

# **PCCF + VERSION 4D USER'S GUIDE**

**AUTOMATED GEOGRAPHIC CODING BASED ON THE  
STATISTICS CANADA POSTAL CODE CONVERSION FILES**

**INCLUDING POSTAL CODES TO DECEMBER 2003**

**by**

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## ABSTRACT

*PCCF+* Version 4 consists of a SAS control program and a series of reference files derived from the most recent Statistics Canada Postal Code Conversion File (PCCF) and a 2001 postal code population weight file (WCF). It automatically assigns a full range of geographic identifiers (down to dissemination area, block, and latitude, longitude) based on postal codes. It is consistent and logical in the way it does this. Any incorrect coding due to errors in the underlying reference files can easily be corrected once identified. To do such coding by manual methods would require highly skilled coders with much time and access to the full mailing address or property description. Even so, the results of manual coding would tend to be less accurate (particularly in urban areas), and they could inadvertently introduce systematic bias (especially in rural areas).

As long as the postal codes on the incoming file are valid for the corresponding addresses, *PCCF+* will usually generate highly accurate geographic coding. Manual geographic coding is no longer required except in very rare circumstances. Records for most postal codes which serve more than one dissemination area—including most rural postal codes and several classes of urban postal codes—are assigned geographic codes based on a population-weighted random allocation among the possible dissemination areas and blocks. This produces an unbiased allocation of events in relation to the resident population. However, because of the nature of the postal code conversion files, a few classes of valid postal codes cannot be assigned full geographic identifiers corresponding to a place of residence or business. In such cases, as well as for postal codes that do not match exactly to the PCCF or WCF, the first two or three characters of the postal code are used to try to assign partial geographic identifiers to the extent possible. This takes care of many situations where the last one, two, or three characters of the postal code are invalid, but the first two or three characters are valid. Problem records include full diagnostic and reference information. Business and institutional addresses are clearly identified, which facilitates determining if the postal code corresponds to the client's usual place of residence (or business), or was the result of a keying or reporting error. An alternate version of the control program is also provided for better coding of the location of health facilities and professionals, as opposed to places of residence, where that is desired.

Note: For authorized university research and teaching purposes, *PCCF+* is available under the Data Liberation Initiative (DLI). For general information on the DLI, including contact persons at each participating university, see the Statistics Canada website: [www.statcan.ca](http://www.statcan.ca) (Learning resources / Postsecondary/Data Liberation Initiative). On the DLI FTP site, the *PCCF+* filenames are shown in the directory `-/health/pccf4c-fccp4c`. [Ressources éducatives / Niveau postsecondaire / l'initiative de démocratisation des données]

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## GETTING STARTED

### Introduction

To do automated geographic coding based on postal codes using *PCCF+*, all you need to do is follow Steps 1, 2 and 3 below. The rest of the documentation provides supplementary detail and background information which should be read eventually, but it is not essential to getting started. A list of **Abbreviations** begins on page 17, the **References** begin on page 18, and a **List of Appendices** available can be found on page 22.

If you want to find out what the program does and how it works before getting started, skip Steps 1-3, and begin reading at the section entitled **Origins and objectives of PCCF+**. Then come back to Step 1 when you are ready to begin coding.

### Step 1: Getting set up

The *PCCF+* package consists of five SAS control files (the programs) plus several reference files derived mainly from the Statistics Canada Postal Code Conversion File (PCCF) and Weighted Conversion File (WCF). To use the programs, you must first have installed SAS on your mainframe or personal computer (PC) and copied all of the files shown in Table 1 (on page 7) into your own directory.

### Step 2: Your input file (with postal codes to be assigned geography)

Your incoming data to be coded will be known to the programs as HLTHDAT. You must indicate to the program where to find your income file, by changing the shaded filename shown below to your own incoming *filename.ext* at the following line:

```
filename HLTHDAT 'r:\pccf4a\sampldat.can'; /* your input file */
```

Your incoming file can be sorted in any order or unsorted. Each logical record of the incoming file must contain a unique identifier (ID), plus a postal code (PCODE) if available. The postal code can have a space or hyphen between the first 3 characters (FSA) and the last 3 characters (LDU), or no space. Those fields can be anywhere in the file, but you must tell SAS where to find them, as in the following example:

```
DATA HLTHDAT0; INFILE HLTHDAT MISSEVER;
INPUT
  @ 5 ID          $CHAR8.  /* UNIQUE IDENTIFIER OR REGISTRAT NUMBER */
                          /* IT CAN BE UP TO 12 CHARACTERS IN LENGTH */
  @ 88 FSA        $CHAR3.  /* FSA (ANA)--FIRST 3 CHARACTERS OF PCODE */
  @ 92 LDU        $CHAR3.; /* LDU (NAN)--LAST 3 CHARACTERS OF PCODE */
PCODE=FSA|LDU;          /* POSTAL CODE (ANANAN) */
```

The ID can be numerical, alphabetic or mixed. It can be up to 12 characters in length, and can be found anywhere in your file, as specified in the INPUT statement. If ID is more than 12 characters in length, the output file formatting would have to be modified. Records with the same ID but different postal codes will each be assigned geographic codes. *However, if the same ID and postal code appear in combination more than once, only one example of each combination will be retained.* The postal code can also be found anywhere in the file, with the FSA optionally separated from the LDU, or together.

### Step 3: The two output files produced

*PCCF+* will produce two output files, one for all of the coded data, and a subset of that which contains the problem records (errors, warnings and notes). You must specify the name of these output files by changing the shaded filenames to the names you want your output files to be called. We suggest using the extensions GEO and PRB for these files, but you can use any extensions you wish.

```
filename HLTHOUT 'r:\pccf4a\sampldat.geo'; /* the main output file */
filename GEOPROB 'r:\pccf4a\sampldat.prb'; /* the problem file */
```

The first of these two output files, known to SAS as HLTHOUT, will contain the ID and postal code from your incoming HLTHDAT file, plus all of the geographic codes which the programs could successfully determine, and diagnostic fields to help you understand how the coding proceeded in each case.

The second output file, known to SAS as GEOPROB, will contain a subset of the HLTHOUT records, for any cases identified as errors, warnings or notes. To facilitate checking and correction, it will be sorted by type of problem (errors first, followed by warnings, followed by notes), then by delivery mode type (DMT), then by postal code. In the unlikely event that none of the HLTHOUT records were identified as potential problems (errors, warnings, or notes), then the GEOPROB dataset and corresponding file would be empty.

When Steps 1, 2 and 3 are completed, you will be ready to start assigning geographic identifiers to your file based on postal codes. If you are eager to get started, go right ahead. Just submit the program. The rest of the documentation can be read later.

#### Step 4 (optional): Getting appropriate geographic coding for FSAs which were moved (V1H & V9G)

After completing Step 3 (running the program), check the printed output. Immediately following the Summary of Automated Coding Results (at the beginning of the .LST output), if your data contained any postal codes beginning with V1H or V9G, you will see a table showing how many postal codes with each of those two FSA were involved. If that table is present (and non-blank), then to get the appropriate geographic coding for those postal codes, you may need to run a supplemental program (R4xOLD for residential coding, or I4xOLD for institutional coding). Whether or not you need to run the supplemental program depends on the vintage of your postal codes (see Appendix C for how the vintage of a postal code is defined). *If the vintage of your postal codes is 1 April 1999 or later, then use of the supplemental programs is unnecessary and will have no effect on the data.* In all other cases, if the results of Step 3 show postal codes beginning in V1H or V9G, you should run the supplemental program to ensure that the appropriate geographic codes are assigned.

First identify your input file, as you did in Step 2, except that this time the input filename will be the same as the HLTHOUT filename which you identified in Step 3.

Assuming that each record in your data has approximately the same vintage of postal code, then check the first input data step in R4xOLD or I4xOLD, and modify the value of PCVDATEC if required, as shown in the shaded area below. If your data contain no postal codes of vintage later than 1 June 1996, then do not change the value of PCVDATEC.

```
/* ONLY CHANGE DATE BELOW IF VINTAGE IS LATER THAN 19970601: */
PCVDATEC='19970601'; /* YYYYMMDD VINTAGE OF PCODES */
/* MM=01-12; DD=01-31 ONLY-NOT 00 OR 99 */
```

When you have completed the above, submit the supplemental program. Depending on the vintage of your postal codes, some, none or all of the geographic coding for postal codes beginning with V1H and/or V9G may be changed to correspond to their former location.

*The rest of this step is needed only if each record of your data may have a different vintage of postal code, so that the global change of the PCVDATEC as shown above is not appropriate. But if (as will most often be the case) the global change was appropriate, then stop here.*

If each record of your data may have a different vintage of postal code, then append that date to the end of each HLTHOUT record output by GEORES4x or GEOINS4x, and then revise the first input data step in R4xOLD or I4xOLD to include the following line:

```
@ nnn PCVDATEC $CHAR8.; /* YYYYMMDD VINTAGE OF PCODE */
```

And in that case, don't forget to delete the semicolon at the end of the old input statement, and to comment out the line (just below the end of the input statement) that defines PCVDATEC as a constant. Do the latter by adding the SAS comment characters as shown in the shaded text below:

```
/* PCVDATEC='19970601'; */ /* YYYYMMDD VINTAGE OF PCODES */
```

**Table 1**  
Files included in PCCF+ Version 4

Filename / PC filename (if different)	Description
GEORES4x.SAS	SAS PROG (RESIDENCE CODES)
GEOINS4x.SAS*	ALT SAS PROG (OFFICE CODES)
R4xOLD.SAS#	SAS PROG OLD FSAs (RESIDENCE CODES)
I4xOLD.SAS#*	ALT SAS PROG OLD FSAs (OFFICE CODES)
DIST4x.SAS	CALCULATES MINIMUM DISTANCE TO CLOSEST OF MANY LAT LONG
BLDG9606.EGMRES.CAN	POSSIBLE RES FOR DMT E G M
BLDG0302.TXTFL1EZ.CAN	BLDG NAMES & ADDRESSES
CPADR.NADR0302.CAN	NUMBER ADDRESS RANGES FOR PCODE
GEOREF01.ARDEF.CAN	AGRICULTURAL REGION (CROP DISTRICT) DEFINITIONS
GEOREF01.ARNAME.SAS	AGRICULTURAL REGION (CROP DISTRICT) NAMES
GEOREF01.BL01EA96.CAN	2001 DISSEMINATION BLOCK TO 1996 ENUMERATION AREA
GEOREF01.CCSSAC.CAN	CENSUS CONSOLIDATED SUBDIVISION DEFS, SACTYPE, SAC
GEOREF01.CCSNAMES.CAN	CENSUS CONSOLIDATED SUBDIVISION NAMES
GEOREF01.CDNAMES.CAN	CENSUS DIVISION NAMES
GEOREF01.CSDNAMES.CAN	CENSUS SUBDIVISION NAMES
GEOREF01.CSIZE01.CAN	COMMUNITY SIZE BASED ON 2001 CMACA POP (INCL CMA NAMES)
GEOREF01.DABLK.CAN	BLOCKS WITHIN DISSEMINATION AREAS
GEOREF01.DABLKPT.CAN	POINTER TO BLOCKS WITHIN DISSEMINATION AREAS
GEOREF01.DPLNAMES.CAN	DESIGNATED PLACE NAMES
GEOREF01.ERDEF.CAN	ECONOMIC REGION DEFINITIONS
GEOREF01.ERNAMES.CAN	ECONOMIC REGION NAMES
GEOREF01.FEDNAMES.CAN	FEDERAL ELECTORAL DISTRICT--1996 LIST NAMES
GEOREF01.FED03DEF.CAN	FEDERAL ELECTORAL DISTRICT--2003 LIST DEFINITIONS
GEOREF01.FED03NAM.CAN	FEDERAL ELECTORAL DISTRICT--2003 LIST NAMES
GEOREF01.GTF01B.CAN	GEOGRAPHIC ATTRIBUTES AT BLOCK LEVEL
GEOREF01.HRDEF.CAN	HEALTH REGIONS DEFINITIONS
GEOREF01.HRNAMES.CAN	HEALTH REGION NAMES AND POPULATIONS
GEOREF01.INSTFLG.CAN	INSTITUTIONAL FLAG
GEOREF01.NSREL96.CAN	NORTH SOUTH RELATIONSHIP (BASED ON 1996 PRDCSD)
GEOREF01.SUBDEF.CAN	HEALTH DISTRICT DEFINITIONS
GEOREF01.SUBNAMES.CAN	HEALTH DISTRICT NAMES
GEOREF01.THDIST2.COD	TORONTO HEALTH PLANNING AREA NAMES AND CODES
GEOREF01.THPA01DA.DEF	TORONTO HEALTH PLANNING AREA DEFINITIONS
MSWORD.FCCP4x.PDF	PCCF+ USER GUIDE-FRENCH
MSWORD.FMT4xGEO.DOC	MS Word SHELL FOR PRINTING THE MAIN OUTPUT FILE (.GEO)
MSWORD.FMT4xPRB.DOC	MS Word SHELL FOR PRINTING THE PROBLEM FILE (.PRB)
MSWORD.PCCF4x.PDF	PCCF+ USER GUIDE-ENGLISH
PCCFyyymm.BCVUNIQ.CAN#	PCODES PRIOR TO MOVE--OLD FSAs
PCCFyyymm.CPCOMM.CAN	CANADA POST COMMUNITY NAMES
PCCFyyymm.DUPS.CAN	ALL OCCURRENCES DUPLICATE PCODES
PCCFyyymm.FSAGE0G.CAN	GEOGRAPHY AT EACH FSA
PCCFyyymm.FSAGE01.CAN#	GEOGRAPHY AT EACH FSA--OLD FSAs
PCCFyyymm.FSA12GEO.CAN	GEOGRAPHY AT EACH FSA12
PCCFyyymm.FSA12GE1.CAN#	GEOGRAPHY AT EACH FSA12--OLD FSAs
PCCFyyymm.POINTDUP.CAN	POINTER TO 1ST DUPLICATE PCODE
PCCFyyymm.RPO.CAN*	RURAL POST OFFICE LOCATIONS
PCCFyyymm.UNIQ.CAN	PCODES UNIQUE ON PCCF
PCCFyyymm.WCFPOINT.CAN	POINTER TO 1ST DUPLICATE PCODE ON WCF
PCCFyyymm.WCFDUPS.CAN	ALL OCCURRENCES DUPL+UNIQUE PCODES ON WCF
PCCFC01.WCFBLK.CAN	BLOCKS SERVED BY WCF POSTAL CODES
PCCFC01.WCFBLKPT.CAN	POINTER TO BLOCKS SERVED BY WCF POSTAL CODES
PCCFC01.FSAPOINT.CAN	POINTER TO 1ST DUPLICATE FSADABLK
PCCFC01.FSAUDUPS.CAN	ALL OCCURRENCES DUPL+UNIQUE FSADABLK
SAMPLEDAT.CAN	SAMPLE DATA FOR TESTING PROGRAMS
SERVICES.IGE	TEST DATA FOR PROGRAM DIST4x.SAS
SEsREF.QAIPe01.CAN	IPPE QUINTILES WITHIN CMACA (BASED ON 2001 CENSUS DATA)

Note: Provincial or regional subsets of the reference files will end with one of the following extensions in place of CAN: NF NS PE NB PQ ON MB SK AB BC YT NT NU ATL PRA WES. (For the meanings of the filename extensions, see page 17.) Provincial or regional subsets will only be able to find geographic codes for postal codes occurring within the same province or region. For best results, all of the files used should have the same extensions.

\* An asterisk following a filename indicates that it is only needed for office coding.

# A number sign following a filename indicates that it is only needed for coding FSAs which have been moved. PCCFyyymm replaced by PCCF0209 (Sept 2002), etc.

GEORES4x GEOINS4x replaced by GEORES4A GEOINS4A (Version 4A), etc.

## HOW THE PACKAGE WORKS

### Origins and objectives of PCCF+

*PCCF+* consists of two SAS control programs (GEORES4x for residential coding, GEOINS4x for office coding) and a series of reference files derived from the Statistics Canada *Postal Code Conversion File* (PCCF), the *Postal Code Population Weight File* (WCF) and other sources. It automatically assigns a full range of geographic identifiers (PR CD CSD CMA CT DA BLK LAT LONG etc.) based on postal codes. It is consistent and logical in the way it does this. *PCCF+* uses techniques developed over a period of years for research studies at Statistics Canada. Any incorrect coding due to errors in the underlying reference files can easily be corrected once identified. To do such coding by manual methods would require highly skilled coders with much time and access to full mailing addresses. Even so, the results of manual coding would tend to be less accurate (particularly in urban areas), and they could inadvertently introduce systematic bias (especially in rural areas).

Version 1: 1986 Census geography; equal weight to each duplicate record

Version 2: 1991 Census geography; 2B (20% sample) household weights for most duplicate records

Version 3: 1996 Census geography; 2A (100% count) population weights for most duplicate records

Version 4: 2001 Census geography, 2A (100% count) population weights for most duplicate records

### Objectives

At their place of residence, 24% of the Canadian population use postal codes which are vague and ambiguous with respect to location (see **Table 2**, page 21, or which are only linked to post office location. This is the biggest problem facing geographic coding from Canadian postal codes. For example, about 20% of the population uses rural postal codes (which each serve an average of about 1100 persons), 3% use rural route services from urban post offices, and 1% use small post office boxes. For the other 76% of Canadians, the vast majority use postal codes presenting little or no problem with respect to geographic coding, which can usually be done with great precision. For example, for the most common category of service—letter carrier delivery to a private dwelling—only about 30 people share the same postal code. However, a few classes of urban postal codes are primarily used by business and institutions, and may or may not be valid as a place of residence. It is important to identify and deal with the various sorts of problems represented by each of the above categories, and that is what *PCCF+* does, as summarized below.

- Deal with community mail boxes and other sources of duplicate records on PCCF (DMT A, B).
- Identify postal codes which may be used by businesses or institutions (DMT E, G, M).
- Provide geographically unbiased coding despite the great ambiguity of rural postal codes and rural routes from urban post offices (DMT W, H, T).
- Provide geographically unbiased coding for persons or organizations using small PO boxes at urban post offices (DMT K), and for those using General Delivery at urban post offices (DMT J).
- Provide client site coding (vs PO location) for institutions using large PO boxes (DMT M).
- Deal with retired postal codes, taking into account problems related to previous DMT.
- Provide for translation across different vintages of census geography.

### Bells and whistles

- Use the FSA to impute or partially impute geographic coding where the postal code is not found or is only linked to post office geography.
- Use the first 1 or 2 characters of the postal code for partial imputation if FSA not found.
- Provide information which may help in correcting erroneous or problematic postal codes, or for finding geographic codes by other means (if possible); try to furnish enough information so that the user can decide whether to accept or reject the coding suggested (if correction of the underlying problem is not possible or feasible).
- For postal codes which may or may not refer to a place of business (DMT E, G, or M), flag records for postal codes known to serve non-residential addresses, and flag those known to serve residential addresses.
- For areas consisting primarily of collective dwellings, indicate the predominate type of dwelling (hospital, nursing home, prison, etc.).

### Operational requirements

- Provide detailed diagnostics indicating how the coding was done, what problems were encountered, and how ambiguous the postal code was (especially re CD and CSD codes).
- Document everything in a detailed *User's Guide*.
- Make it simple to use by persons with little or no previous knowledge of geography or computers, and small enough to run regional subsets on unsophisticated personal computers.
- Update semi-annually following release of new vintages of the PCCF.



**What's new in Version 4D?**

In Version 4D, a new field has been added at the end of the main output file for the Federal Electoral District--2003 Representation Order (FED2003). Those were the ridings used for the June 2004 federal election.

The Health District (SUB) field once again identifies CLSCs in Québec, based on the best fit of each census dissemination area.

Numerous corrections to programming and files have resulted in better coding for urban and rural areas.

**What was new in Version 4A?**

In Version 4, coding is to 2001 census standard geography, using 2001 census population weights when required. By contrast, Version 3 coding was to 1996 census geography, using 1996 census population weights when required.

For 2001 census, the dissemination area has replaced the enumeration area as the lowest standard level of geography for most data dissemination purposes. However, dissemination areas are built up from census blocks, which are the basic geographic units required for the definition of health regions, health districts, federal electoral districts, designated places, and the census urban and rural area typology, as well as for best fit correspondence to previous census geographies. So for geographic coding purposes, the dissemination area plus census block replaces the enumeration area, and that change is reflected in *PCCF+* Version 4. Block-level coding is much more precise than enumeration area-level coding, but the file sizes are much larger now than previously (478,707 blocks versus 49,361 EAs in 1996), so execution time of the programs has noticeably increased.

