitude of dissemination area centroid
57	1	C	DMT	Delivery Mode Type
58	1	C	H_DMT	Historic Delivery Mode Type
59	1	C	DMTDIFF	Previous DMT if different from current DMT
60	1	C	Rep_Pt_Type	Representative Point Type
61	1	C	PCtype	Postal Code^{OM} type
62	1	N	nDA	Number of dissemination areas for 5-character Postal Code^{OM}
63	1	N	nCD	Number of census divisions for 5-character Postal Code^{OM}
64	1	N	nCSD	Number of census subdivisions for 5-character Postal Code^{OM}
65	3.2	N	PC5DAWT	Dissemination area level weight for 5-character Postal Code^{OM}

Postal Code^{OM} pointers (WC6POINT)

B.22: Pointer for Postal Code^{OM} weighting file.

Position	Size	Type	Field Name	Description
1	6	C	PCODE	Postal Code^{OM}
7	7	N	FirstObs	Pointer for first observation on wc6dups
14	5	N	nOBS	Total number of observations for PCODE
19	3.2	N	TWT	Total weight
1	6	C	PCODE	Postal Code^{OM}

DA-Block pointer file (DABLKPOINT)

B.23: Pointer file for dissemination area and dissemination block file.

Position	Size	Type	Field Name	Description
1	8	C	DAuid	Dissemination area unique identifier
1	2	C	PR	Province
3	2	C	CD	Census division
5	4	C	DA	Dissemination area
9	4	N	nBLK	Number of Blocks in dissemination area
13	6	N	FirstObs	Observation of first block occurrence
19	6	N	DAPop2011	Sum of dissemination block population within dissemination area
26	3	C	SACcode	Statistical Area Classification code
30	3	C	CSD	Census subdivision

Partial geographic attribute file (GAF11)

B.24: Subset of Geographic Attribute File.

Position	Size	Type	Field Name	Description
1	10	C	DBuid	Dissemination block unique identifier
1	2	C	PR	Province or territory code
3	2	C	CD	Census division
5	4	C	DA	Dissemination area
9	2	C	BLK	Dissemination block
11	8	C	DBpop2011	Dissemination block population (rounded)
19	8	C	DBtdwell2011	Dissemination block total private dwellings
27	1	C	DB_ir2011	Indian Reserve flag

Position	Size	Type	Field Name	Description
28	8	C	DAuid	Dissemination area unique identifier
36	9.6	N	DAlat	Dissemination area latitude coordinate (decimal degrees)
45	11.6	N	DAlong	Dissemination area longitude coordinate (decimal degrees)
58	30	C	PRename	Province or territory name in English
88	30	C	PRfname	Province or territory name in French
118	5	C	FEDuid	Federal Electoral District unique identifier
123	85	C	FEDname	Federal Electoral District name
208	4	C	ERuid	Economic Region unique identifier
212	85	C	ERname	Economic Region name
297	7	C	CDuid	Census Division unique identifier
301	40	C	CDname	Census Division name
341	7	C	CSDuid	Census Sub-division unique identifier
348	55	C	CSDname	Census Sub-division name
403	1	C	SACtype	Statistical Area Classification type
404	3	C	SACcode	Statistical Area Classification code
407	7	C	CCSuid	Census Consolidated Sub-division unique identifier
414	55	C	CCSname	Census Consolidated Sub-division name
469	6	C	DPLuid	Designated Place unique identifier
475	85	C	DPLname	Designated Place name
560	3	C	DPLtype	Designated Place type
563	5	C	CMAPuid	Census Metropolitan Area unique identifier
568	100	C	CMAname	Census Metropolitan Area name
668	1	C	CMAtype	Census Metropolitan Area type
669	10	C	CTuid	Census Tract unique identifier within a census metropolitan / agglomeration area
679	4	C	CTcode	Census Tract unique identifier
683	7	C	CTname	Census Tract 7.2 character numeric 'name'
690	6	C	PopCtrRAPuid	Population Centre and Rural Area unique identifier
696	100	C	PopCtrRAname	Population Centre and Rural Area name
796	1	C	PopCtrRAtype	Population Centre and Rural Area type
797	1	C	PopCtrRAclass	Population Centre and Rural Area class
798	4	C	CARuid	Census Agricultural Area unique identifier
802	50	C	CARname	Census Agricultural Area name
852	10	C	DB06uid	Dissemination block (2006)
862	8	C	DA06uid	Dissemination area (2006)
878	8	C	EA96uid	Enumeration Area (1996)
870	8	C	DA01uid	Dissemination area (2001)
886	8	C	EA91uid	Enumeration Area (1991)
894	8	C	EA86uid	Enumeration Area (1986)
902	8	C	EA81uid	Enumeration Area (1981)
910	1	C	CSIZE	Community Size Code
911	1	C	CSIZEMIZ	Community Size with MIZ

Health region definitions (HRDEF)

B.25: Combined Health Region definitions.

Position	Size	Type	Field Name	Description
1	10	C	DBuid	Dissemination block identifier
11	8	C	DAuid	Dissemination area identifier
19	7	C	CSDuid	Census subdivision identifier
26	4	C	HRuid	Health region unique identifier

Position	Size	Type	Field Name	Description
30	60	C	HRename	Health region name (English)
90	60	C	HRfname	Health region name (French)
150	4	C	SubHRuid	Health subregion unique identifier
154	60	C	SubHRename	Health subregion name (English)
214	60	C	SubHRfname	Health subregion name (French)

SES reference file (SESREF)

B.26: Income quintiles and immigrant terciles (2006 DA identifiers).