In previous census geographies, the federal electoral district code was an integral part of the enumeration area code (PRFEDEA), which was lowest standard level of geography for both geographic coding and data dissemination purposes. For the 2001 census geography, the enumeration area is used only for data collection purposes, so it has been dropped from *PCCF+* Version 4. The federal electoral district code has been retained, but it has been moved to near the end of the file. Note that for the 1996 census, the federal electoral district representation order was that of 1987, while for the 2001 census, it changed to the 1996 representation order.

The 2001 census population weight file allows for population-weighted random allocation among multiple dissemination areas served by a single postal code. As with previous versions of *PCCF+*, this is done for several classes of postal codes (those with delivery mode types of H through Z) which mainly provide service to rural residents. Then within the randomly selected dissemination area, an additional population-weighted random allocation is performed to select a single block from among the multiple census blocks in that dissemination area. The latter routine is new for Version 4, as it is required for defining several of the geographic levels of major interest to users.

When imputations of geographic coding are required based on the first three characters of the postal code (the forward sortation area or FSA), a complete set of geographic codes down to dissemination area and block are imputed from rural as well as urban FSAs. Previously, a complete set of codes was only imputed for urban FSAs.

The definitions of health regions (HR) and health districts (SUB) have been updated to reflect recent changes in some provinces, as well as the new census geographic concepts.

An updated neighbourhood income quintile field (QAIPPE) is based on 2001 census data by dissemination area.

The community size field (CSIZE) has been updated, based on 2001 census populations. This field classifies census metropolitan areas and census agglomerations by population size, and the residual area not in any census metropolitan area or census agglomeration--also known as "rural and small town Canada".

A new field for the statistical area classification type (SACTYPE) has been added. This field distinguishes among census metropolitan areas (all of which are tracted), tracted versus untracted census agglomerations, and the residual area not in any census metropolitan area or census agglomeration ("rural and small town Canada"), with the latter further classified by the relative importance of commuting flows to work in any census metropolitan area or census agglomeration--also known as "metropolitan influence zones" or MIZ.

A new field defining the North-South relationship (NSREL) in Canada has been added. This field distinguishes South from South transition, North transition and North. It is based on methods described by Puderer and McNiven (2000).

A new field for the rural-urban block (BLKURB) has been added. This is an alternate way of defining urban and rural, based on the population density of each census block, which permits both urban and rural areas to be defined within as well as outside of census metropolitan areas and census agglomerations. Note however that in the vast majority of rural areas, the census block and dissemination area are imputed based on population-weighted random allocations among the many such units known to fall within the postal code service area, so this field should only be used with due caution for the definitional difficulties. Classification based on urban postal codes is much more certain, as the specific block is almost always known

with much greater certainty. This field is defined as follows: `IF UARA GE 9910 THEN BLKURB=0; ELSE IF UARA NE . THEN BLKURB=1.`

A new field for economic region (ER) has been added. Economic regions (formerly known as “subprovincial regions”) are defined as aggregates of adjacent complete census divisions except in Ontario, where in one case an ER is defined as an aggregate of adjacent census subdivisions, but splitting census division boundaries.

A new field for census agricultural region (AR) has been added. ARs are defined as aggregates of complete adjacent census divisions, except in Saskatchewan, where they are defined as aggregates of adjacent census consolidated subdivisions, without respect to census division boundaries.

A new field for census consolidated subdivision (CCS) has been added. CCSs are defined as aggregations of adjacent census subdivisions within a given census division.

The various categories of the representative point flag field (RPF) have been redefined to correspond with the new 2001 census geography concepts.

The enumeration area collective dwelling field (EACOLL) and the enumeration area comment flag field (EACMFLG) have been deleted, since enumeration areas are now used only for data collection purposes, and no longer appear on the PCCF+ output files. In its place, a new field (INSTFLG) has been added to help identify records likely to be for institutional residents.

A supplemental program (DIST4x.SAS) has been added to calculate distances from each postal code on one output file (usually the result of GEORES4x.SAS), to the closest of many postal codes on another file (which would usually be the output of GEOINS4x.SAS). Typically this would be used for calculating distances from residences to some kind of health facility or health professional. Basic familiarity with SAS programming is required for use of this supplementary program.

### **What was new in version 3E?**

Health regions (HR) and health district (SUB) codes were assigned based on the enumeration area code, if present. If an enumeration area code was not present, then the program attempted to assign health region and health district codes based on the census subdivision code, if known, as long as 90% or more of the census subdivision population resided in a single health region or health district.

Canada Post recently moved two FSAs in British Columbia: 100km south in the case of V9G, and 400 km south in the case of V1H. This means that the vintage of the postal code must now be taken into account in order to correctly assign geography in such cases. Thus, the main programs (GEORES3E & GEOINS3E) were revised to assign only the most current geographic codes for those cases, and supplementary programs (R3EOLD & I3EOLD) were written to assign the old geographic coding where required, depending on the vintage of the postal codes (which can be specified). The supplementary programs also print out a summary of the corrections and problems encountered in the recoding, if any, and merge the corrections back into a revised main file. To explain how to use the supplementary programs, and to determine whether or not their use is required, a new Step 4 (optional) was added to the Getting Started section of the documentation.

To further increase the functionality of the output files, community size (CSIZE) codes were now assigned based on the census metropolitan area and census agglomeration code (the CMA field, which includes CA codes). Also, to demonstrate the ease of attaching geographically-coded variables from other data sets (such as summary data from the quinquennial census), neighbourhood income quintile (QAIPPE) codes were now assigned, based on the enumeration area code.

The CPCCODE field (a sequential numeric code corresponding to the Canada Post Community Name) was fully implemented. In previous versions, records which were coded by the weighted conversion file (WCF) were not assigned a CPCCODE, but beginning with Version 3E, all records with a valid postal code have had it assigned.

The main output files (dataset HLTHOUT) were identical in format to those produced by Version 3D, except for the addition of the 4 new fields (HR SUB CSIZE QAIPPE) appended to the end of the record, as noted in the revised documentation. The output of the supplementary programs (R3EOLD and I3EOLD) also included 3 additional fields (BTHDATEC RETDATEC PCVDATEC) appended to the end of the record.

The problem file output was modified slightly by reducing the latitude and longitude fields each to 2 digits in order to leave enough room to show the HR and SUB fields.

The documentation was revised to reflect the above changes.

### What was new in Version 3 (all other updates)?

- Version 3 produced output coded to 1996 Census standard geography, whereas Version 2 coded to 1991 census standards, and Version 1 coded to 1986 census standards.
- Whenever possible, 1996 2A (100%) population weights were used for postal codes served by rural post offices, or by rural routes, PO boxes, and suburban route service from urban post offices. However, 1991 2B (20% sample) household weights were used for such postal codes if they were not part of the 1996 census population weight file.
- EAs were imputed for rural as well as most urban postal codes. However, imputation of EA from urban FSAs (new in Version 2) was no longer performed for postal codes linked to post office geography, for which the service area or users might be outside the nominal FSA boundaries.
- New fields were added, but all of the former fields were retained, as was the “look and feel” of the programs. The only change to the definitions of former fields is for problem (PROB) type 2 (unused since Version 1), which was redefined as a Warning (rather than Error as formerly) when the postal code was improbable as a place of residence. The PROB field has been renamed LINK, so that the meaning of the field values will be intuitive: LINK=0 means no link, and LINK=9 means best link. Latitude and longitude were shown with much greater precision (degrees + 6 places after the decimal rather than degrees + 4 places previously). The field CCSUM was no longer written to the files, but it was still calculated for the printouts.

DPL	A field for Designated Place (DPL) code was added. This was a new sub-municipal level of geography with the 1996 census.
RESFLG	Postal codes for addresses which were improbable as a place of residence were now flagged (RESFLG), as are postal codes for business and institutional type addresses which appeared to be possible places of residence.
EACOL	A field for Enumeration Area Collective Dwelling (EACOL) type was added. This field identified EAs which were specific to hospitals, nursing homes, prisons, etc.
EACMT	An Enumeration Area Comment (EACMT) could occur in the problem file output if other address information was not available. The comment field usually named the collective dwelling, business or institution specific to that EA. A flag field (EACMTFLG) identified EAs for which such comments were available in the G96EACMT file.

Five new diagnostic fields were added. The first three were derived from the PCCF, while the last two were derived from other sources:

DMTDIFF	A new field based on the previous DMT (DMTDIFF) allowed retired postal codes to be used without fear of overlooking problems related to the previous DMT.
RPF	The Representative Point Flag (RPF) indicated the precision of the underlying geographic linkage (to BLKFACE or EA, and single or multiple links in each case).
SERV	The Canada Post Service Type code (SERV) distinguished route service with street address from route service without street address.
PREC	The precision (PREC) of latitude and longitude coordinates was indicated with respect to the service area of the postal code, as well as with respect to the blockface or EA nature of the coordinates, and with respect to the nature of the imputation required (if any). 0=least precise; 9=most precise.
NADR	The number of address ranges (NADR) served by a postal code was usually one, but might be many. For example, community mail boxes and rural route services usually refer to several address ranges, while most other urban postal codes refer to only one address or address range.

Because of these changes, the record layout for the last section of both output files was changed.

The source program code was still written in SAS, and was easily modifiable—for example, to reduce the printed output by deleting frequency tabulations of each field. As before, the source program was self-documenting to facilitate understanding of what the program actually did and didn't do.

Preliminary versions of supplemental files and model programs were made available for translating back and forth between 1991 and 1996 census geographies.

## What was new in Version 2?

Version 2 of PCCF+ (*Geocodes/PCCF*) incorporated several significant improvements over the original version.

- Manual geographic coding was no longer required for records with valid postal codes, except in very rare circumstances (< 1%). Previously, about 10-15% of records with valid postal codes could not be coded to census tract and enumeration area without manual intervention. Now most postal codes for rural routes from urban post offices, for post office boxes (group of boxes), as well as for suburban service and general delivery, could automatically be assigned the full complement of geographic codes available for other types of postal codes.
- Records with postal codes which serve more than one enumeration area—including most rural postal codes and several classes of urban postal codes—were assigned geographic codes based on a household-weighted random allocation among the possible locations. This produced an unbiased allocation of events in relation to the resident population. An alternative program could be chosen which would assign all rural postal codes to village centres.
- Problem records now included better diagnostic and reference information. Fields indicating the source of the matching and the number of different levels of geographic codes assigned were added, in addition to the previously available fields which indicated the type of problem, the number of census divisions and census subdivisions served by the postal code, and the DMT.
- Business and institutional addresses were more clearly identified. The problem records for most such cases showed the building, company, or institutional establishment name and brief address—which helped determine if the postal code corresponds to the client's usual place of residence (or business), or was the result of a keying or reporting error.
- "Most likely" partial geographic coding based on the first two characters of the postal code was suggested (where possible) for records with invalid postal codes. Previously, such coding was attempted only if the first three characters were valid.
- For geographic coding of the location of health facilities and health professionals, an alternate SAS control program (GEOINS4x) and one additional file (RPO) were provided. With the alternate program and file, records with rural postal codes were assigned to the same enumeration area as the rural post office.

## How the reference files were produced

To develop the reference files used, the PCCF was pre-processed as follows. First the file was analyzed to determine which postal codes were unique, and which occurred more than once on the file (linked to more than one dissemination area, block or blockface). The unique postal codes were then separated from the duplicate codes. Only the essential fields of the PCCF were retained, to reduce disk storage and memory requirements. Canada Post community names were assigned numeric codes so the names could be moved off to a much smaller, non-redundant auxiliary file. Census subdivision names (but not the corresponding numeric SGC codes) were also removed to a much smaller, non-redundant auxiliary file. Additional reference files were created to show the relationship of the first three characters of the postal code to corresponding census divisions, census subdivisions, census metropolitan areas/census agglomerations, census tracts, enumeration areas, and latitude/longitude. A similar file was created showing the relationship of the first 2 characters of the postal code to the most frequently corresponding census geography and latitude/longitude. Other files were created for matching postal codes to a subset of the 1991, 1996 and 2001 Postal Code Population Weight Files or Weighted Conversion Files (WCF), which are based on census population or household counts by postal codes and census geography. For Version 4, missing block codes are assigned by population-weighted imputation from dissemination area, if available. A building name and address file was constructed to help check the validity of postal codes for problem records related to business, commercial and institutional establishments. Using census data plus visual inspection of building names, postal codes for addresses which are improbable as a place of residence were flagged, as were postal codes for business and institution-type addresses which appear to be possible places of residence. Health region and health district codes were obtained from provincial health departments. When necessary, dissemination area and block approximations to the definitions were created. A file showing neighbourhood income quintiles within each census metropolitan area or census agglomeration (CMACA) or provincial rural and small town areas was created, based on dissemination area summary data from the 2001 census. Community size groups were determined, based on the 2001 census population in each CMACA. Areas outside of any CMACA were taken as the smallest community size group ("rural and small town Canada").

### What the package does

The result is a set of related files, which together with the SAS control programs provided, can be used for automated coding of most records with a valid postal code. As long as the postal codes on your incoming file are valid for the addresses, *PCCF+* will generate highly accurate geographic coding for your data. However, because of the nature of the PCCF and WCF, a few classes of valid postal codes still cannot be assigned full geographic identifiers corresponding to a place of residence or place of business. In such cases, as well as for postal codes that do not match exactly to the PCCF or WCF, the first three characters of the postal code are used to try to assign partial geographic identifiers to the extent possible. If that fails, then the first two characters of the postal code are tried.

In each case where *PCCF+* encounters a possible problem with its automated coding, diagnostic codes are output to the problem file, together with any partial geographic identifiers which may have been determined. The program listing prints out the problem records grouped by type of problem; the records themselves follow a brief printed message describing the problem and suggesting how to correct it. Usually the first thing to do is to check the postal code to make sure that it was correctly entered, and to see that the postal code shown is the correct one for the address.

### Why it is important to have accurate postal codes

The coding produced by *PCCF+* is only as good as the postal codes on your incoming data file. The *Postal Code Directory* issued by Canada Post, or computerized versions of the directory (available from various sources), can be used to find missing postal codes as well as to validate or correct existing postal codes on your file. With computerized versions, the reverse lookup of address ranges from postal codes is an effective and efficient way of validating postal codes for incomplete or incorrectly spelled addresses. Note that in addition to its troublesome consequences for geographic coding, the absence of a valid postal code on your file could adversely affect any later follow up which might be required. Moreover, the delivery of mail by Canada Post may be delayed or impossible without a valid postal code.

### How the matching process works

The routines in *GEORES4x* are for assigning geographic codes for places of usual residence. Similar routines in *GEOINS4x* can be used to assign geographic codes for locations of health facilities or offices of health professionals.

The SAS control program for residential coding is explained below; procedures which apply only to office coding are shown in italics:

- (1) First, rural postal codes and postal codes 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 (WCF)--consisting of about 75,000 records for 12,000 different postal codes. 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, as seen in the WCF. *For coding of office locations, etc., the GEOINS4x program omits the rural postal codes from this step, so that they can all be assigned to the same dissemination area as the rural post office.*
- (2) Second, remaining postal codes which are unique on the PCCF (only linked to a single dissemination area, block or blockface) are matched to corresponding codes on the incoming HLTHDAT file. There are about 560,000 of these unique codes for all Canada, including most urban postal codes. *For coding of office locations, rural postal codes together with their corresponding post office geography (File RPO) are added at this point, since those records are also unique.*
- (3) Then postal codes which are not unique on the PCCF (over 260,000 different postal codes for which about 1.4 million PCCF records exist, including each of the multiple occurrences of the same postal code) are matched to the remaining records from the HLTHDAT file. Most urban postal codes and some rural postal codes which are not unique on the PCCF (in the sense that they link to more than one dissemination area, block or blockface) are nonetheless not ambiguous in terms of higher levels of geography such as CD, CSD or CMA, CT. To avoid "many-to-many" matching, the matching in this part of the program is done in two steps: (a) Each remaining HLTHDAT record (not already matched to the WCF or to the PCCF unique file) is matched by postal code to a pointer file (POINTDUP) which contains a single record for each postal code which occurs more than once on the PCCF. The pointer file shows how many times the postal code occurs, and the physical location (observation number) of the first occurrence of that postal code on the DUPS file. (b) The information on the POINTDUP file is used to match each successive HLTHDAT record with the next occurrence of that postal code on the DUPS file. This has the

- effect of distributing events for such postal codes across all possible dissemination areas, blocks or blockfaces which are served by that postal code--with equal weight assigned to each PCCF record.
- (4) Because block codes are required for coding of HR SUB FED UARA, missing block codes are now assigned based on population-weighted imputation from the dissemination area code, if that is available.
  - (5) Error records are then identified and processed as follows: (a) Any record with a postal code which did not match on all 6 characters to the PCCF is identified as an error record (LINK=0). (b) Records with postal codes which matched to the PCCF or WCF, 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 CMA, CD and CSD codes, plus CT and DA for urban postal codes. Coding will be suggested based on the first 3 characters of the postal code (FSA), or failing that, based on the first 2 characters of the postal code. PR (only) may be assigned based on the first character of the postal code.
  - (6) Health region and health district codes are then assigned by matching to DA, or to DA and BLK, if required.
  - (7) Neighbourhood income quintiles within each CMA or CA (QAIPPE) are then assigned, based on the DA. Note that neighbourhood income data are not available for DAs made up of institutional collective dwellings.
  - (8) Community size codes (CSIZE) are then assigned, based on CMA or CA populations from the 2001 census. Statistical area classification type (SACTYPE) codes are assigned, based on the CMA or CA code (for SACTYPES 1-4) plus the PRDCSD (for SACTYPES 5-8). Economic region (ER) codes are assigned, based on the PRCD (or PRDCSD in Ontario only). Agricultural region (AR) codes are assigned based on PRCD (or PRDCSD in Saskatchewan only). A residence flag is assigned by matching to PCODE to identify non-residential versus residential postal codes among postal codes whose DMT is E, G or M.
  - (8b) 1996 enumeration area codes (FEDEA96) codes are assigned using 2001 block to 1996 EA correspondence files.
  - (9) All records with their corresponding geography (to the extent found) are output to the HLTHOUT file. If some or all geographic codes could not be determined, those fields are set to missing values before writing to the HLTHOUT file. See **Appendix A** for the record layout, and **Appendix C** for an explanation of the fields and codes.
  - (10) A smaller file (GEOPROB) is then created containing: records with postal codes which could not be matched on all 6 characters (LINK type 0: error); records with postal codes for a Delivery Mode Type (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 WCF; records where the DMT frequently indicates a non-residential address (LINK types 3 and 4: warning); records for postal codes known to indicate a non-residential address (LINK type 2: warning); records which could have been assigned more than one CSD based on the unweighted PCCF (LINK type 5: note); records which could have been assigned to more than one CSD based on the WCF (LINK type 6: note). See **Appendix B** for the record layout, and **Appendix C** for an explanation of the fields and codes.
  - (11) A one page summary of what happened, including the number of records in each link type above is printed in the program listing, 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. See **Appendix D** for sample output.
  - (12) Frequency counts of the occurrence of each value of the main fields are printed out. This is done first for the entire HLTHOUT dataset, and then for the GEOPROB subset.
  - (13) The entire problem dataset (GEOPROB) is printed out. In this case, the spacing of the printout mirrors that of the corresponding file. See **Appendix D** for sample output.
  - (14) The first 500 records from the output dataset (HLTHOUT, including fully coded, partially coded, and uncoded records) are printed out. The printout includes one field which is not present in the output dataset: DISTANCE, which was calculated for illustrative purposes only. See **Appendix D** for sample output.

### How the programs deal with multiple matches

Version 4 of PCCF+ has two different ways of dealing with multiple matches--where a single postal code can be linked to more than one dissemination area, block or blockface. (1) For rural postal codes (with a 0 in the second position) and for urban postal codes with a delivery mode type (DMT) of H, K, M,T and Z, a subset of the WCF is used whenever possible to make a population-weighted random distribution of records among the applicable geographic areas served. In this way, if 75% of the population served by a postal code was known to be in DA 1001, then on average, 75% of the records will be assigned to that DA. Next, within the randomly selected DA, a specific block is selected, using weights based on total block population in the blocks served in whole or in part by the postal code. (2) For other types of postal codes with multiple matches possible, equal weight is given to each dissemination area, block or blockface. Successive events at such a postal code are coded in turn to each applicable dissemination area, block or blockface. *For office coding only, rural postal codes are always assigned to the dissemination area and block to which the PCCF single link indicator (SLI) is assigned.*

In most cases, a full mailing address would not allow any greater accuracy in the determination of CSD, and using only the city or community name line of the address for coding purposes would tend to bias the results towards whichever CSD had a name most similar to that of the postal community. The result would be the often-noted "hot spots" surrounded by "cold spots".

In summary, then, whenever a postal code can be linked to more than one CSD, an explanatory message is printed, the record is output to the problem file (as a Note only), and a systematically selected CSD code is written out to both the main file (HLTHOUT) and the problem file (GEOPROB). *For office coding, links to more than one CSD are rare, since rural postal codes are assigned to the dissemination area and block to which the PCCF SLI is assigned.*

### How the programs deal with reuse of postal codes (beginning with Version 3E)

After a period of retirement, postal codes are sometimes rebirthed by Canada Post for reuse at a new location. Such reuse may also entail a change of DMT. Reuse of postal codes occurs most frequently, but not exclusively, in areas undergoing rapid expansion which was not foreseen by Canada Post planners when the FSA structure was initially created. However, in almost all cases, reuse of postal codes occurs within the same FSA, and most frequently within a very short distance of the former use. Thus, reuse of postal codes is not normally a problem, and the birth date and retirement date of postal codes is not part of the usual processing of postal codes in the GEORES4x and GEOINS4x programs. In the late 1990s however, two entire FSAs in British Columbia were first retired, and then moved by Canada Post (approximately 100 km south in the case of V9G, and 400 km south in the case of VIH). So the main programs (GEORES4x and GEOINS4x) were revised to assign only the most current geography to records with those two FSAs. Supplemental programs (R4xOLD and I4xOLD) were written to read the output of the main program, and reassign the old geographic coding where required, based on the vintage of the postal codes (which may be specified by the user). Users with less than current data from British Columbia will thus need to run the main program (eg, GEORES4x) followed by the supplemental program (eg, R4xOLD). The results from the supplemental program are automatically merged back into the data output from the main program. However, if your data do not include postal codes with those FSAs, or if your data only contain postal codes of vintage 19990401 or later, then use of the alternate programs is unnecessary and will have no effect on the coding produced by the regular programs GEORES4x and GEOINS4x.

### How to indicate unknown or partially unknown postal codes

If the postal code for a given record does not match exactly to any postal code on the PCCF, PCCF+ will attempt to assign partial geography based on the first 1, 2 or 3 characters the unmatched postal code. Thus, you should give some thought to how unknown or partially complete postal codes should be indicated on your incoming file. If you were to assign the non-existent postal code H0H0H0 (ho-ho-ho!) to records with missing (and unfindable) postal codes, then those records would all be assigned PR 24 and CMA 462, since nearly all postal codes beginning with H are from metropolitan Montréal, Québec. Even worse, the non-existent postal code H9H9H9 would be assigned to PR 24, CMA 462 and CD 65 (Île de Montréal), since that is the only place legitimate codes beginning with H9H are found. If only the province of residence is known, be sure to indicate the corresponding first letter (for example, B for Nova Scotia) in the initial position of the postal code field, so that the province and region code (PR) will be generated and written to the output files and listings.

### How to run PCCF+

To do automated geographic coding based on postal codes using PCCF+ all you need to do is follow steps 1, 2 and 3 at the beginning of this *User's Guide*. The rest of the documentation provides supplementary detail and background information which should be read eventually, but which is not essential to getting started.

### Future versions of PCCF+

For each new version of the PCCF, which is to be released semi-annually, a corresponding update of PCCF+ will be produced. Preliminary versions of supplementary files and sample programs for EA<=>DA+BLK translation across census years are now available for testing (contact Russell Wilkins for more information).

### Verification of geographic coding produced by PCCF+

**Table 3** (page 21) shows the population-based error percentages for each level of geography, for coding produced by PCCF+ Version 3 (R3A) compared to coding from the PCCF Single Link Indicator (SLI), and compared to population-weighted coding from FSA only. In each case, the “gold standard” is a 1% sample of the census population and corresponding postal codes collected in the 1996 Census of Canada. The error percentages are consistently smaller for the PCCF+ method, compared to the SLI method, at all levels of geography. At the CSD level, for example, the SLI error percentage is three times higher than that produced by PCCF+. At the CT level (mostly in urban postal codes areas), the SLI did much better than at the CSD level, but the error percentage was still over 40% higher compared to PCCF+.

However, if the only objective is to assign codes as close as possible to the real census DA centroids (whether or not the population is distributed among all applicable areas), then the SLI method may be somewhat more accurate, at least beyond the 75<sup>th</sup> percentile of distance.

## WHERE TO GET HELP

### Technical assistance

Any technical problems noted with the functioning of these programs or suggestions for improvements to the programs or documentation should be addressed to Russell Wilkins, Health Analysis and Measurement Group, Statistics Canada, RHC-24A, Ottawa, Ontario K1A 0T6, telephone 1-613-951-5305, fax 1-613-951-3959, email wilkrus@statcan.ca. If corresponding by email, be sure to include your telephone number and mailing address.

Canadian Vital Statistics and Cancer Registry users *only*: For copies of the control programs and/or provincial or regional subsets of the Canada files, or operational problems getting started using the programs, please contact Colette Brassard, Operations and Integration Division--Health, Statistics Canada, JT2-B20, Ottawa, Ontario K1A0T6; telephone 1-613-951-1850, fax 1-613-951-0709, email brassar@statcan.ca. Colette can also handle technical questions related to PC-SAS running under UNIX, DOS or Windows.

### Suspected problems with the PCCF

If you have identified possible errors in coding, please look at the SOURCE diagnostic code. If the SOURCE code is F, D or V you may have identified possible errors on the Postal Code Conversion File, so please report these to the Geography Division of Statistics Canada, which is responsible for the creation, maintenance and updates to the PCCF. Include a list of the postal codes which you find suspicious, the geography assigned by the PCCF, and an indication of the nature of the problem (which fields appear to be wrong?). Contact the GeoHelp desk, Geography Division, Statistics Canada, JT3-B6, Ottawa, Ontario K1A0T6, telephone 1-613-951-3889, fax 1-613-951-0569, email geohelp@statcan.ca.

If on the other hand the SOURCE code is C, I, 3, or 2, the problem is not with the PCCF itself, but rather with the supplementary files created by the Health Analysis and Measurement Group. The same applies to problems with the RESFLG or diagnostic codes (LINK, SOURCE, NCSO, NCD, RPF, PREC, NADR, CODER, CPCCODE). For all such cases, contact Russell Wilkins at the address noted above.



## ADDITIONAL REFERENCE INFORMATION

### Acceptable characters and numbers in Canadian postal codes

The first character must be in A B C E G H J K L M N P R S T V X Y. The third and fifth characters may be any character valid for the first position, plus W and Z. The second, fourth and sixth positions may be any single numeric digit (0-9). Acceptable syntax does not guarantee that the postal code will be valid; many combinations have never been used. See Appendices F1, F2 and F3 for acceptable characters or combinations of characters in the first 1, 2 or 3 positions, respectively.

### Filename extensions

The filename extensions have the following meaning:

CAN	Canada
NF or NL	Newfoundland and Labrador
PE	Prince Edward Island
NS	Nova Scotia
NB	New Brunswick
QC	Québec
ON	Ontario
MB	Manitoba
SK	Saskatchewan
AB	Alberta
BC	British Columbia (including data for YT and NT)
YT or YK	Yukon
NT	Northwest Territories
NU	Nunavut
ATL	Atlantic region (NF NS PE NB)
PRA	Prairie region (MB SK AB)
WES	Western region (MB SK AB BC YT NT NU)
DOC	Documentation (in MS Word format)

### Abbreviations

Some of the abbreviations used in this documentation and programs are as follows:

ANANAN	Alpha numeric alpha numeric alpha numeric (format of Canadian postal codes)
AR	Census agricultural region (short for PRAR)
BLK	Census block (new for 2001); short for PRCDDA+BLK
BLKF	Blockface (not identified except by latitude longitude and RPF)
BLKURB	Urban block within CMACA area or non-CMACA area
CA	Census agglomeration (included in CMA field)
CCHS	Canadian Community Health Survey
CCS	Census consolidated subdivision (short for PRCDCCS)
CD	Census division (a county-level code; short for PRCD)
CMA	Census metropolitan area (this field also includes CAs)
CODER	PCCF+ program, version and release (eg, R4A=GEORES4A)
CPCCODE	Canada Post community code (corresponding to a postal community name)
CSD	Census subdivision (a municipal-level code; short for PRCDCSD)
CSDNAME	Name of CSD (unique within province and CSDTYPE).
CSDTYPE	Type of CSD.
CSIZE	Community size code (based on 2001 CMACA population)
CT	Census tract (a neighborhood-level code; unique within CMA)
DA	Census dissemination area; also short for PRCDDA (replaces enumeration area for 2001)
DIAG	Diagnostic fields (in HLTHOUT and GEOPROB files)
DISTANCE	Distance in km between two centroids (shortest or "great circle" distance)
DMTDIFF	Previous DMT if different than current DMT.
DMT	Delivery mode type (specified by Canada Post)
DPL	Designated place (a sub-municipal level code used for unincorporated places; unique within PR)
DPLTYPE	Designated place type.
EA	Enumeration area (also short for PRFEDEA)--only shown for 1996 census geography

EA96UID	1996 enumeration area (PRFEDEA for 1996).
ER	Economic region (formerly "subprovincial region"; short for PRER)
FED	Federal electoral district (unique within PR)
FSA	Forward sortation area (first three characters of postal code)
GEOPROB	SAS dataset name used for the output file containing all problem records (including errors, warnings and notes)
HLTHDAT	SAS dataset name used for the incoming records to be coded
HLTHOUT	SAS dataset name used for the output records after processing
HR	Health region (as defined by provincial health departments)
ID	Identifier (unique identifier or registration number, as defined by user)
INSTFLG	Institutional flag
IPPE	Neighbourhood income per person equivalent (based on 2001 DA summary data)
JCL	Job Control Language (for mainframe computers)
LAT	Latitude (North)
LDU	Local delivery unit (last three characters of the postal code)
LL	Latitude and longitude
LONG	Longitude (West)
NSREL	North-South relationship
OBS	Observations (records in SAS dataset)
PCCF	Postal Code Conversion File
PCODE	Postal code
PR	Province and region
QAIPPE	Quintile of neighbourhood income per person equivalent (within CMACA or residual)
PREC	Precision of geographic coding
PRCDDA	Province, census division and dissemination Area
PRFEDEA	Province, federal electoral district, and enumeration area--latter not shown for 2001
RESFLG	Residence flag
RPF	Representative point flag (indicates if latitude longitude refer to DA, BLK or BLKF)
SACTYPE	Statistical area classification type
SAS	Statistical Analysis System
SERV	Canada Post service type
SGC	Standard Geographic Classification code (PR CD CSD)
SOURCE	Source of geographic codes assigned (C D F I 3 2 1 0 or .)
SLI	Single link indicator (used mainly to avoid multiple matches when weights not used)
SUB	Health district (as defined by provincial health departments)
TRACTED	If centroid is in a census tracted area, then TRACTED=1.
UARA	Urban area, rural area code
WCF	Weighted Conversion File (PCCF-style records with PRCDDA and population-based weights derived from the 2001 and 1996 censuses, and household-based weights derived from the 1991 census)

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### Warning and disclaimer

*PCCF+* is intended only for authorized users of the PCCF. Installation, use and/or modification of the control program and related files are solely the responsibility of the user. The accuracy and consistency of the geographic coding generated by the package should be tested thoroughly and evaluated by the user--prior to employing the package for production runs.

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For Version 1, René Poulin of the Health Statistics Division, Statistics Canada suggested splitting the PCCF into unique and non-unique records to avoid "many-to-many" matching, as well as counting in modulo, random sorting and use of pointers to cycle through the duplicate records for the same postal code. Edward Ng, then also of the Health Statistics Division, and Ron Cunningham of the Geography Division implemented the routines for distance calculation. Laszlo Szabo, then of the Social Survey Methods Division and Geography Division, created the first Weighted Conversion File from the 1991 Census 2B postal codes and PCCF, and later the FSA to EA equivalences from the 1996 Census 2A postal codes. Jason Pole, then a University of Waterloo Coop student, and Edward Ng revised a routine for household-weighted matching to the Weighted Conversion File. The Small Area and Administrative Division (SAAD) derived the historic DMT field. Robert Parenteau, Richard Nadwodny, Nelson Kopustus, Peter Bissett, Brenda Wannell, Cam McEwen, Ingrid Ivanovs, and David Graham have each provided considerable help with successive versions of the PCCF, for which they have had responsibility within the Geography Division of Statistics Canada. The current definitions of health regions and health districts (where applicable) were supplied by provincial departments of health, and are subject to change in the future. Health Canada (LCDC/PPHB) provided essential support, encouragement and advice for successive upgrades to the PCCF and for various stages of the development and implementation of *PCCF+* (*Geocodes/PCCF*). Users in several other divisions of Statistics Canada and elsewhere have provided useful comments and suggestions. Thanks to the Data Liberation Initiative (DLI), this software is now freely available for eligible university teaching and research purposes. Thanks also to the Canadian Association of Public Data Users (CAPDU), which has been instrumental in helping DLI users to make effective use of the programs.

**Table 2**

Distribution of postal codes and census population by delivery mode type (DMT),  
September 2002 PCCF and May 2001 Census.

Delivery mode type (DMT)	PCCF					Census				
	Pcodes		Records		Rec/Pc	Pcodes		Population		Pop/Pc
	n	%	n	%	av	n	%	n	%	av
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<b>Total</b>	823,556	100.0	1,987,055	100.0	2.4	671,797	100.0	29,779,095	100.0	44
<b>Urban post office</b>										
<i>Urban services</i>										
A (ordinary urban)	717,537	87.1	1,264,191	63.6	1.8	638,936	95.1	20,115,945	67.6	31
B (apartments)	17,291	2.1	27,361	1.4	4.6	16,329	2.4	2,561,093	8.6	157
E (business, etc)	9,193	1.1	25,003	1.3	2.7	2,364	0.4	28,803	0.1	12
G (gov, inst, etc)	8,284	1.0	24,299	1.2	2.9	2,303	0.3	83,971	0.3	36
M (single PO box)	5,052	0.6	19,690	1.0	3.9	900	0.1	16,438	0.1	18
<i>Rural services from urban PO</i>										
H (rural route from urban PO)	996	0.1	58,459	2.9	58.7	1,014	0.2	859,807	2.9	848
J (general delivery)	645	0.1	2,425	0.1	3.8	282	0.0	3,311	0.0	12
K (group of PO boxes)	7,239	0.9	31,681	1.6	4.4	4,402	0.7	231,686	0.8	53
T (suburban service)	77	0.0	1,357	0.1	17.6	60	0.0	15,044	0.1	251
X (mobile route)	1	0.0	62	0.0	62.0	1	0.0	179	0.0	179
Z (retired)	52,064	6.3	203,759	10.3	3.9	15	0.0	282	0.0	19
<b>Rural post office</b>										
W (rural PO, all service types)	5,177	0.6	328,768	16.5	63.5	5,191	0.8	5,862,536	19.7	1,129

Note: PCCF Sept 2002. May 2001 census postal codes (with DMT from May 2001).

**Table 3**

Comparison of population-based coding errors using PCCF+ Version 3 (GEORES3A) versus coding errors using the PCCF single link indicator (SLI), versus coding errors using FSA-based imputation (FSA)

Level	FSA	SLI	R3A	Diff	Ratio
	%	%	%	SLI-R3A	SLI/R3A
PR Province	0.0	0.1	0.1	0.0	1.00
CD Census Division	0.5	0.6	0.3	0.3	2.00
CSD Census Sub-division	4.7	9.4	3.2	6.2	2.94
CMA Census Metropolitan Area /Census Agglom.	0.3	0.4	0.2	0.2	2.00
CT Census Tract	11.6	2.7	1.9	0.8	1.42
EA Enumeration Area	41.8	33.6	15.8	17.8	2.13
DPL Designated Place – applicable areas only	30.3	50.9	20.0	30.9	2.55

Note: Population-based coding errors were defined as the sum over all areas at this level of the absolute value of the population coded less the population known from the census sample, expressed as a percentage of the total population in all areas at this level. Based on simple 1% sample of individuals in the 1996 total population. Error percentages calculated after improbable census postal codes excluded from sample.

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## APPENDIX A: RECORD LAYOUT OF THE HLTHOUT FILE

```

DATA HLTHOUT;SET HLTHOUT;FILE HLTHOUT;
PUT
@ 1  ID          $CHAR12./ * RECORD IDENTIFICATION (AS INPUT)          */
@13  PCODE       $CHAR6. / * POSTAL CODE (AS INPUT)                    */
@19  RESFLG     $CHAR1./ * RESIDENCE FLAG ON PCODES IF DMT=E,G,M      */
@20  PR          $CHAR2./ * PROVINCE CODE (99=UNKNOWN)                 */
@22  CD          $CHAR2./ * CENSUS DIVISION CODE (00=UNKNOWN)          */
@24  CSD        $CHAR3./ * CENSUS SUBDIVISION CODE (999=UNKNOWN)      */
@28  CMA        $CHAR3./ * CMA OR CA CODE (999=UNKN;000=NOT APPL)    */
@32  CT         $CHAR6./ * CENSUS TRACT--URBAN CT'S ONLY              */
@39  DA         $CHAR4./ * DISSEMINATION AREA (9999=MISSING)          */
@43  BLK        $CHAR2./ * BLOCK (.9=MISSING)                          */
@45  INSTFLG    $CHAR1./ * INSTITUTIONAL FLAG                          */
@46  LAT        Z8./ * LATITUDE DEGREES(2)+DECIMALS(6)                */
@54  LONG       Z9./ * LONGITUDE DEGREES(3)+DECIMALS(6)                */
@64  DPL        $CHAR3./ * DESIGNATED PLACE (000=NOT APPL;999=UNKN)  */
@67  DMTDIFF    $CHAR1./ * PREVIOUS OR ALTERNATE DMT IF DIFFERENT    */
@68  DMT        $CHAR1./ * DELIVERY MODE TYPE:                          */
@69  LINK       $CHAR1./ * LINK TYPE (INCREASING CONFIDENCE)          */
@70  SOURCE     $CHAR1./ * SOURCE OF GEOGRAPHIC CODES                  */
@71  NCSD       1./ * NUMBER CSD POSSIBLE AT THIS PCODE 1-9+          */
@72  NCD        1./ * NUMBER CD POSSIBLE AT THIS PCODE 1-9+          */
@73  RPF        $CHAR1./ * REPRESENTATIVE POINT (CENTROID) FLAG      */
@74  SERV       $CHAR1./ * SERVICE TYPE                                */
@75  PREC       $CHAR1./ * PRECISION OF LAT LONG (0=LEAST;9=MOST)    */
@76  NADR       1./ * NUMBER OF ADDRESS RANGES FOR THIS PCODE        */
@78  CODER      $CHAR3./ * CODER: 'R4A'=GEORES4A SEPT 2002 PCCF      */
@82  CPCCODE    $CHAR4./ * CANADA POST COMMUNITY CODE (SEQUENTIAL)  */
@87  HR         $CHAR2./ * HEALTH REGION CODE (UNIQUE WITHIN PR)      */
@89  SUB        $CHAR3./ * HEALTH DISTRICT CODE (UNIQUE IN PR/PR+HR  */
(QC ONLY) */
@93  CSIZE      $CHAR1./ * COMMUNITY SIZE CODE (BASED ON CMACA 2001  */
POP) */
@95  QAIPPE     $CHAR1./ * NEIGHBOURHOOD INCOME QUINTILE (WITHIN  */
CMACA) */
@97  SACTYPE    $CHAR1./ * STATISTICAL AREA CLASSIF TYPE (INCL  */
TRACTED, MIZ) */
@99  NSREL      $CHAR1./ * NORTH-SOUTH RELATIONSHIP                    */
@101 BLKURB     $CHAR1./ * URBAN BLOCK INDICATOR (1=URBAN; 0=RURAL;  */
9=MISSING)*/
@103 FED1996    $CHAR3./ * FEDERAL ELECTORAL DIST, 1996 LIST (UNIQUE  */
IN PR) */
@107 ER         $CHAR2./ * ECONOMIC REGION (UNIQUE WITHIN PR)        */
@110 AR         $CHAR2./ * CENSUS AGRICULTURAL REGION (CROP DIST)-  */
UNIQUE IN PR*/
@113 CCS        $CHAR3./ * CENSUS CONSOLIDATED SUBDIVISION (UNIQUE  */
WITHIN PR) */
@117 EA96UID    $CHAR8./ * PR(2)+FED1987(3)+EA(3) FOR 1996 CENSUS  */
GEOGRAPHY */
@126 FED2003    $CHAR3./ * FEDERAL ELECTORAL DIST, 2003 LIST (UNIQUE  */
IN PR) */
/* THE FOLLOWING FIELDS APPLY TO ALTERNATE PROGRAMS R4XOLD I4XOLD  */
ONLY: */
@130 BTHDATC   $CHAR6. / * YYYYMM OF PCCF PCODE BIRTH DATE          */
@137 RETDATEC  $CHAR6. / * YYYYMM OF PCCF PCODE RETIREMENT DATE     */
@144 PCVDATEC  $CHAR6.; / * YYYYMM OF USERS' PCODE VINTAGE          */

```

The dataset HLTHOUT is sorted first by ID, then by PCODE. If the incoming file HLTHDAT contains any records with identical ID+PCODE, only a single example of each such records will be processed. Then when the HLTHOUT records are merged back to the main file, every record with the same ID+PCODE will be assigned the same geographic codes, even if more than one set of geographic codes were possible for that postal code.