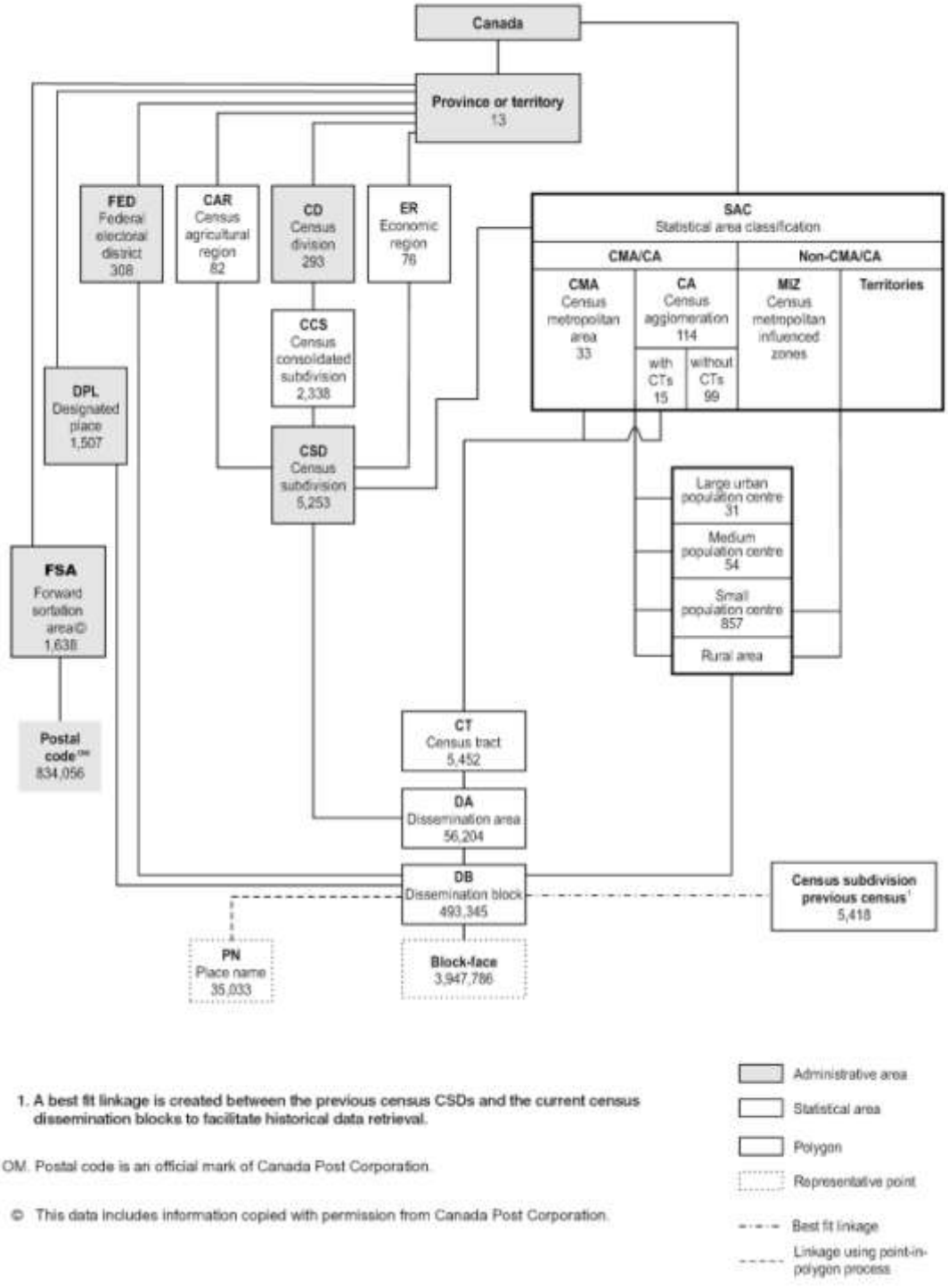
Position	Size	Type	Field Name	Description
1	8	C	DA06uid	Dissemination area identifier (2006 Census)
13	1	N	ImmTer	Tercile of foreign-born population
14	1	N	QAIPPE	Area-based income quintile
15	1	C	ImpFlag	Imputation flag for IPPE (mean household income imputed)
16	1	N	QNIPPE	National-based income quintile
18	2	N	DAIPPE	Area-based income decile
21	2	N	DNIPPE	National-based income decile

Appendix C: Supplementary programs included with PCCF+

1. **dist6a.sas** – Calculates distance between two geocoded points. This can be used to calculate distance between residential Postal Codes^{OM} (such as patients) geocoded via PCCF+ and institutional Postal Codes^{OM} (such as hospitals) geocoded via PCCF+.
2. **explode.sas** – Explodes a dataset that has only a single record per Postal Code^{OM}, but a field indicating the number of subjects at each Postal Code^{OM}.
3. **fix_pcodes.sas** – Fixes common coding errors for Postal Codes^{OM}, such as using a “0” (zero) instead of an “O”.
4. **histSESref.sas** – Codes historic income-per-person equivalents, 1981 through 2006, for geocoded records.

Appendix D: Hierarchy of standard geographic units for dissemination, 2011 Census

Figure B.1 Hierarchy of standard geographic units for dissemination, 2011 Census



Sources: Statistics Canada, 2011 Census of Population; Canada Post Corporation, May 2011.