## APPENDIX B: RECORD LAYOUT OF THE GEOPROB FILE

```

DATA GEOPROB;SET GEOPROB;BY LINK;FILE GEOPROB;
PUT
@ 1 ID          $CHAR12./* RECORD IDENTIFICATION (AS INPUT)          */
@ 13 PCODE     $CHAR6. /* POSTAL CODE (AS INPUT)                      */
@ 19 RESFLG    $CHAR1. /* RESIDENCE FLAG ON PCODES IF DMT=E,G,M          */
@ 20 PR        $CHAR2. /* PROVINCE CODE (99=UNKNOWN)                */
@ 22 CD        $CHAR2. /* CENSUS DIVISION CODE (00=UNKNOWN)         */
@ 24 CSD       $CHAR3. /* CENSUS SUBDIVISION CODE (999=UNKNOWN)     */
@ 28 CMA       $CHAR3. /* CMA OR CA CODE (999=UNKN;000=NOT APPL)   */
@ 32 CT        $CHAR6. /* CENSUS TRACT--URBAN CT'S ONLY (NO PCT)   */
@ 39 DA        $CHAR4. /* DISSEMINATION AREA (9999=UNKNOWN)        */
@ 43 BLK       $CHAR2. /* BLOCK (00=UNKNOWN)                        */
@ 45 INSTFLG   $CHAR1. /* INSTITUTIONAL FLAG                        */
/* NOTE: GEOPROB HAS DIFF LAYOUT FROM HLTHOUT BEGINNING WITH LAT */
@ 46 LAT       $CHAR2. /* LATITUDE DEGREES(2)                      */
@ 48 LONG      $CHAR2. /* LONGITUDE DEGREES(3)/10=(2)              */
@ 51 HR        $CHAR2. /* HEALTH REGION CODE (UNIQUE WITHIN PR)    */
@ 53 SUB       $CHAR3. /* HLTH DIST CODE (UNIQUE IN PR /PR+HR(QC))*/
@ 57 DPL       $CHAR3. /* DESIGNATED PLACE (999=UNKN;000=NOT APPL)*/
/* DIAGNOSTIC FLAGS: */
@ 61 DMTDIFF   $CHAR1. /* PREVIOUS DMT IF DIFFERENT                */
@ 62 DMT       $CHAR1. /* DELIVERY MODE TYPE                       */
@ 63 LINK      $CHAR1. /* LINK TYPE                                 */
@ 64 SOURCE    $CHAR1. /* SOURCE OF GEOGRAPHIC CODES               */
@ 65 NCSD      1. /* NUM CSD POSSIBLE AT THIS PCODE/FSA/FSA12*/
@ 66 NCD       1. /* NUM CD POSSIBLE AT THIS PCODE/FSA/FSA12 */
@ 67 RPF       $CHAR1. /* REPRESENTATIVE POINT (CENTROID) FLAG     */
@ 68 SERV      $CHAR1. /* SERVICE TYPE                              */
@ 69 PREC      $CHAR1. /* PRECISION (0=LEAST;9=MOST)               */
@ 70 NADR      1. /* NUMBER OF ADDRESS RANGES FOR THIS PCODE */
/* NO OTHER FIELDS OF HEALTHOUT PRESENT IN THE GEOPROB FILE */
/* FOLLOWING 3 FIELDS ONLY PRESENT IN GEOPROB FILE: */
@ 72 ADR       $CHAR50. /* BLDG NAME, STREET ADR, CITY              */
@123 CSDNAME   $CHAR8. /* FIRST 8 CHARACTERS OF CSD NAME           */
@131 CSdtype   $CHAR2.;/* CSdtype WITH '*' REPLACING TRAILING ' ' */

```

The dataset GEOPROB is sorted first by LINK, then by RESFLG, DMT (or DMTDIFF if DMT='Z'), PCODE, PR, CD, CSD, DA, BLK and ID. That ensures that records with similar types of problems will be grouped together, which will facilitate corrections.



### APPENDIX C: EXPLANATION OF FIELDS AND CODES APPEARING IN THE OUTPUT FILES AND PRINTOUTS

Except as noted, the following fields appear on both of the output files (HLTHOUT and GEOPROB) produced by PCCF+. When the same field appears on both files, it does *not* necessarily appear in the same position.

#### Identification (ID)

```
@ 1 ID      $CHAR12. /* ID OR REGIST NUMBER (AS INPUT) */
```

Record identification. This field will appear exactly as read in from the HLTHDAT file, including leading or trailing blanks, if any, plus all numbers, letters and special characters. The ID can be any combination of alphabetic, numeric or other characters.

#### Postal Code (PCODE)

```
@ 13 PCODE  $CHAR6. /* POSTAL CODE (ANANAN) */
```

Postal code. The first three characters of the postal code represent the Forward Sortation Area (FSA). The last three characters represent the Local Delivery Unit (LDU). A zero (0) in the second position of the postal code indicates service from a *rural* post office. Rural route services and suburban route services are also provided from *urban* post offices (where the second position of the postal code is not 0), in which cases the PCCF will show a Delivery Mode Type (DMT) of H (rural route service) or T (suburban route service).

Lower case alphabetic characters in the postal code field will be converted to upper case prior to matching.

If the province of residence is known (but nothing else), then the first letter of the postal code on your incoming file should correspond to the first letter for that province as assigned by Canada Post (for example, use B for a Nova Scotia resident of unknown address).

#### Residence Flag on Postal Code if DMT is E, G or M (RESFLG)

```
@ 19 RESFLG $1. /* RESIDENCE FLAG ON PCODES IF DMT=E,G,M: */
/* '@' POSSIBLE RESIDENCE */
/* '-' IMPROBABLE RESIDENCE */
/* '?' DMT=E,G,M BUT RES UNDETERMINED */
/* ' ' DMT NOT IN (E,G,M) */
```

If the delivery mode type is E, G or M, then RESFLG indicates postal codes for possible or improbable residence addresses, or postal codes 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 GEOPROB output (@72 ADR \$CHAR50.) for Canada Post building name and address information, if available.

#### Province, Census Division and Census Subdivision (PRCDCSD)

This field is composed of three subfields:

```
@ 20 PR      $CHAR2. /* PROVINCE CODE */
@ 22 CD      $CHAR2. /* CENSUS DIVISION CODE */
@ 24 CSD     $CHAR3. /* CENSUS SUBDIVISION CODE */
```

The form of this field tells you how much is known, and how much is unknown about each of the three subfields. The output will have one of the following forms (where each "n" represents a number from 0 through 9):

nnnnnnn	PR CD and CSD known
nnnn999	PR and CD known, CSD unknown
nn00999	PR known, CD and CSD unknown
9900999	PR CD and CSD unknown

See the 2001 *Standard Geographical Classification (SGC)* for lists of valid codes for PR PRCD and PRCDCSD. A missing CD is indicated by 00 (since 99 is a legitimate CD code in northern Quebec); other missing fields for SGC are filled with '9's. Files CDNAMES and CSDNAMES show the names of each CD and CSD.

**Census Metropolitan Area/Census Agglomeration and Census Tract (CMACT)**

This field is composed of two subfields:

```
@ 28 CMA      $CHAR3.      /* CMA OR CA CODE (000=NONE; 999=UNKNOWN) */
@ 32 CT       $CHAR6.2    /* CENSUS TRACT (000=NOT APPL;999.99=MISSING) */
```

The form of this field tells you how much is known, and how much is unknown about each of the subfields. The output will have one of the following forms (where each "n" represents a number from 0 through 9):

000 000.00	Not in any CMA or CA
nnn nnn.nn	CMA/CA with urban Census Tract
nnn 999.99	CMA/CA with urban Census Tract, but CT unknown
999 999.99	CMA/CA unknown, and CT unknown (if any)

Note that CMA codes 996-999 as shown in *2001 GeoSuite* are not true CMA codes as defined by the 2001 Standard Geographic Classification, but rather Metropolitan Influence Zones (MIZ). Only true CMA codes are shown here, plus 999 for unknown CMA, and 000 for not in any CMA (or CA).

**Dissemination Area (DA)**

```
@ 39 DA      $CHAR4.      /* DISSEMINATION AREA (UNIQUE WITHIN PRCD); 9999=MISSING */
```

The dissemination area is the smallest geographic unit for which population characteristics are diffused from the 2001 census. In previous censuses, that role was filled by the enumeration area, but for the 2001 census, the enumeration area was used for collection purposes only.

**Block (BLK)**

```
@ 43 BLK     $CHAR2.      /* DISSEMINATION BLOCK (UNIQUE WITHIN PRCD); 00=MISSING */
```

A dissemination block is an area bounded on all sides by roads and/or boundaries of standard geographic areas. Blocks cover all the territory of Canada. The block is the smallest geographic area for which population and dwelling counts are disseminated. There may be as many as 99 blocks within a DA, so the missing value for block is a period.

**Institutional Flag (INSTFLG)**

```
@ 45 INSTFLG $1. /* INSTITUTIONAL FLAG */
/* E=SCHOOL OR UNIVERSITY RESIDENCES */
/* H=HOSPITALS */
/* I=HOSPITALS (ONLY FROM BUILDING NAME) */
/* N=NURSING HOMES */
/* S=SENIORS RESIDENCES */
/* P=PRISONS, JAILS */
/* U=OTHER */
/* BLANK=NOT APPLICABLE (AREA NOT PREDOM INST)*/
```

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.

*Beginning with the following fields, the record layout of the GEOPROB file differs from that of the HLTHOUT file. Where fields are common to both files, only the layout for the HLTHOUT file is shown as program lines, although differences in the GEOPROB file may be mentioned in the field description and shown within square brackets.*

**Latitude and longitude (LAT LONG)**

```
@ 46 LAT     Z8. /* LATITUDE DEGREES(2)+DECIMALS(6) */ [@ 46 LAT Z2. on GEOPROB file]
@ 53 LONG     Z9. /* LONGITUDE DEGREES(3)+DECIMALS(6) */ [@ 48 LONG Z2. on GEOPROB file]
```

Latitude and longitude. If SOURCE=F, D, C or I, then the latitude and longitude shown refer to dissemination area, block or blockface coordinates (the RPF field tells you which, and the PREC field indicates the spatial precision of the coding). If

SOURCE=I, 3 or 2, then the latitude and longitude shown will be the average latitude and longitude of all postal codes in that FSA or aggregate of FSAs. The latter are clearly only approximate locations, so the corresponding distance calculations will also be only approximate. If the first two characters of the postal code were invalid, then latitude and longitude will be unknown, and each field will contain a single period ("."), which indicates a missing numerical value. Exceptionally for these two fields, 99999999 and 999999999 are not used to indicate missing values, since those would have been taken as legitimate values for the distance calculations, thus resulting in extreme distances, rather than missing distances. Note that in the GEOPROB file, in order to conserve space only two places after the implied decimal are shown.

### Designated Place (DPL)

```
@ 64 DPL $CHAR3. /* DESIGNATED PLACE (999=UNKN;000=NONE) */
[@ 57 DPL $CHAR3. on GEOPROB file]
```

The Designated Place (DPL) field is for a generally submunicipal level geography which was new with the 1996 census. For 2001, 1261 DPLs have been defined--only in some provinces--as a group of census blocks which refer to an unincorporated place usually within a single census subdivision (CSD), but some (84) cross CSD boundaries, of which a few (12) also cross census division (CD) boundaries. Note that because DPLs mostly occur in areas served by rural postal codes (where a single postal code serves a group of DAs and many census blocks), such areas are difficult or impossible to define with reasonable accuracy in terms of postal codes alone. File DPLNAMES shows the names of the DPLs assigned by provincial authorities.

### Diagnostic flags (DMTDIFF, DMT, LINK, SOURCE, NSCD, NCD, RPF, SERVE, PREC, NADR)

*Note: There are now 10 characters (with no spaces between them) for diagnostic flags on both the HLTHOUT and GEOPROB files. These diagnostic flags are for DMTDIFF, DMT, LINK, SOURCE, NSCD, NCD, RPF, SERV, PREC and NADR. In addition, the GEOPROB file and printout will show truncated address information (if applicable), or Designated Place Name (if applicable), or Canada Post Community Name or Census Division Name, and Census Subdivision Name and Census Subdivision Type (if known or estimated from partial matching).*

### Different Delivery Mode Type (DMTDIFF)

```
@ 67 DMTDIFF $1. /* PREVIOUS OR ALTERNATE DMT IF DIFFERENT */
[@ 61 DMTDIFF $1. on GEOPROB file]
```

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).

### Delivery Mode Type (DMT)

```
@ 68 DMT $1. /* DELIVERY MODE TYPE */ [@ 62 DMT $1. on GEOPROB file]
```

The Delivery Mode Type is a single character which will be W if delivery is from a rural post office, or will be another alphabetic character if delivery is from an urban post office, or 9 if DMT is missing or not applicable. The Delivery Mode Type is determined by Canada Post, except that, beginning with Version 3 of PCCF+, W is always used in place of blank for delivery from a rural post office.

- W Rural postal codes (regardless of type of service) now always have a DMT of W. Where more than 1 CSD is served by the rural post office, this will result in a Note to that effect on the GEOPROB 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/address, to see if they refer to a legitimate residence or office location. In most cases, the RESFLG field will indicate whether the postal code is probable or improbable as a place of residence. The building name and brief address are shown on the GEOPROB file. The legitimacy of a postal code 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/address, to see if they refer to a legitimate residence or office location. In most cases, the RESFLG field will indicate whether the postal code is probable or improbable as a place of residence. The building, company or institution name and brief address will be shown on the GEOPROB file. The legitimacy of postal codes 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 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.

*Special note concerning Delivery Mode Types H, J, K, M, R and T: Except on rare occasions, it is no longer 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 post office counter), K (pick-up from group of post office boxes), or T (suburban service delivery). Most postal codes with those DMTs can now be assigned a full set of geographic codes by reference to the WCF (SOURCE=C). That also applies to many postal codes with DMT of M (pick up from a single large post office box) and R (miscellaneous services; no longer used by Canada Post).*

H Rural route delivery from urban post office. For most rural routes, the WCF shows the 2001 Census 2A population weights associated with each PCODE/PRCDDA combination. As rural routes serve large areas, more than one CSD or CD may be linked to a postal code with this DMT, in which case the record will be output to the GEOPROB file with a Note to that effect. If the SOURCE is not equal to 'C', then only PR and CMA will be imputed from FSA, since the service area of these postal codes extends out into adjacent rural FSAs.

J General delivery (poste restante). Residence location may be available from census data (WCF, 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 (SOURCE=I) or on "most likely" values for the FSA (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 (SOURCE=I) or on "most likely" values for the FSA (SOURCE=3).

M Single post office box. If present on the WCF (SOURCE=C), will be fully coded. In most cases, the RESFLG field will indicate whether the postal code is probable or improbable as a place of residence. The building, company or institution name and brief address will be shown on the GEOPROB file. If not present on the WCF, postal codes with this DMT will result in an Error, since the PCCF only links postal codes 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 (SOURCE=I), or on based on "most likely" values for the FSA (SOURCE=3).

R Miscellaneous delivery services. Residence location may be available from census data (WCF). 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, but it may appear in the field for previous DMT.*

T Suburban service delivery (rare). Residence location may be available from census data (WCF). 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 GEOPROB file. However, since in such cases the first three characters of the postal code are known to be valid, then a "most likely" PR and CMA may often be imputed and an average LAT and LONG for the FSA would be assigned by the programs.*

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. Usually geography for records with rural postal codes will be derived from the Weighted Conversion File (SOURCE=C).

Z Retired postal codes. Usually the DMTDIFF field will show the previous DMT for retired postal codes. If so, the LINK 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 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 WCF, hence DMT is unknown. These will result in an Error message as well as output to the GEOPROB file. A partial set of geographic codes may still be assigned based on the first 1, 2 or 3 characters of the postal code (SOURCE=1, 2, 3 or I).

### Link type code (LINK) - (formerly PROB prior to Version 4)

@ 69 LINK \$1. /\* LINK TYPE (INCREASING CONFIDENCE) \*/ [@ 63 LINK \$1. on GEOPROB file]

The meanings of the numbers in this field are as follows:

- 0 Error: No match to PCCF (UNIQ, DUPLS, or WCF).
- 1 Error: Linked to PO geography.
- 2 Warning: Non-residential. DMT=E, G or M and EGMRES=- (probable non-residential).
- 3 Warning: Business building (may possibly not be a legitimate residence). DMT=E and EGMRES=blank.
- 4 Warning: Commercial or institutional (check if legitimate residence). DMT=G or M and EGMRES=blank.
- 5 Warning: Retired postal code (slight chance of DMT problem prior to retirement, if DMT=Z, and DMTDIFF=blank).
- 6 Note: Multiple match to CSD. CSD assigned by random allocation among possible CSDs shown in PCCF, with equal weight to each DA or BLK served. No further action required.
- 7 Note: Multiple match to CSD. CSD assigned by random allocation among possible CSDs shown in WCF, based on distribution of population by postal code and DA 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 GEOPROB file or printout.*

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.

### Source of Geographic Codes (SOURCE)

@ 70 SOURCE \$1. /\* SOURCE OF GEOGRAPHIC CODES AND LAT/LONG \*/ [@ 64 SOURCE \$1. on GEOPROB file]

The possible values of this field are as follows:

- 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).
- I Full geography was imputed from the first 3 characters of a postal code (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 (if 90% certain). Average latitude and longitude of the FSA were assigned.
- 2 A partial set of geographic codes were assigned based on only the first 2 characters of this postal code. Average latitude and longitude of the FSA12 were assigned (if 90% certain). CT and DA+BLK always set to missing values. All of the records with this SOURCE are due to unknown (non-existent) postal codes.
- 1 A province code was assigned based on only the first character of this postal code. No other geographic codes or latitude and longitude were assigned. All of the records with this SOURCE are due to unknown (non-existent) postal codes.
- 0 The first character of this postal code is not in the set used for Canadian postal codes. No geographic codes assigned.
- V A full set of geographic codes and latitude/longitude were derived from an exact match to a PCCFuniq record for a postal code with an FSA of VIH or V9G, including geography from the period prior to the rebirth of those FSAs in their new locations. This SOURCE only occurs where the program R4xOLD or I4xOLD is used to recode British Columbia FSAs which were moved by Canada Post.

### Coding Completing Summary Code (CCSUM)

In Versions 3 and 4, this field is not present in either output file, but is calculated for frequency tables in the printouts. This field shows how many geographic codes were assigned. It is the sum over all of the coding completion variables, which each have a value of 1 if a given geographic code was assigned.

- 0 No geographic codes were assigned, or latitude and longitude.
- 1 One geographic code was assigned: a province code, with no latitude or longitude.
- 2 Two geographic codes were assigned: a province and Census Division or Census Metropolitan Area / Census Agglomeration code, plus an average latitude and longitude for the FSA or aggregate of FSAs.
- 3 Three geographic codes were assigned: province, Census Division and Census Subdivision; or province, Census Division and Census Metropolitan Area or Census Agglomeration, plus an average latitude and longitude for the FSA or aggregate of FSAs.
- 4 Four geographic codes were assigned: province, Census Division, Census Subdivision, and Census Metropolitan Area or Census Agglomeration, plus an average latitude and longitude for the FSA or aggregate of FSAs.
- 6 Six geographic codes were assigned: province, Census Division, Census Subdivision, Census Metropolitan Area or Census Agglomeration, Census Tract (if applicable) and Dissemination Area, plus the latitude and longitude of the Dissemination Area.
- 7 All 7 geographic codes were assigned: province, census division, census subdivision, census metropolitan area or census agglomeration, dissemination area, and census block, plus the latitude and longitude of the block or blockface.

### Number of Census Subdivisions (NCSD)

```
@ 71 NCSD 1. /* NUMBER CSD POSSIBLE AT THIS PCODE (1-9+) */ [@ 65 NCSD 1. on GEOPROB file]
```

This field indicates the number of Census Subdivisions served in whole or in part by this postal code. A value of 9 indicates 9 or more. Most urban postal codes serve only one Census Subdivision.

### Number of Census Divisions (NCD)

```
@ 72 NCD 1. /* NUMBER CD POSSIBLE AT THIS PCODE (1-9+) */ [@66 NCD 1. on GEOPROB file]
```

This field indicates the number of Census Divisions served in whole or in part by this postal code. A value of 9 indicates 9 or more. Most urban postal codes serve only one Census Division.

### Representative Point Flag (RPF)

```
@ 73 RPF $1. /* REPRESENTATIVE POINT FLAG */ [@67 RPF $1. on GEOPROB file]
/* FOR LAT & LONG CENTROID (REP POINT): */
/* 1=BLOCKFACE REP POINT */
/* 2=BLK REP POINT DETERMINED BY PCCF */
/* 3=BLK REP POINT IMPUTED W/IN DA (SOURCE=F D) */
/* 4=BLK REP POINT IMPUTED W/IN PCODE (SOURCE=C) */
/* 5=DA REP POINT IMPUTED W/IN PCODE (SOURCE=C) */
/* 6=DA REP POINT IMPUTED W/IN FSA (SOURCE=I) */
/* 8=AV LAT LONG FOR FSA/PART (SOURCE= 3 2 1) */
/* 9=REP POINT MISSING */
```

### Service Type (SERV)

```
@ 74 SERV $1. /* SERVICE TYPE (1,2=WITH STREET ADR) */ [@68 SERV $1. on GEOPROB file]
/* 1=STREET ADR W/ LETTER CARRIER SERVICE */
/* 2=STREET ADR W/ ROUTE SERVICE */
/* 3=PO BOX */
/* 4=ROUTE SERVICE W/O STREET ADR */
/* 5=GENERAL DELIVERY */
/* 9=UNKNOWN (WHEN SOURCE=I 3 2 1) */
/* 0=UNKNOWN (WHEN SOURCE=F D C) */
```

### Precision (PREC)

```
@ 75 PREC $1. /* PRECISION OF LAT LONG (0=LEAST;9=MOST) */ [@69 PREC $1. on GEOPROB file]
/* 9=1 BLKF IN 1 DA; DMT IN (A B E G) */
/* 8=1 BLK IN 1 DA; DMT IN (A B E G) */
/* 7=1 DA; DMT IN (A B E G) */
/* 6=2+ DA'S; DMT IN (A B E G) */
/* ABOVE SERVICE POINTS < 200 M DIST */
/* SO DA'S ADJACENT AND FEW */
```

```

/* 5=1+ DA'S; DMT IN (H-Z), FROM WCF POP WEIGHTS */
/* 4=DA, ETC IMPUTED FROM FSA POP WEIGHTS */
/* 3=CODES IMPUTED FROM FSA W/OUT WT */
/* 2=CODES IMPUTED FROM FSA12 W/OUT WT */
/* 1=PR IMPUTED FROM FSA1 */
/* 0=NO GEOGRAPHIC CODING POSSIBLE (NOT EVEN PR) */

```

### Number of Address Ranges (NADR)

```
@ 76 NADR 1. ; /* NUMBER ADDRESS RANGES FOR THIS PCODE (1-9+) */ [ @70 NADR 1. on GEOPROB file ]
```

This field indicates the number of address ranges served by this postal code. A value of 9 indicates 9 or more. The address ranges may be on different streets. Only the first or last address range (if applicable) is shown in the problem file output and printout

The following two fields (CODER and CPCCODE) are not present on the GEOPROB file:

### Coder (CODER)

```
@ 78 CODER $3. /* CODER: R4A=GEORES4A SEPT 2002 PCCF */ [ not on GEOPROB file ]
```

The PCCF+ program and version is indicated by the CODER field. For example, CODER I4A indicates that the GEOINS program was run using the September 2002 vintage of the PCCF. Information about the coder is necessary for interpretation of the Canada Post Community Code (CPCCODE), and for understanding why certain categories of postal codes were coded the way they were. Using the wrong program to do the coding (GEORES for office coding, or GEOINS for residential coding—the opposite of what was intended) could easily go undetected without this field.

### Canada Post Community Code (CPCCODE)

```
@ 82 CPCCODE $CHAR4. /* CANADA POST COMMUNITY CODE (SEQUENTIAL) */ [not on GEOPROB file]
/* WARNING: THIS CODE CHANGES WITH EACH VINTAGE */
/* OF PCCF, SO MUST ONLY BE USED WITH CPCNAMES */
/* FILE ASSOCIATED WITH ABOVE CODER */
/* WILL BE MISSING IF SOURCE=C */
/* NOTE: TO REGENERATE PROBLEM FILE FROM GEOG1: */
/* IF LINK LT 5; MERGE TO LOOKUP CPCOMM */
/* CSDNAMES CDNAMES */

```

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, deletion of a community, or change in spelling of a community name. That is why the CPCCODE can only be interpreted if correctly paired with the corresponding list of communities (see file PCCFYMM.CPCOMM). For example, CODERs R4A and I4A use the community list of September 2002; the use of a list from any other month or year would be meaningless.

### HR Health Region

```
@ 87 HR $CHAR2. /* HEALTH REGION CODE (UNIQUE WITHIN PR) (99=MISSING) */
[ @ 51 HR $CHAR2. on GEOPROB file ]
```

Health regions are subprovincial 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 DA+BLK has been uniquely assigned to a single health region. Since each health region covers many DAs, 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 HR code is only unique within a given province. 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 1 June 1 2003, but the definitions may be changed by provinces at any time, particularly in provinces without a long history of producing data by health region. See Appendix H1 for a summary of health regions by province and type, and Appendix H3 for a complete list of health regions. File HRNAMES shows the name of each HR, including unofficial descriptive names for unnamed HRs. Source: Statistics Canada catalog 82-402-XIE, revised 30 September 2003.

**Health District (SUB)**

```
@ 89 SUB $CHAR3. /* HEALTH DISTRICT CODE - UNIQUE WITHIN PR OR PR+HR (QC ONLY) */
[@ 53 SUB $CHAR3. on GEOPROB file] /* BLANK=NOT APPLICABLE; 999=APPLICABLE BUT MISSING */
```

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 Ontario, all health districts except two (Sudbury and Porcupine) completely respect health region boundaries, and even those two exceptions mostly respect the health region boundaries. In all cases, a health district code is only unique within a given province. In Quebec, the health district (CLSC) code is only unique within the province and health region. Where a province uses only two characters to represent a health district, the third character will be zero. See Appendix H2 for a summary of health districts by province and type, and Appendix H4 for a complete list of health districts. File SUBNAMES shows the name of each health district. Source: Same as for health regions. Alphabetic codes corresponding to Toronto Health Planning Areas (major and minor areas) have been appended as a suffix to Ontario health district code 95. The definitions for the latter were provided by the Toronto Public Health Department.

The following 5 fields are not present on the GEOPROB file:

**Community Size (CSIZE)**

```
@ 93 CSIZE $1. /* COMMUNITY SIZE CODE (BASED ON CMACA POP2001) */ [not present on GEOPROB file]
/* 1=1,250,000+ */
/* 2= 500,000-1,249,999 */
/* 3= 100,000- 499,999 */
/* 4= 10,000- 99,999 (ANY CMACA < 100,000) */
/* 5= < 10,000 (ANY NON-CMACA) */
/* 9= MISSING */
```

Community Size is defined in terms of the 2001 census population in each census metropolitan area or census agglomeration (CMA or CA), as shown above. Community Size 1 consists of Toronto, Montreal and Vancouver CMAs. Community Size 2 consists of Ottawa-Hull (Gatineau), Edmonton, Calgary, Québec, Winnipeg and Hamilton CMAs. Community Size 3 includes all 18 other CMAs plus 7 of the larger CAs. Community Size 4 includes all 106 other CAs. Community Size 5—“rural and small town Canada”—includes all places not included in any CMA or CA. (i.e., places with an urban area population less than 10,000, plus rural areas). *The lower threshold of CSIZE=5 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 is valid) can be assigned to a CMA or CA, and thus to a CSIZE category.

**Neighbourhood Income Quintile (QAIPPE)**

```
@ 95 QAIPPE $1. /* 2001 NEIGHBOURHOOD INCOME QUINTILE (WITHIN CMACA): */
/* 1=LOWEST INCOME QUINTILE */
/* 5=HIGHEST INCOME QUINTILE */
/* 9=MISSING */ [not present on GEOPROB file]
```

Neighbourhood income per person equivalent (IPPE) is a household size-adjusted measure of household income, based on 2001 census summary data at the DA level, and using person-equivalents implied by the 2001 low income cut-offs (LICOs). Note that the 2001 single person equivalents were 1.00 for 1 person, 1.25 for 2 persons, 1.55 for 3 persons, 1.95 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 CMA, CA or provincial residual area not in any CMA or CA, the DA average IPPE was used to rank all DAs, 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 CMA or CA would have about an equal percentage of the population in each income quintile.



The following five fields are new beginning with Version 4:

### Statistical Area Classification Type (SACTYPE)

```
@97 SACTYPE    $1.    /* STATISTICAL AREA CLASSIFICATION TYPE          */
                /* 1=CENSUS METROPOLITAN AREA                */
                /* 2=TRACTED CENSUS AGGLOMERATION            */
                /* 3=NON-TRACTED CENSUS AGGLOMERATION        */
                /* 4=NON-CMACA, STRONG CMACA INFLUENCE       */
                /* 5=NON-CMACA, MODERATE CMACA INFLUENCE    */
                /* 6=NON-CMACA, WEAK CMACA INFLUENCE        */
                /* 7=NON-CMACA, NO CMACA INFLUENCE          */
                /* 8=NON-CMACA, TERRITORIES                 */
                /* 9=NON-CMACA, CMACA INFLUENCE UNKNOWN     */
                /* .=MISSING SACTYPE                          */
```

In census metropolitan areas and census agglomerations, the Statistical Area Type is defined by characteristics of the CMACA. In areas outside of any census metropolitan area or census agglomeration, the Statistical Area Type is defined by characteristics of the census subdivision, based on commuting flows to work in census metropolitan areas or census agglomerations (metropolitan influence zone or MIZ). For more details, see the following source: McNiven C, Puderer H, Janes D. *Census Metropolitan Area and Census Agglomeration Influence Zones (MIZ): A Description of the Methodology*. Geography Working Paper Series No. 2000-2. Catalogue No. 92F0138MPE. Ottawa: Geography Division, Statistics Canada, 2000.

### North-South Relationship (NSREL)

```
@ 99 NSREL     $1.    /* NORTH-SOUTH RELATIONSHIP:                            */
                /* N=NORTH                                    */
                /* P=NORTH TRANSITION                       */
                /* R=SOUTH TRANSITION                       */
                /* S=SOUTH                                    */
                /* 9=MISSING                                  */
```

The North-South relationship classification (NSREL) is described in the following source: McNiven C, Puderer H. *Delineation of Canada's North: An examination of the North-South relationship in Canada*. Geography Working Paper Series No. 2000-3. Catalogue No. 92F0138MPE. Ottawa: Geography Division, Statistics Canada, 2000. For PCCF+, NSREL is determined by the 1996 census subdivision code.

### Urban Block Flag (BLKURB)

```
@101 BLKURB    $1.    /* URBAN BLOCK FLAG                                     */
                /* 1=URBAN BLOCK                                       */
                /* 0=RURAL BLOCK                                       */
                /* 9=URBAN-RURAL STATUS OF BLOCK UNKNOWN    */
```

Coding to block in areas served by rural postal services is always imputed from dissemination area, based on population weights for each block served, so classification of such blocks as urban or rural is only probabilistic. Classification based on urban postal codes is much more certain, as the specific block is almost always known with much greater certainty. Note also that within CMACAs, entire census subdivisions may be classified as urban, regardless of the population density of particular blocks. This field is defined as follows: IF UARA GE 9910 THEN BLKURB=0; ELSE IF UARA NE . THEN BLKURB=1;

### Federal Electoral District -- 1996 Representation Order (FED1996)

```
@103 FED1996   $CHAR3. /* FED ELECT DISTRICT, 1996 LIST (999=MISSING); UNIQUE WITHIN PR */
```

A Federal Electoral District is the area represented by member of the House of Commons. The Federal Electoral Districts used for the 2001 Census were based on the 1996 Representation Order (list). If missing, FED will be set to 999. If an exact match to the PCCF was not possible, but the postal code indicated an urban FSA, then the FED may have been imputed proportionally to the population using that FSA (SOURCE=I). Otherwise (when SOURCE=3, 2 or 1), the FED will be 999. File FEDNAMES shows the official name of each FED.

**Economic Region (ER)**

```
@107 ER      $2. /* ECONOMIC REGION (UNIQUE WITHIN PR)                */
```

An economic region (formerly "subprovincial region") is a collection of complete census divisions (except for one CD in Ontario which is split between 2 ERs) which is used for analysis of regional economic activity. The Ontario CD of Halton (3524) is split between the ER of Hamilton-Niagara Peninsula and the ER of Toronto. The ER code is only unique within a given province or territory. File `ERNAMES` shows the name of each ER.

**Census Agricultural Region (AR) or Crop District**

```
@ 110 AR      $CHAR2. /* CENSUS AGRICULTURAL REGION (CROP DISTRICT)-UNIQUE IN PR */
                /* 00=TERRITORIES; 99=MISSING BUT APPLICABLE                */
```

Census agricultural regions are used by the Census of Agriculture for disseminating agricultural statistics. ARs are composed of groups of adjacent census divisions, except in Saskatchewan, where they are composed of groups of adjacent census consolidated subdivisions (CCS) not respecting census division boundaries. ARs are not defined for the territories. The AR code is unique only when preceded by the province code. File `ARNAMES` shows the name of each AR, including unofficial descriptive names for otherwise unnamed ARs.

**Census Consolidated Subdivision (CCS)**

```
@ 113 CCS      $CHAR3. /* CENSUS CONSOLIDATED SUBDIVISION--UNIQUE IN PR (999=MISSING)*/
```

CCSs are composed of groups of adjacent census subdivisions within the same census division. The CCS code is unique only when preceded by the province and census division codes. File `CCSNAMES` shows the name of each CCS, which is the same as that of its largest CSD.

**1996 Enumeration Area (EA96UID)**

```
@ 117 EA96UID  $CHAR8. /* 1996 ENUMERATION AREA = PR(2)+FED(3)+EA(3) */
```

This field shows the 1996 enumeration area (PRFEDEA), based on the 2001 dissemination block to 1996 enumeration area correspondence file shown in Appendix to the 2001 *GeoSuite* (Statistics Canada catalogue 92F0150XCB, Geography Division, Statistics Canada, Ottawa, March 2002). In cases where a 2001 dissemination block corresponded to more than one 1996 enumeration area, for the purposes of this field on *PCCF+*, a single link was made to the 1996 enumeration area with the highest population among the possible choices.

**Federal Electoral District -- 2003 Representation Order (FED2003)**

```
@ 126 FED2003  $CHAR3. /* FEDERAL ELECTORAL DISTRICT, 2003 LIST */
```

*The following three fields (ADR, CSDNAME, CSDTYPE) are not present on the HLTHOUT file, they only appear on the GEOPROB file:*

**Building Name and Address (ADR)**

```
@ 72 ADR      $50. /* BLDG NAME (IF APPL), STREET ADR, CITY */ [only on GEOPROB file]
```

This field shows either (1) a somewhat abbreviated building name (if applicable), plus a street address and Canada Post community name (if available), or (2) a designated place name (if applicable) followed by the designated place type within parentheses, followed by a space plus the Canada Post community name (if available), followed by a colon (:) plus an abbreviated census division name and type code (if available), or (3) the Canada Post community name (if available), followed by a colon, plus an abbreviated census division name and type code. The contents of this field are intended to provide the most useful written description of the exact location which can be shown more or less readably in 50 spaces. *This field only applies to problem records; it is not shown on the HLTHOUT file or printout.*

With respect to Canada Post community names, note that the service areas of postal communities are defined by Canada Post with little regard for municipal boundaries established by local authorities, and that is frequently a source of confusion for geographic coding. Also, many smaller rural municipalities have no post office of their own, so those municipal names will appear only rarely in mailing addresses.

The census division name (if present) shows the first 16 characters of the alphabetic name corresponding to the PRCD code of the *Standard Geographical Classification*, plus a space, followed by the 3-character CSDTYPE. If the CD field is missing

(00), the 20 characters immediately following the colon will be blank. If a building name and address plus Canada Post community name are shown, then no census division name and type will be shown.

### Census Subdivision Name (CSDNAME)

```
@123 CSDNAME $CHAR8. /* FIRST 8 CHAR OF CSD NAME */ [only on GEOPROB file]
```

This field contains the first 8 characters of the Census Subdivision Name. If the Census Subdivision (the last three positions of the PRCDCSD field) is missing (999), then the CSDNAME field will be blank. *A truncated version of the CSDNAME field is shown only on the GEOPROB file and printout; it does not appear on the HLTHOUT file or printout.* See file CSDNAMES for the complete name and corresponding CSDTYPE.

### Census Subdivision Type (CSDTYPE)

```
@131 CSDTYPE $2. /* CSD TYPE WITH * REPLACING TRAILING BLANK */ [only on GEOPROB file]
```

This field contains a one or two character abbreviation of the Census Subdivision Type. To facilitate uploading and downloading, if the second (and last) character of this field is blank, the blank will be replaced by an asterisk in order to ensure that every record will be of the same fixed length. (Uploading and downloading utility programs frequently delete trailing blanks, which would otherwise produce variable record lengths for successive records. The asterisk at the end of each record ensures that this won't happen. *This field is shown only on the GEOPROB file and printout; it does not appear on the HLTHOUT file or printout.*

### Distance (DISTANCE)

This field shows the distance (in km) from the latitude and longitude centroid of the Montreal Children's Hospital to the centroid of the HLTHOUT record. If latitude and longitude of the HLTHOUT record could not be determined (that is, if their values were "."), then DISTANCE will be missing (indicated by a single period "."). *This field appears only on the printout of the HLTHOUT dataset. It is not written to the corresponding file, since DISTANCE was calculated merely as an illustration of how the latitude and longitude information can be used. For more details on the use of latitude and longitude for the calculation of distances using the PCCF, see Ng E and Wilkins R, How far is it to the nearest hospital? Health Reports 1993;5(2):157-177. A SAS program for calculating distances from each record in one file to the record for the record with the closest latitude and longitude on another file is included (DIST4X.SAS); see Appendix K.*

### Message (MESSAGE)

*A brief explanatory message corresponding to the link type code (LINK) appears in the summary table and on the GEOPROB printout only; it does not appear in the GEOPROB or HLTHOUT files.*

```
-----
/* BRIEF MESSAGE DESCRIBING PROBLEM */
-----
0 'ERROR: NO MATCH TO PCCF---CHECK PCODE/ADDRESS &OR CODE MANUALLY';
1 'ERROR: LINKED TO PO GEOG---CODE MANUALLY IF RESID ADD AVAILABLE';
2 'WARNING: NON-RESIDENTIAL----CHECK PCODE/ADDRESS (LEGITIMATE RES?)';
3 'WARNING: BUSINESS BLDG-----CHECK PCODE/ADDRESS (LEGITIMATE RES?)';
4 'WARNING: COMMERCE/INSTITU----CHECK PCODE/ADDRESS (LEGITIMATE RES?)';
5 'WARNING: RETIRED PCODE-----CHECK PCODE/ADDRESS IF OLD DMT UNKNOWN';
6 'NOTE: MULT MATCH TO CSD---DISTRIBUTED AMONG APPLIC DA/BLK/BLKFACE';
7 'NOTE: MULT MATCH TO CSD---DISTRIBUTED BY POP WEIGHTS OBSERVED';
9 'NO PROB (ERR,WARN,NOTE)-----NO ACTION REQUIRED';
-----
```

The link type codes (LINKs) and corresponding messages (MESSAGEs) 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. The "no problem" message only appears on the summary table, since records with no problems (error, warning or note) are not part of the GEOPROB file or printout.

The following three fields are only present on the output from R4xOLD and I4xOLD, which are used with older data for assigning geographic codes to British Columbia FSAs which have now been moved by Canada Post:

#### Birth date of postal code as used in this location (BTHDATC)

```
@130 BTHDATEC $CHAR6. /* YYYYMM OF BIRTH DATE OF PCCF PCODE */  
[only present on OLDCODES and HLTHOUT2 files produced by R4xOLD or I4xOLD]
```

#### Retirement date of postal code as used in this location (RETDATC)

```
@137 RETDATEC $CHAR6. /* YYYYMM OF RETIREMENT DATE OF PCCF PCODE */  
[only present on OLDCODES and HLTHOUT2 files produced by R4xOLD or I4xOLD]
```

#### Postal code vintage (PCVDATEC)—for alternate programs R4xOLD, I4xOLD only

```
@144 PCVDATEC $CHAR6. /* YYYYMM OF USER'S POSTAL CODE VINTAGE (AT THIS LOCATION) */  
[from user input and written to OLDCODES and HLTHOUT2 files produced by R4xOLD or I4xOLD]
```

In this context, vintage refers to the year and month when the user's postal code was reported or generated (looked up). In most cases, the date of the event will be a reasonable proxy for the vintage of the postal code on the user's file. However, if postal codes were missing when the data were collected, and subsequently looked up or generated (manually or by computer), then the vintage of the postal code may be months or even years later than the date of the event. Note that it is common for retired postal codes to remain in use for many months or even years after their retirement by Canada Post. However, it is safe to assume that newly created postal codes are not reported until after the postal code birth date indicated by Canada Post.

This field is created by user input and is only present in the OLDCODES and HLTHOUT2 files produced by the supplemental programs R4xOLD and I4xOLD which are used to assign the old geographic coding to British Columbia FSAs V1H and V9G. Postal codes with those two FSAs were first retired and then subsequently moved and reused by Canada Post. V1H was moved about 400km south beginning 1 July 1997, while V9G was moved about 100km south beginning 1 April 1999. Beginning with Version 3E, the regular programs GEORES3x and GEOINS3x print a warning if your data contain either of the two FSAs which were moved. *If your data do not include postal codes with those FSAs, or if your data only contains postal codes of vintage April 1999 or later, then use of the alternate programs is unnecessary and will have no effect on the coding produced by the regular programs GEORES4x and GEOINS4x.*

**APPENDIX D:  
SAMPLE OUTPUTS  
FROM THE PCCF+ PACKAGE**

**Summary table of results of the automated geographic coding**

SUMMARY OF AUTOMATED CODING RESULTS USING GEOCODES/PCCF VERSION 4

RECORDS	PERCENT	PROB	MESSAGE	ACTION
3996	100.00		TOTAL RECORDS INPUT FROM HLTHDAT (ID + PCODE)	
131	3.28	0	ERROR: NO MATCH TO PCCF---CHECK PCODE/ADDRESS &OR CODE MANUALLY	
5	0.13	1	ERROR: LINKED TO PO GEOG--CODE MANUALLY IF RESID ADD AVAILABLE	
3	0.08	2	WARNING: NON-RESIDENTIAL--CHECK PCODE/ADDRESS (LEGITIMATE RES?)	
3	0.08	3	WARNING: BUSINESS BLDG----CHECK PCODE/ADDRESS (LEGITIMATE RES?)	
241	6.03	4	WARNING: COMMERC/INSTITU--CHECK PCODE/ADDRESS (LEGITIMATE RES?)	
65	1.63	5	WARNING: RETIRED PCODE----CHECK PCODE/ADDRESS IF OLD DMT UNKNOWN	
1	0.03	6	NOTE: MULT MATCH CSD-PCCF-DISTRIBUTED AMONG APPLIC DA/BLK/BLKF	
535	13.39	7	NOTE: MULT MATCH CSD-WCF--DISTRIBUTED BY POP WEIGHTS OBSERVED	
3012	75.38	9	NO PROB (ERR,WARN,NOTE)---NO ACTION REQUIRED	
8	0.20		NOT CODED AT ALL	
39	0.98		PARTIALLY CODED TO PR ONLY	
2	0.05		PARTIALLY CODED TO PR + (CD OR CMA)--& APPROX LAT LONG	
12	0.30		PARTIALLY CODED TO PR+CD+CMA--AND APPROX LAT LONG	
8	0.20		PARTIALLY CODED TO PR+CD+CMA+CSD--AND APPROX LAT LONG	
3927	98.27		FULLY CODED TO PR+CD+CMA+CSD+CT+BLK--AND DA/BLK/BLKFACE LAT LONG	



Sample printout from the GEOPROB dataset

GEOCODES/PCCF VERSION 4

PARTIAL PRINT OF GEOPROB FILE (ERRORS & WARNINGS, BUT NO NOTES)

ID	PCODE	PRCDCSD	CMA	CT	DABLK	LL	HRSUB	DPL	DIAG	BLDG NAME,ADR(CPCOMM:CMA/DPL)	:CDNAME	CDTYP	CSDNAME	TY
0 ERROR: NO MATCH TO PCCF---CHECK PCODE/ADDRESS &OR CODE MANUALLY														
1202050810	A1X5J7	1001485	001	301.02	013501	4705	01	000	90I31994.	St. John's CMA	:Avalon Peninsul	DIV	CONCEPTIT*	
1201026310	B2M5B3	1200999	999	999.99	999900	4506	99	999	902..892.		:		*	
1302025710	G0K2K0	2410005	000	000.00	007009	4806	01	000	90I949949	NOT CMACA	:Rimouski-Neiget	MRC	ESPRIT-SM*	
1301031010	H9G3X9	2466140	462	521.01	235801	4507	06	000	90I31994.	Montréal CMA	:Montréal	CU	DOLLARD-V*	
1602451310	K7K2T0	3510010	521	008.00	018405	4407	0241	000	90I11994.	Kingston CMA	:Frontenac	CTY	KINGSTONC*	
1604153110	M3Y4A1	3520005	535	999.99	999900	4307	999999	999	902..892.	Toronto CMA	:Toronto	DIV	TORONTO C*	
1604305110	R3N3L2	4611040	602	008.00	038001	4909	10	000	90I11994.	Winnipeg CMA	:Winnipeg	DIV	WINNIPEGC*	
1802106710	V1S4X1	5933042	925	006.00	004302	5012	14	000	90I21994.	Kamloops CAL	:Thompson-Nicola	RD	KAMLOOPSC*	
1802068310	V4T4J5	5935027	915	102.02	015502	4911	13	175	90I41994.	Kelowna CAL:Westbank (UNP)	:Central Okanaga	RD	CENTRAL RD	
1803049810	V9C5T3	5917044	935	154.02	048004	4812	41	000	90I51994.	Victoria CMA	:Capital	RD	LANGFORDDM	
1 ERROR: LINKED TO PO GEOG--CODE MANUALLY IF RESID ADD AVAILABLE														
1604055531	R4J1A1	4611999	602	999.99	999900	4909	99	000	JZ1I22824.	HEADINGLEY:Winnipeg CMA	:Winnipeg	DIV	*	
1201059710	A1X4G9	1001999	001	999.99	999900	4705	99	000	K1I318341	BOX 18001:18060 STN MAIN UPPER GULLIES			*	
2 WARNING: NON-RESIDENTIAL PCODE--CHECK PCODE/ADDRESS (LEGIT RES?)														
1304154932	H3L1B9	-2400999	462	999.99	999900	.	. 99	999	E2F119191	CENTRE MEDICAL HENRI-BOURASSA 222 HENRI-BOURA MONT			*	
1603422510	L4C9S7	-3500999	535	999.99	999900	.	. 999999	999	E2F119191	BUSINESS BUILDING 120 NEWKIRK RD RICHMOND HILL			*	
1602226510	T2S2T6	-4800999	825	999.99	999900	.	. 99	999	E2F119191	FOODVALE OFFICE COMPLEX 5005 ELBOW DR SW CALGARY			*	
1601088310	T5N4A3	-4800999	835	999.99	999900	.	. 99	999	E2F119191	PEOPLES TRUST PLAZA 10216 124 ST NW EDMONTON			*	
1302161110	H3N2Y1	-2400999	462	999.99	999900	.	. 99	999	G2F119191	VIDEOTRON LTEE 405 OGILVY AV 200 MONTREAL			*	
1804030033	V2A5A9	-5900999	913	000.00	999900	.	. 99	999	G2D119171	CITY OF PENTICTON 171 MAIN ST PENTICTON			*	
3 WARNING: BUSINESS BLDG----CHECK PCODE/ADDRESS (LEGITIMATE RES?)														
1604118533	L6Y2N4@3521010	535	572.05	020201	4307	0653	000	000	E3F111191	APARTMENT BLDG 430 MCMURCHY AVE S BRAMPTON		BRAMPTONC*		
1604503732	T5H4B9@4811061	835	046.00	020808	5311	25	000	000	E3F111191	HYS MEDICAL CENTRE 11010 101 ST NW EDMONTON		EDMONTONC*		
4 WARNING: COMMERC/INSTITU--CHECK PCODE/ADDRESS (LEGITIMATE RES?)														
1801082533	V5G4J3?5915025	933	230.01	139201	4912	22	000	000	BG4F111191	BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY 4200 BURN	BURNABY	BURNABY C*		
1202190833	A1B1S5@1001519	001	013.00	025301	4705	01	000	000	G4F111191	ST PATRICKS MERCY HOME 146 ELIZABETH AVE ST. JOHN'	ST. JOHN'	ST. JOHN C*		
1202154133	A2A2E1@1006017	010	000.00	003010	4805	03	000	000	G4D112171	CENTRAL NEWFOUNDLAND REGIONAL HEALTH CENTRE 5 GRAN	GRAND FAT*			
1303089633	H2C3H6@2466025	462	277.00	265801	4507	06	000	000	G4F111191	LES RESIDENCES LAURENDEAU,LEGARE,LOUVAIN 1725 MONT	MONTREÁLV*			
1603169333	M1H3A1@3520005	535	356.00	361001	4307	0495N	000	000	G4F111191	CEDARBROOK LODGE 520 MARKHAM RD SCARBOROUGH		TORONTO C*		
1602154410	M9W4L3@3520005	535	246.00	184101	4307	0495A	000	000	G4F111191	KIPLING ACRES HOME FOR THE AGED 2233 KIPLING ETOBI	TORONTO	TORONTO C*		
1604515931	N2L3G1@3530016	541	106.01	029605	4308	0765	000	000	G4F111191	UNIVERSITY OF WATERLOO 200 UNIVERSITY AVE W WATERL	WATERLOOC*			
1604443433	R1N3V4@4609029	607	000.00	001414H4909	40	000	000	000	G4F112181	LION'S PRAIRIE MANOR 24 9TH ST SE PORTAGE LA PRAIR	PORTAGE C*			
1603468632	R3N1V9@4611040	602	510.02	036601	4909	10	000	000	G4F111191	CANADIAN FORCES BASE WINNIPEG, KAPYONG BARRAC WINN	WINNIPEGC*			
1601086332	R7N1R7@4617050	000	000.00	001114	5110	60	000	000	G4F111191	DAUPHIN GENERAL HOSPITAL 625 3RD ST SW DAUPHIN		DAUPHIN C*		
1603548732	S4S3B4@4706027	705	002.02	049002	5010	04	000	000	G4F111191	EXTENDICARE/PARKSIDE 4540 RAE ST REGINA		REGINA C*		
1602539533	T5K0L4@4811061	835	032.02	015604H5311	25	000	000	000	G4F111191	GENERAL HOSPITAL 11111 JASPER AVE NW EDMONTON		EDMONTONC*		
1803100131	V6T1K2@5915020	933	069.00	094705	4912	32	000	000	G4D111171	WALTER GAGE RESIDENCE ( UBC ) 5959 STUDENT UN VANC	GREATER RD			

**APPENDIX E**

Census Metropolitan Areas and Census Agglomerations in numerical order, 2001 Census classification, showing 2001 population and city size, and indicating if area is census tracted

**APPENDICE E**

Régions métropolitaines de recensement et Agglomérations de recensement en ordre numérique, selon la classification du recensement de 2001, avec indication si les secteurs de recensement s'appliquent

CMA/CA RMR/AR	CT SR	Type Type	Name Nom	Tracted Secteurs	CSIZE	Pop 2001	
000	000.00	Not in CMA/CA -- Non dans une RMR/AR				5	
001	999.99	CMA/RMR	St John's	CT/SR	3	172,918	
010	000.00	CA/AR	Grand Falls-Windsor		4	18,981	
011	000.00	CA/AR	Gander		4	11,254	
015	000.00	CA/AR	Corner Brook		4	25,747	
025	000.00	CA/AR	Labrador City		4	9,638	
105	000.00	CA/AR	Charlottetown		4	58,358	
110	000.00	CA/AR	Summerside		4	16,200	
205	999.99	CMA/RMR	Halifax	CT/SR	3	359,183	
210	000.00	CA/AR	Kentville		4	25,172	
215	000.00	CA/AR	Truro		4	44,276	
220	000.00	CA/AR	New Glasgow		4	36,735	
225	000.00	CA/AR	Cape Breton (Sydney)		3	109,330	
305	999.99	CA/AR	Moncton	CT/SR	3	117,727	
310	999.99	CMA/RMR	Saint John	CT/SR	3	122,678	
320	000.00	CA/AR	Fredericton		4	81,346	
328	000.00	CA/AR	Bathurst		4	23,935	
330	000.00	CA/AR	Campbellton		4	16,265	
335	000.00	CA/AR	Edmundston		4	22,173	
403	000.00	CA/AR	Matane		4	16,249	
404	000.00	CA/AR	Rimouski		4	47,688	
405	000.00	CA/AR	Rivière-du-Loup		4	22,339	
406	000.00	CA/AR	Baie-Comeau		4	28,940	
408	999.99	CMA/RMR	Chicoutimi-Jonquière	CT/SR	3	154,938	
410	000.00	CA/AR	Alma		4	30,126	
411	000.00	CA/AR	Dolbeau-Mistassini		4	148,879	
412	000.00	CA/AR	Sept-Îles		4	26,952	
421	999.99	CMA/RMR	Québec	CT/SR	2	682,757	
428	000.00	CA/AR	Saint-Georges		4	28,127	
430	000.00	CA/AR	Thetford Mines		4	26,323	
433	999.99	CMA/RMR	Sherbrooke	CT/SR	3	153,811	
435	000.00	CA/AR	Magog		4	22,535	
437	000.00	CA/AR	Cowansville		4	12,032	
440	000.00	CA/AR	Victoriaville		4	41,233	
442	999.99	CMA/RMR	Trois-Rivières	CT/SR	3	137,507	
444	000.00	CA/AR	Shawinigan		4	57,304	
446	000.00	CA/AR	La Tuque		4	12,376	
447	999.99	CA/AR	Drummondville	CT/SR	4	68,451	
450	999.99	CA/AR	Granby	CT/SR	4	60,264	
452	000.00	CA/AR	Saint-Hyacinthe		4	49,536	
454	000.00	CA/AR	Sorel-Tracy		4	40,956	
456	000.00	CA/AR	Joliette		4	35,821	
459	999.99	CA/AR	Saint-Jean-sur-Richelieu	CT/SR	4	79,600	
462	999.99	CMA/RMR	Montréal	CT/SR	1	3,426,350	
465	000.00	CA/AR	Salaberry-de-Valleyfield		4	39,028	
468	000.00	CA/AR	Lachute		4	11,628	
480	000.00	CA/AR	Val-d'Or		4	32,423	
481	000.00	CA/AR	Amos		4	21,749	
485	000.00	CA/AR	Rouyn-Noranda		4	36,308	



CMA/CA RMR/AR	CT SR	Type Type	Name Nom	Tracted Secteurs	CSIZE	Pop 2001
501	000.00	CA/AR	Cornwall		4	57,581
502	000.00	CA/AR	Hawkesbury		4	11,629
505	999.99	CMA/RMR	Ottawa-Hull (Gatineau)	CT/SR	1	1,063,664
512	000.00	CA/AR	Brockville		4	44,741
515	000.00	CA/AR	Pembroke		4	23,608
516	000.00	CA/AR	Petawawa		4	14,398
521	999.99	CMA/RMR	Kingston	CT/SR	3	146,838
522	999.99	CA/AR	Belleville	CT/SR	4	87,395
527	000.00	CA/AR	Cobourg		4	17,172
528	000.00	CA/AR	Port Hope and Hope		4	15,605
529	999.99	CA/AR	Peterborough	CT/SR	3	102,423
530	000.00	CA/AR	Kawartha Lakes (Lindsay)		4	69,129
532	999.99	CMA/RMR	Oshawa	CT/SR	3	296,298
535	999.99	CMA/RMR	Toronto	CT/SR	1	4,682,897
537	999.99	CMA/RMR	Hamilton	CT/SR	2	662,401
539	999.99	CMA/RMR	St Catharines-Niagara	CT/SR	3	377,009
541	999.99	CMA/RMR	Kitchener	CT/SR	3	414,284
543	999.99	CA/AR	Brantford	CT/SR	4	86,417
544	000.00	CA/AR	Woodstock		4	33,061
546	000.00	CA/AR	Tillsonburg		4	14,052
547	000.00	CA/AR	Norfolk (Simcoe)		4	60,847
550	999.99	CA/AR	Guelph	CT/SR	3	117,344
553	000.00	CA/AR	Stratford		4	29,676
555	999.99	CMA/RMR	London	CT/SR	3	432,451
556	000.00	CA/AR	Chatham-Kent		3	107,709
557	000.00	CA/AR	Leamington		4	46,757
559	999.99	CMA/RMR	Windsor	CT/SR	3	307,877
562	999.99	CA/AR	Sarnia (Sarnia-Clearwater)	CT/SR	4	88,331
566	000.00	CA/AR	Owen Sound		4	31,583
567	000.00	CA/AR	Collingwood		4	16,039
568	999.99	CA/AR	Barrie	CT/SR	3	148,480
569	000.00	CA/AR	Orillia		4	40,256
571	000.00	CA/AR	Midland		4	33,692
575	999.99	CA/AR	North Bay	CT/SR	4	63,681
580	999.99	CMA/RMR	Sudbury	CT/SR	3	155,601
582	000.00	CA/AR	Elliot Lake		4	11,956
584	000.00	CA/AR	Haileybury		4	12,867
586	000.00	CA/AR	Timmins		4	43,686
590	999.99	CA/AR	Sault Ste. Marie	CT/SR	4	78,908
595	999.99	CMA/RMR	Thunder Bay	CT/SR	3	121,986
598	000.00	CA/AR	Kenora		4	15,838
602	999.99	CMA/RMR	Winnipeg	CT/SR	2	671,274
607	000.00	CA/AR	Portage la Prairie		4	20,617
610	000.00	CA/AR	Brandon		4	41,037
640	000.00	CA/AR	Thompson		4	13,256
705	999.99	CMA/RMR	Regina	CT/SR	3	192,800
710	000.00	CA/AR	Yorkton		4	17,554
715	000.00	CA/AR	Moose Jaw		4	33,519
720	000.00	CA/AR	Swift Current		4	16,527
725	999.99	CMA/RMR	Saskatoon	CT/SR	3	225,927
735	000.00	CA/AR	North Battleford		4	17,512
745	000.00	CA/AR	Prince Albert		4	41,460
750	000.00	CA/AR	Estevan		4	12,083

CMA/CA RMR/AR	CT SR	Type Type	Name Nom	Tracted Secteurs	CSIZE	Pop 2001
805	999.99	CA/AR	Medicine Hat	CT/SR	4	61,735
806	000.00	CA/AR	Brooks		4	11,604
810	999.99	CA/AR	Lethbridge	CT/SR	4	67,374
825	999.99	CMA/RMR	Calgary	CT/SR	2	951,395
830	999.99	CA/AR	Red Deer	CT/SR	4	67,707
833	000.00	CA/AR	Camrose		4	14,854
835	999.99	CMA/RMR	Edmonton	CT/SR	2	937,845
840	000.00	CA/AR	Lloydminster		4	20,988
845	000.00	CA/AR	Cold Lake (Grand Centre)		4	27,935
850	000.00	CA/AR	Grande Prairie		4	36,983
860	000.00	CA/AR	Wood Buffalo (Fort McMurray)		4	42,602
865	000.00	CA/AR	Wetaskiwin		4	11,154
905	000.00	CA/AR	Cranbrook		4	24,275
913	000.00	CA/AR	Penticton		4	41,574
915	999.99	CA/AR	Kelowna	CT/SR	3	147,739
918	000.00	CA/AR	Vernon		4	51,530
925	999.99	CA/AR	Kamloops	CT/SR	4	86,491
930	000.00	CA/AR	Chilliwack		4	69,776
932	999.99	CMA/RMR	Abbotsford (Matsqui)	CT/SR	3	147,370
933	999.99	CMA/RMR	Vancouver	CT/SR	1	1,986,965
934	000,00	CA/AR	Squamish		4	14,435
935	999.99	CMA/RMR	Victoria	CT/SR	3	311,902
937	000.00	CA/AR	Duncan		4	38,813
938	999.99	CA/AR	Nanaimo	CT/SR	4	85,664
939	000.00	CA/AR	Parksville		4	24,285
940	000.00	CA/AR	Port Alberni		4	25,396
943	000.00	CA/AR	Courtenay		4	47,051
944	000.00	CA/AR	Campbell River		4	33,872
945	000.00	CA/AR	Powell River		4	18,269
950	000.00	CA/AR	Williams Lake		4	25,122
952	000.00	CA/AR	Quesnel		4	24,426
955	000.00	CA/AR	Prince Rupert		4	15,302
960	000.00	CA/AR	Kitimat		4	10,285
965	000.00	CA/AR	Terrace		4	19,980
970	999.99	CA/AR	Prince George	CT/SR	4	85,035
975	000.00	CA/AR	Dawson Creek		4	17,444
977	000.00	CA/AR	Fort St. John		4	16,034
990	000.00	CA/AR	Whitehorse		4	21,405
995	000.00	CA/AR	Yellowknife		4	16,541
999	999.99	CMA/CA unknown--RMR/AR inconnu		CT/SR?		

Note: Former names (from 1991 or 1996 census) shown in parentheses if different. Since 1996, 5 CAs were added (Amos, Petawawa, Squamish, Brooks, Parksville), 2 CAs were deleted (Smith Falls, Strathroy), and 2 other CAs were promoted to CMA (Kingston, Abbotsford). Three CAs gained census tracts: Drummondville, Granby and Medicine Hat. Also 1 CMA and 6 CAs were renamed: Sudbury to Greater Sudbury, Dolbeau to Dolbeau-Mistassini, Sorel to Sorel-Tracy, Port Hope to Port Hope and Hope, Lindsay to Kawartha Lakes, Simcoe to Norfolk, Grand Centre to Cold Lake.

Nota: Les anciens noms (du recensement de 1991 ou de 1996) sont indiqués entre parenthèses s'ils ont changé.

## APPENDIX F GEOGRAPHIC CODING FROM PARTIAL POSTAL CODES BASED ON PCCF

<b>APPENDIX F1</b>	Geographic coding from the first character of the postal code
<b>APPENDIX F2</b>	Geographic coding from the first two characters of the postal code
<b>APPENDIX F3</b>	Geographic coding from the first three characters of the postal code

### APPENDIX F1 GEOGRAPHIC CODING FROM THE FIRST CHARACTER OF THE POSTAL CODE

Letter	Province/Territory Major Geographic Area (Canada Post)	Standard Abbreviation
A	Newfoundland and Labrador	NF, NL
B	Nova Scotia	NS
C	Prince Edward Island	PE
E	New Brunswick	NB
G H J	Québec	QC
G	Québec East	
H	Montréal Metro	
J	Québec West	
K L M N P	Ontario	ON
K	Eastern Ontario	
L	Central Ontario	
M	Toronto Metro	
N	Southwestern Ontario	
P	Northern Ontario	
R	Manitoba	MB
S	Saskatchewan	SK
T	Alberta	AB
V	British Columbia	BC
X	Northwest Territories	NT
X	Nunavut	NU
Y	Yukon	YK, YT

In the September 2002 PCCF, 88 postal codes are linked to a different province from their first character allocation. Those records are not mistakes; they reflect the reality of Canada Post sortation and delivery patterns.

### APPENDIX F2 GEOGRAPHIC CODING FROM THE FIRST TWO CHARACTERS OF THE POSTAL CODE BASED ON SEPTEMBER 2002 PCCF

FS	FSA12 - FIRST TWO CHARACTERS OF POSTAL CODE
NPC	NUMBER OF POSTAL CODES
CMA	MOST COMMON CENSUS METROPOLITAN AREA OR CENSUS AGGLOMERATION (CMA/CA)
PCMA	PERCENTAGE OF POSTAL CODES WITHIN THAT CMA/CA
PRCD	MOST COMMON CENSUS SUBDIVISION (CD)
PCD	PERCENTAGE OF POSTAL CODES WITHIN THAT CD
PRCDCSD	MOST COMMON CENSUS SUBDIVISION (CSD)
PCSD	PERCENTAGE OF POSTAL CODES WITHIN THAT CSD
AVLAT	AVERAGE LATITUDE IN DEGREES(2)+DECIMALS(6)
AVLONG	AVERAGE LONGITUDE IN DEGREES(3)+DECIMALS(6)
T	1=CMA/CA IS CENSUS TRACTED; 0=CMA/CA NOT TRACTED

FILE=FSA12GEO.CAN

## GEOGRAPHIC CODING FROM FIRST TWO CHARACTERS OF THE POSTAL CODE

FS	NPC	CMA	PCMA	PRCD	PCD	PRDCSD	PCSD	AVLAT	AVLONG	T
<b>NEWFOUNDLAND AND LABRADOR - TERRE-NEUVE ET LABRADOR</b>										
A0	8720	000	91.6	1001	36.4	1010025	3.6	48692998	055088390	0
A1	14510	001	94.9	1001	96.5	1001519	44.2	47597789	052895286	1
A2	4619	015	42.8	1005	43.3	1005018	41.6	49270448	058618991	0
A8	1061	000	100.0	1005	98.3	1005004	75.2	49202405	057425012	0
<b>NOVA SCOTIA - NOUVELLE ECOSSE</b>										
B0	12350	000	79.2	1212	11.3	1207001	6.2	45076455	063718581	0
B1	15659	225	97.8	1217	97.8	1217030	96.8	46147758	060158701	0
B2	14528	205	33.2	1209	33.2	1209034	33.2	45323562	062612204	1
B3	11459	205	100.0	1209	100.0	1209034	100.0	44650437	063639261	1
B4	9495	000	48.1	1209	36.6	1209034	36.6	44937568	064147955	0
B5	1982	000	100.0	1202	98.4	1202006	78.6	43848198	066115568	0
B9	782	000	100.0	1215	96.4	1215002	67.1	45637082	061361888	0
<b>PRINCE EDWARD ISLAND - ILE DU PRINCE-EDOUARD</b>										
C0	3064	000	88.4	1103	38.4	1103051	3.5	46393913	063288804	0
C1	6715	105	69.0	1102	69.2	1102075	49.0	46294117	063324159	0
<b>NEW BRUNSWICK - NOUVEAU BRUNSWICK</b>										
E0	779	000	84.0	1305	14.1	1305022	6.5	46389014	066076066	0
E1	15877	305	59.5	1307	50.5	1307022	38.1	46522230	065014890	1
E2	13036	310	70.5	1301	49.8	1301006	46.9	45830833	065994531	1
E3	12573	320	51.4	1310	46.5	1310032	32.7	46438924	067076430	0
E4	19010	000	88.7	1307	39.2	1307016	7.9	46138331	064948817	0
E5	8840	000	62.2	1305	43.6	1302026	6.6	45360280	066341074	0
E6	3104	000	72.9	1310	96.3	1310036	10.1	45987063	067023061	0
E7	9362	000	79.1	1311	47.2	1313027	17.6	46739566	067807609	0
E8	6361	000	93.2	1315	59.2	1314017	10.2	47782720	065756752	0
E9	2026	000	100.0	1309	98.4	1309036	22.7	46969757	065532936	0
<b>QUEBEC</b>										
G0	33748	000	86.1	2419	5.3	2425005	1.5	47310886	069878275	0
G1	24214	421	100.0	2423	100.0	2423025	33.9	46819596	071258016	1
G2	6660	421	100.0	2423	100.0	2423025	41.3	46837120	071334689	1
G3	6385	421	62.3	2423	62.3	2423050	27.0	46896799	071422039	1
G4	7682	000	43.6	2497	36.0	2497010	32.2	49399082	066494830	0
G5	15513	000	37.2	2429	26.1	2429075	24.3	47570479	069452730	0
G6	18462	421	46.7	2424	24.2	2424020	21.5	46408126	071394919	1
G7	12025	408	85.5	2494	88.0	2494070	35.4	48207620	071152540	1
G8	19470	442	32.9	2437	32.9	2493040	22.3	47948976	072253309	1
G9	10906	444	58.6	2436	58.6	2436028	22.4	46593926	072669965	0
H0	26	462	80.8	2465	80.8	2465005	80.8	45596425	073754401	1
H1	18591	462	100.0	2466	100.0	2466025	66.2	45602237	073567214	1
H2	12312	462	100.0	2466	100.0	2466025	94.2	45531435	073593846	1
H3	19253	462	100.0	2466	100.0	2466025	79.5	45526882	073581040	1
H4	11889	462	100.0	2466	100.0	2466025	44.8	45497248	073647974	1
H5	184	462	100.0	2466	100.0	2466025	100.0	45505555	073563883	1
H7	17586	462	100.0	2465	100.0	2465005	100.0	45584462	073742239	1
H8	6619	462	100.0	2466	100.0	2466040	40.2	45452405	073720556	1
H9	11031	462	100.0	2466	100.0	2466095	17.3	45458899	073843107	1
J0	53471	000	80.5	2477	6.6	2477045	1.8	45911707	073909726	0
J1	13499	433	57.7	2443	57.3	2443025	31.4	45402097	071977030	1
J2	20960	450	28.0	2447	29.0	2454045	19.3	45543203	072799842	1
J3	19864	462	63.4	2457	35.7	2453052	16.1	45617648	073243552	1
J4	12772	462	100.0	2458	82.2	2458030	40.2	45520845	073471763	1
J5	10840	462	80.6	2460	49.7	2460028	20.8	45713608	073523125	1
J6	19207	462	64.9	2464	27.7	2464010	19.9	45584375	073732693	1
J7	21611	462	98.9	2473	27.5	2474005	10.4	45612533	073906771	1
J8	20248	505	62.1	2481	52.1	2481015	30.1	45663266	075170281	1
J9	14973	000	30.0	2481	22.8	2486033	16.1	47114840	077103037	0

**ONTARIO**

K0	23077	000	63.9	3506	13.6	3506008	13.6	44884429	076631417	0
K1	20952	505	100.0	3506	99.9	3506008	99.9	45405662	075653963	1
K2	14532	505	100.0	3506	100.0	3506008	100.0	45325412	075801349	1
K4	4995	505	99.9	3506	78.4	3506008	78.4	45404421	075467527	1
K6	7214	501	55.1	3501	56.8	3501012	54.1	44978275	075001277	0
K7	15349	000	56.1	3510	41.3	3510010	41.2	44613422	076449034	0
K8	9938	522	50.9	3512	51.7	3547064	32.9	44942336	077325422	1
K9	9410	529	55.9	3515	56.3	3515014	50.5	44250562	078392667	1
L0	19101	000	35.2	3543	34.2	3543064	11.0	43837075	079602011	0

L1	24599	532	60.9	3518	95.3	3518013	26.5	43889998	078896495	1
L2	18189	539	100.0	3526	100.0	3526053	49.4	43117811	079164068	1
L3	23930	535	60.6	3519	56.9	3519036	42.7	43759213	079355697	1
L4	37369	535	80.7	3519	63.9	3519028	29.9	43952919	079547401	1
L5	21016	535	100.0	3521	99.9	3521005	99.6	43578973	079683154	1
L6	24763	535	100.0	3521	48.5	3521010	48.1	43640506	079683774	1
L7	13570	537	56.4	3524	76.2	3524002	56.4	43527431	079817659	1
L8	15006	537	100.0	3525	99.8	3525005	99.8	43234567	079817558	1
L9	19055	537	37.0	3525	36.8	3525005	36.8	43854474	079835175	1

M1	21549	535	100.0	3520	100.0	3520005	100.0	43755928	079273864	1
M2	7057	535	100.0	3520	100.0	3520005	100.0	43775313	079374016	1
M3	6299	535	100.0	3520	100.0	3520005	100.0	43743713	079425542	1
M4	13567	535	100.0	3520	100.0	3520005	100.0	43698456	079361357	1
M5	15221	535	100.0	3520	100.0	3520005	100.0	43675710	079384617	1
M6	14998	535	100.0	3520	100.0	3520005	100.0	43678295	079444237	1
M7	7321	535	100.0	3520	99.9	3520005	99.9	43772760	079256491	1
M8	4765	535	100.0	3520	100.0	3520005	100.0	43627375	079507944	1
M9	11231	535	100.0	3520	100.0	3520005	100.0	43697411	079544313	1

N0	26984	000	70.5	3541	12.9	3536020	7.4	43330599	081236163	0
N1	12358	550	47.9	3523	55.0	3523008	46.9	43416650	080208927	1
N2	14488	541	91.6	3530	91.6	3530013	57.4	43512239	080595031	1
N3	14116	543	38.6	3529	49.1	3529006	38.6	43207343	080284965	1
N4	10680	000	27.8	3532	44.2	3532042	23.3	43568070	080797509	0
N5	13846	555	71.8	3539	45.9	3539036	45.7	42979796	081130889	1
N6	11679	555	100.0	3539	100.0	3539036	98.9	42965876	081264298	1
N7	10003	562	45.3	3538	45.3	3538030	42.0	42919191	082131032	1
N8	20606	559	81.6	3537	93.4	3537039	73.2	42305006	082903203	1
N9	9387	559	87.6	3537	100.0	3537039	58.9	42226099	083007092	1

P0	14943	000	77.8	3556	12.3	3553005	7.7	47309726	082863230	0
P1	6355	575	59.5	3548	59.5	3548044	58.4	45843666	079379444	1
P2	4586	000	100.0	3548	61.6	3548055	61.4	46532787	079974989	0
P3	7356	580	99.1	3553	99.1	3553005	99.1	46509799	080986910	1
P4	3171	586	99.6	3556	99.8	3556027	99.6	48485322	081334694	0
P5	2178	000	59.3	3557	41.0	3557041	40.7	47342945	082341557	0
P6	4558	590	98.4	3557	100.0	3557061	97.0	46526814	084328802	1
P7	8471	595	97.2	3558	100.0	3558004	92.1	48418849	089263932	1
P8	1224	000	100.0	3560	100.0	3560027	71.2	49855947	092622560	0
P9	2297	000	52.9	3559	52.2	3559012	50.3	49166390	093915089	0

**MANITOBA**

R0	27955	000	91.4	4615	9.5	4612047	2.7	50196632	098677222	0
R1	3978	000	56.4	4613	57.7	4609029	37.3	50065044	097508266	0
R2	14470	602	100.0	4611	95.7	4611040	95.7	49900951	097109966	1
R3	13724	602	99.8	4611	98.0	4611040	98.0	49869041	097178703	1
R4	685	602	89.1	4611	39.7	4613037	36.6	49933145	097326239	1
R5	681	000	78.0	4602	100.0	4602044	36.1	49611033	096727890	0
R6	1675	000	100.0	4603	100.0	4603053	49.0	49180672	098023385	0
R7	7819	610	79.8	4607	82.3	4607062	79.0	50073414	099970886	0
R8	1137	640	51.4	4622	52.0	4622026	51.4	55262655	099754019	0
R9	1371	000	100.0	4621	100.0	4621045	82.1	53816538	101255834	0

**SASKATCHEWAN**

S0	45480	000	93.9	4706	8.7	4714077	0.7	51459590	105501095	0
S2	77	705	100.0	4706	100.0	4706055	93.5	50771863	104930221	1
S3	1739	710	95.9	4709	99.6	4709012	90.2	51210549	102459513	0
S4	15666	705	82.0	4706	82.2	4706027	80.6	50271632	104411088	1
S6	8186	745	50.2	4715	50.8	4707039	48.4	51820806	105645797	0
S7	13922	725	99.7	4711	99.3	4711066	95.9	52128091	106646292	1
S9	7472	720	45.6	4708	45.9	4708004	43.2	51839414	108347372	0

**ALBERTA**

T0	41400	000	87.7	4810	12.3	4813001	1.9	52625780	113307693	0
T1	19353	810	32.0	4802	48.3	4802012	32.0	50187681	112637785	1
T2	30159	825	99.8	4806	99.9	4806016	98.7	51009148	114051146	1
T3	15976	825	99.9	4806	99.9	4806016	91.8	51094669	114144681	1
T4	14087	000	35.3	4808	56.2	4808011	29.7	52255111	113746748	0
T5	30050	835	100.0	4811	100.0	4811061	99.8	53565419	113510532	1
T6	21179	835	100.0	4811	100.0	4811061	99.4	53503746	113488256	1
T7	10840	835	63.2	4811	68.7	4811034	34.8	53592056	114632026	1
T8	16099	835	59.2	4811	59.2	4819012	35.4	54283468	115512293	1
T9	15386	835	25.3	4811	37.4	4811016	18.6	54010457	112055117	1

**BRITISH COLUMBIA - COLOMBIE-BRITANIQUE**

V0	26977	000	83.5	5929	8.9	5929011	3.2	50581494	121419253	0
V1	37163	000	26.7	5935	23.3	5935010	19.3	50891711	119031397	0
V2	42064	970	19.1	5909	32.7	5953023	16.6	50679854	121922514	1
V3	36463	933	97.1	5915	97.1	5915004	49.1	49181802	122793984	1
V4	20037	933	83.2	5915	83.2	5915004	39.7	49184436	122453350	1
V5	20689	933	100.0	5915	100.0	5915022	57.8	49248451	123035856	1
V6	21510	933	100.0	5915	100.0	5915022	83.4	49249617	123129197	1
V7	13323	933	100.0	5915	100.0	5915015	31.8	49272881	123116292	1
V8	23709	935	66.0	5917	70.0	5917021	25.4	49851907	124722195	1
V9	35760	938	21.7	5925	35.5	5921007	18.4	49288128	124390847	1

**NORTHWEST TERRITORIES OR NUNAVUT - TERRITORIES DU NORD-OUEST OU NUNAVUT**

X0	1167	000	99.7	6106	57.5	6106016	24.1	63645330	113346345	0
X1	1003	995	99.7	6106	100.0	6106023	99.7	62451236	114385180	0

**YUKON**

Y0	317	000	98.1	6001	100.0	6001029	26.2	62232499	135620588	0
Y1	3461	990	99.9	6001	100.0	6001009	99.2	60724190	135072254	0

**APPENDIX F3****GEOGRAPHIC CODING  
FROM THE FIRST THREE CHARACTERS OF THE POSTAL CODE  
BASED ON SEPTEMBER 2002 PCCF**

GEOGRAPHIC CODING FROM THE FIRST THREE CHARACTERS OF THE POSTAL CODE

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-----  
FSA      FORWARD SORTATION AREA - FIRST THREE CHARACTERS OF POSTAL CODE  
NPC      NUMBER OF POSTAL CODES  
CMA      MOST COMMON CENSUS METROPOLITAN AREA OR CENSUS AGGLOMERATION (CMA/CA)  
PCMA     PERCENTAGE OF POSTAL CODES WITHIN THAT CMA/CA  
PRCD     MOST COMMON CENSUS SUBDIVISION (CD)  
PCD      PERCENTAGE OF POSTAL CODES WITHIN THAT CD  
PRCDCSD  MOST COMMON CENSUS SUBDIVISION (CSD)  
PCSD     PERCENTAGE OF POSTAL CODES WITHIN THAT CSD  
AVLAT    AVERAGE LATITUDE IN DEGREES(2)+DECIMALS(6)  
AVLONG   AVERAGE LONGITUDE IN DEGREES(3)+DECIMALS(6)  
T        1=CMA/CA IS CENSUS TRACTED; 0=CMA/CA NOT TRACTED  
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## APPENDIX H Health Regions and Health Districts

### APPENDIX H1

#### Summary List of Health Regions, by Province and Type, Canada, June 2003

PR	Health Region Type	HRTYP	Number
<b>Total</b>			118
NF	Health and Community Services Region	HCS	4
	Regional Health Services Board	RHS	1
	Health Corporation	HCO	1
PE	Health Region	HRE	4
NS	Health Zone	ZON	6
NB	Region	REG	7
QC	Région socio-sanitaire	RSS	18
ON	District Health Council	DHC	16
MB	Regional Health Authority	RHA	11
SK	Regional Health Authority	RHA	12
SK	Health Authority	HAU	1
AB	Regional Health Authority	RHA	3
AB	Health Region	HRE	3
AB	Health	HLT	3
BC	Health Service Delivery Area	HSD	16
YK	Territory	TER	1
NT	Territory	TER	1
NU	Territory	TER	1

The 16 Health Service Delivery Areas in BC roll up to 5 Health Authorities, which are designated by the first digit of the Health Region code.

### APPENDIX H2

#### Summary List of Health Districts by Type and Province, Canada, 2003

PR	Health District Type	SUBTYP	Number
<b>Total</b>			204
QC	Centre local de services communautaires	CLS	174
ON	Public Health Unit (incl Toronto)	PHU	37
	Health Planning Area (Toronto only)	HPA	16
BC	Local Health Area	LHA	89

For Version 4A of PCCF+, the Health District codes for BC and QC are not shown.



**APPENDIX H3:  
HEALTH REGIONS, CANADA, 2000  
REGIONS SOCIO-SANITAIRES, CANADA, 2000**

PRHR	HEALTH REGION / REGION SOCIO-SANITAIRE	HRTYP
<b>NEWFOUNDLAND / TERRE-NEUVE</b>		
1001	SAINT JOHN'S	HCS
1002	EASTERN	HCS
1003	CENTRAL	HCS
1004	WESTERN	HCS
1005	GRENFELL	HSB
1006	LABRADOR	HCO
<b>PRINCE EDWARD ISLAND / ILE DU PRINCE-EDOUARD</b>		
1101	WEST PRINCE	HRE
1102	EAST PRINCE	HRE
1103	QUEENS	HRE
1104	KINGS	HRE
<b>NOVA SCOTIA / NOUVELLE ECOSSE</b>		
1201	YARMOUTH	ZON
1202	KENTVILLE	ZON
1203	TRURO	ZON
1204	NEW GLASGOW	ZON
1205	CAPE BRETON	ZON
1206	HALIFAX	ZON
<b>NEW BRUNSWICK / NOUVEAU-BRUNSWICK</b>		
1301	MONCTON	REG
1302	SAINT JOHN	REG
1303	FREDERICTON	REG
1304	EDMUNDSTON	REG
1305	CAMPBELLTON	REG
1306	BATHURST	REG
1307	MIRAMICHI	REG
<b>QUEBEC</b>		
2401	BAS-SAINT-LAURENT	RSS
2402	SAGUENAY--LAC-SAINT-JEAN	RSS
2403	QUEBEC	RSS
2404	MAURICIE ET CENTRE DU QUEBEC	RSS
2405	ESTRIE	RSS
2406	MONTREAL-CENTRE	RSS
2407	OUTAOUAIS	RSS
2408	ABITIBI-TEMISCAMINGUE	RSS
2409	COTE-NORD	RSS
2410	NORD-DU-QUEBEC	RSS
2411	GASPESIE--ILES-DE-LA-MADELEINE	RSS
2412	CHAUDIÈRE-APPALACHES	RSS
2413	LAVAL	RSS
2414	LANAUDIÈRE	RSS
2415	LAURENTIDES	RSS
2416	MONTEREGIE	RSS
2417	NUNAVIK	RSS
2418	TERRES-CRIES-DE-LA-BAIE-JAME	RSS

PRHR	HEALTH REGION / REGION SOCIO-SANITAIRE	HRTYP
<b>ONTARIO</b>		
3501	CHAMPLAIN	DHC
3502	QUINTE-KINGSTON-RIDEAU	DHC
3503	DURHAM-HALIBURTON-KAWARTHA-PINE RIDGE	DHC
3504	TORONTO	DHC
3505	SIMCOE-YORK	DHC
3506	HALTON-PEEL	DHC
3507	WATERLOO-WELLINGTON-DUFFERIN	DHC
3508	HAMILTON	DHC
3509	NIAGARA	DHC
3510	GRAND RIVER	DHC
3511	THAMES VALLEY	DHC
3512	ESSEX-KENT-LAMBTON	DHC
3513	GREY-BRUCE-HURON-PERTH	DHC
3514	NOTHERN SHORES	DHC
3515	ALGOMA-COCHRANE-MANITOULIN-SUDBURY	DHC
3516	NORTHWESTERN ONTARIO	DHC
<b>MANITOBA</b>		
4610	WINNIPEG	RHA
4615	BRANDON	RHA
4620	NORTH EASTMAN	RHA
4625	SOUTH EASTMAN	RHA
4630	INTERLAKE	RHA
4640	CENTRAL	RHA
4650	MARQUETTE AND SOUTH WESTMAN	RHA
4660	PARKLAND	RHA
4670	NORMAN	RHA
4680	BURNTWOOD	RHA
4690	CHURCHILL	RHA
<b>SASKATCHEWAN</b>		
4701	SUN COUNTRY	RHA
4702	FIVE HILLS	RHA
4703	CYPRESS	RHA
4704	REGINA	RHA
4705	SUNRISE	RHA
4706	SASKATOON	RHA
4707	HEARTLAND	RHA
4708	KELSEY TRAIL	RHA
4709	PRINCE ALBERT PARKLAND	RHA
4710	PRAIRIE NORTH	RHA
4711	MAMAWETAN CHURCHILL RIVER	RHA
4712	KEEWATIN YATTHE	RHA
4713	ATHABASCA	RHA
<b>ALBERTA</b>		
4820	CHINOOK	RHA
4821	PALLISER	RHA
4822	CALGARY	HRE
4823	DAVID THOMPSON	RHA
4824	EAST CENTRAL	RHA
4825	CAPITAL	HRE
4826	ASPEN	RHA
4827	MISTAHIA	RHA
4828	NORTHERN LIGHTS	RHA

PRHR	HEALTH REGION / REGION SOCIO-SANITAIRE	HRTYP
<b>BRITISH COLUMBIA / COLOMBIE-BRITANNIQUE</b>		
5911	EAST KOOTENAY	HSD
5912	KOOTENAY-BOUNDARY	HSD
5913	OKANAGAN	HSD
5914	THOMPSON/CARIBOO	HSD
5921	FRASER VALLEY	HSD
5922	SIMON FRASER	HSD
5923	SOUTH FRASER	HSD
5931	RICHMOND	HSD
5932	VANCOUVER	HSD
5933	NORTH SHORE/COAST GARIBALDI	HSD
5941	SOUTH VANCOUVER ISLAND	HSD
5942	CENTRAL VANCOUVER ISLAND	HSD
5943	NORTH VANCOUVER ISLAND	HSD
5951	NORTH WEST	HSD
5952	NORTHERN INTERIOR	HSD
5953	NORTHEAST	HSD
<b>TERRITORIES / TERRITOIRES</b>		
6001	YUKON	HRE
6101	NORTHWEST	HRE
6102	NUNAVUT	HRE

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**APPENDIX H4:  
HEALTH DISTRICTS, CANADA, 2004  
DISTRICTS SOCIO-SANITAIRES, CANADA, 2004**

PRHR	SUB NAME / NOM	SUBTYP	POP2001
<b>QUEBEC</b>			
2401101	RIMOUSKI-NEIGETTE	CLS	52289
2401102	LA MITIS	CLS	19326
2401103	MATANE	CLS	22507
2401105	LA MATAPEDIA	CLS	19920
2401301	LES BASQUES	CLS	9848
2401302	SAINT-ELEUTHERE	CLS	6891
2401303	RIVIERE-DU-LOUP	CLS	31826
2401304	KAMOURASKA	CLS	22494
2401305	CABANO	CLS	15529
2402101	FJORD	CLS	23916
2402102	SAGUENAY	CLS	28883
2402103	JONQUIERE	CLS	65694
2402106	CHICOUTIMI	CLS	48287
2402202	DOMAINE-DU-ROY	CLS	32839
2402203	MARIA-CHAPDELAINE	CLS	26900
2402204	LAC-SAINT-JEAN-EST	CLS	51760
2403000	PORTNEUF	CLS	44955
2403101	LAURENTIEN	CLS	58518
2403102	SAINTE-FOY - SILLERY	CLS	71294
2403201	QUEBEC-HAUTE-VILLE	CLS	36915
2403202	QUEBEC-BASSE-VILLE	CLS	25666
2403203	LIMOILOU-VANIER	CLS	57491
2403204	DUBERGER-LES SAULES-LEBOURGNEUF	CLS	37943
2403300	LORETTEVILLE - VAL-BELAIR	CLS	81932
2403401	BEAUPORT	CLS	76196
2403402	ORLEANS	CLS	27763
2403500	CHARLESBOURG	CLS	90454
2403701	CHARLEVOIX-EST	CLS	16624
2403702	CHARLEVOIX-OUEST	CLS	13166
2404401	HAUT-SAINT-AURICE	CLS	15862
2404402	MEKINAC	CLS	12809
2404403	CENTRE-DE-LA-AURICIE	CLS	64841
2404404	MASKINONGE	CLS	23401
2404405	TROIS-RIVIERES	CLS	80286
2404406	DES CHENAUX	CLS	12127
2404407	CAP-DE-LA-AUDELEINE	CLS	45942
2404501	NICOLET-YAMASKA	CLS	23496
2404502	BECANOUR	CLS	19088
2404503	DRUMMOND	CLS	87808
2404504	ARTHABASKA	CLS	64089
2404505	DE L'ERABLE	CLS	24021
2405101	GRANIT	CLS	21830
2405102	ASBESTOS	CLS	14535
2405103	HAUT-SAINT-FRANCOIS	CLS	21394
2405104	VAL SAINT-FRANCOIS	CLS	28176
2405105	COATICOOK	CLS	16595
2405106	MEMPHREMAGOG	CLS	41871
2405107	FLEURIMONT-LENNOXVILLE	CLS	53720
2405108	SHERBROOKE	CLS	87492
2406101	LAC SAINT-LOUIS	CLS	78875
2406103	PIERREFONDS	CLS	77744
2406104	DOLLARD-DES-ORMEAUX	CLS	48206

2406105	LACHINE	CLS	57928
2406201	POINTE-SAINT-CHARLES	CLS	13210
2406202	VERDUN	CLS	60564
2406204	SAINT-PAUL	CLS	30242
2406206	LASALLE	CLS	73983
2406301	RIVIERE-DES-PRAIRIES	CLS	52939
2406302	POINTE-AUX-TREMBLES	CLS	53065
2406303	MERCIER-EST	CLS	41344
2406304	MERCIER-OUEST	CLS	41256
2406305	HOCHELAGA-MAISONNEUVE	CLS	48379
2406306	ROSEMONT	CLS	79512
2406308	ANJOU	CLS	38015
2406309	SAINT-LEONARD	CLS	69604
2406401	COTE-DES-NEIGES	CLS	52624
2406402	SNOWDON	CLS	33872
2406403	COTE-SAINT-LUC	CLS	47760
2406404	MONT-ROYAL	CLS	43898
2406501	NOTRE-DAME DE GRACE - MONTREAL-OUEST	CLS	69847
2406503	METRO	CLS	57701
2406504	SAINT-LOUIS DU PARC	CLS	39169
2406505	SAINT-HENRI	CLS	25672
2406601	MONTREAL-NORD	CLS	83600
2406603	SAINT-MICHEL	CLS	54984
2406605	AHUNTSIC	CLS	77864
2406606	BORDEAUX-CARTIERVILLE	CLS	51543
2406608	SAINT-LAURENT	CLS	73129
2406701	MONTREAL-CENTRE-SUD	CLS	36314
2406702	PLATEAU MONT-ROYAL	CLS	51461
2406704	PARC-EXTENSION	CLS	31399
2406705	MONTREAL-CENTRE-VILLE	CLS	9044
2406706	VILLERAY	CLS	61114
2406707	PETITE PATRIE	CLS	46862
2407201	HULL	CLS	66246
2407202	AYLMER	CLS	36085
2407300	GATINEAU	CLS	102898
2407400	PONTIAC	CLS	19208
2407500	LES COLLINES-DE-L'OUTAOUAIS	CLS	25909
2407600	DES FORESTIERS	CLS	18730
2407701	VALLEE-DE-LA-LIEVRE	CLS	31428
2407702	PETITE-NATION	CLS	15042
2408101	TEMISCAMING	CLS	3666
2408102	VILLE-MARIE	CLS	13838
2408103	ROUYN-NORANDA	CLS	39621
2408104	ABITIBI-OUEST	CLS	21984
2408105	ABITIBI	CLS	24613
2408106	VALLEE-DE-L'OR	CLS	42375
2409101	LES ESCOUMINS	CLS	5982
2409102	FORESTVILLE	CLS	6912
2409103	MANICOUAGAN	CLS	33620
2409105	PORT-CARTIER	CLS	7809
2409106	SEPT-ILES	CLS	26952
2409107	CANIAPISCAU	CLS	3630
2409109	MINGANIE	CLS	6714
2409110	BASSE COTE-NORD	CLS	5607
2409112	TERRITOIRE NASKAPI	CLS	540
2410101	CHIBOUGAMAU/CHAPAIS	CLS	9717
2410102	LEBEL-SUR-QUEVILLON	CLS	3282
2410103	MATAGAMI	CLS	1939
2410104	BAIE-JAMES	CLS	1376
2411201	BONAVENTURE	CLS	18267

2411203	PABOK	CLS	17964
2411204	GASPE	CLS	16266
2411205	GRANDE-VALLEE	CLS	2867
2411206	ILES-DE-LA-MADELEINE	CLS	12824
2411207	MURDOCHVILLE	CLS	1171
2411208	DENIS-RIVERIN	CLS	12297
2411209	AVIGNON	CLS	15268
2412101	LAC ETCHEMIN	CLS	17745
2412102	LA NOUVELLE-BEAUCE	CLS	25850
2412103	BEAUCE-SARTIGAN	CLS	47873
2412104	ROBERT-CLICHE	CLS	18771
2412105	L'AMIANTE	CLS	43247
2412401	DESJARDINS	CLS	51855
2412402	CHAUDIERE	CLS	78808
2412403	BELLECHASSE	CLS	29570
2412404	LOTBINIERE	CLS	26851
2412702	L'ISLET	CLS	19368
2412704	MONTMAGNY	CLS	23438
2413801	DUVERNAY	CLS	51092
2413803	CHOMEDEY	CLS	101084
2413805	PONT-VIAU	CLS	84868
2413807	SAINTE-ROSE-DE-LAVAL	CLS	105961
2414201	D'AUTRAY	CLS	40330
2414202	MATAWINIE	CLS	41194
2414203	JOLIETTE	CLS	54167
2414204	MONTCALM	CLS	38740
2414205	LES MOULINS	CLS	110087
2414206	L'ASSOMPTION	CLS	103977
2415101	DEUX-MONTAGNES - MIRABEL	CLS	92173
2415102	THERESE-DE-BLAINVILLE	CLS	130514
2415103	ANTOINE-LABELLE	CLS	33456
2415104	RIVIERE-DU-NORD - MIRABEL	CLS	106993
2415105	LES PAYS-D'EN-HAUT	CLS	30866
2415106	LES LAURENTIDES	CLS	38433
2415107	ARGENTEUIL	CLS	28931
2416001	VAUDREUIL-SOULANGES	CLS	102100
2416002	HAUT-SAINT-LAURENT	CLS	21851
2416003	VALLEYFIELD-BEAUHARNOIS	CLS	54253
2416004	CHATEAUGUAY-MERCIER	CLS	60078
2416005	LES JARDINS DE NAPIERVILLE	CLS	22820
2416006	SAINTE-ROSE-DE-LA-PRAIRIE	CLS	82978
2416007	BROSSARD - SAINT-LAMBERT	CLS	107910
2416008	LONGUEUIL-OUEST	CLS	64124
2416009	LONGUEUIL-EST	CLS	63892
2416010	ST-HUBERT	CLS	75912
2416011	LAJEMMERAIS	CLS	100263
2416012	SAINTE-ROSE-DE-LA-PRAIRIE - SAINT-LUC	CLS	99474
2416013	SAINTE-ROSE-DE-LA-PRAIRIE - BELOEIL - SAINT-HILAIRE	CLS	93736
2416014	CHAMBLY-CARIGNAN-MARIEVILLE	CLS	51380
2416015	BAS RICHELIEU	CLS	50066
2416016	LES MASKOUTAINS	CLS	78917
2416017	COWANSVILLE-FARNHAM-BEDFORD	CLS	49438
2416018	GRANBY-SHEFFORD-BROMONT	CLS	82038
2416019	ACTON	CLS	15167
2417101	BAIE D'HUDSON	CLS	5326
2417102	UNGAVA	CLS	4306
2418101	TERRITOIRE CRI	CLS	12629

**ONTARIO**

3526	ALGOMA		PHU	117185
3527	BRANT		PHU	118580
3530	DURHAM		PHU	506901
3531	ELGIN-ST THOMAS		PHU	81553
3533	GREY BRUCE		PHU	152965
3534	HALDIMAND-NORFOLK		PHU	104575
3535	HALIBURTON-KAWARTHA-PINE RIDGE		PHU	161761
3536	HALTON		PHU	375229
3537	HAMILTON		PHU	490268
3538	HASTINGS-PRINCE EDWARD		PHU	150816
3539	HURON		PHU	59701
3540	CHATHAM-KENT		PHU	107709
3541	KINGSTON-FRONTENAC-LENNOX-ADDINGTON		PHU	178067
3542	LAMBTON		PHU	126971
3543	LEEDS-GRENVILLE-LANARK		PHU	159101
3544	MIDDLESEX-LONDON		PHU	403185
3545	MUSKOKA-PARRY SOUND		PHU	81111
3546	NIAGARA		PHU	410574
3547	NORTH BAY		PHU	92348
3549	NORTHWESTERN		PHU	77823
3551	OTTAWA		PHU	774072
3552	OXFORD		PHU	99270
3553	PEEL		PHU	988948
3554	PERTH		PHU	73675
3555	PETERBOROUGH		PHU	125856
3556	PORCUPINE		PHU	88205
3557	RENFREW		PHU	96467
3558	EASTERN ONTARIO		PHU	185968
3560	SIMCOE		PHU	377050
3561	SUDBURY		PHU	190841
3562	THUNDER BAY		PHU	155462
3563	TIMISKAMING		PHU	35245
3565	WATERLOO		PHU	438515
3566	WELLINGTON-DUFFERIN-GUELPH		PHU	238326
3568	WINDSOR-ESSEX		PHU	374975
3570	YORK		PHU	729254
3595	TORONTO		PHU	2481494
3504	95A TORONTO WEST	AREA 1A	HPA	
3504	95B TORONTO WEST	AREA 1B	HPA	
3504	95C TORONTO CENTRAL WEST	AREA 2A	HPA	
3504	95D TORONTO CENTRAL WEST	AREA 2B	HPA	
3504	95E TORONTO CENTRAL WEST	AREA 2C	HPA	
3504	95F TORONTO CENTRAL WEST	AREA 2D	HPA	
3504	95G TORONTO CENTRAL EAST	AREA 3A	HPA	
3504	95H TORONTO CENTRAL EAST	AREA 3B	HPA	
3504	95I TORONTO CENTRAL EAST	AREA 3C	HPA	
3504	95J TORONTO CENTRAL SOUTH	AREA 4A	HPA	
3504	95K TORONTO CENTRAL SOUTH	AREA 4B	HPA	
3504	95L TORONTO EAST	AREA 5A	HPA	
3504	95M TORONTO EAST	AREA 5B	HPA	
3504	95N TORONTO EAST	AREA 5C	HPA	
3504	95O TORONTO EAST	AREA 5D	HPA	

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PRHR SUB NAME / NOM                                SUBTYP
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BRITISH COLUMBIA / COLOMBIE-BRITANNIQUE
5901 010 FERNIE                                    LHA
5901 020 CRANBROOK                                 LHA
5901 030 KIMBERLEY                                 LHA
5901 040 WINDERMERE                                LHA
5901 050 CRESTON                                   LHA
5901 180 GOLDEN                                    LHA
5902 060 KOOTENAY LAKE                             LHA
5902 070 NELSON                                    LHA
5902 090 CASTLEGAR                                 LHA
5902 100 ARROW LAKES                               LHA
5902 110 TRAIL                                     LHA
5902 120 GRAND FORKS                              LHA
5902 130 KETTLE VALLEY                            LHA
5903 190 REVELSTOKE                                LHA
5903 200 SALMON ARM                                LHA
5903 210 ARMSTRONG-SPALLUMCHEEN                   LHA
5903 220 VERNON                                    LHA
5903 780 ENDERBY                                   LHA
5904 140 SOUTHERN OKANAGAN                         LHA
5904 150 PENTICTON                                 LHA
5904 160 KEREMEOS                                  LHA
5904 170 PRINCETON                                 LHA
5904 230 CENTRAL OKANAGAN                         LHA
5904 770 SUMMERLAND                                LHA
5905 240 KAMLOOPS                                  LHA
5905 260 NORTH THOMPSON                           LHA
5905 290 LILLOOET                                  LHA
5905 300 SOUTH CARIBOU                            LHA
5905 310 MERRITT                                   LHA
5906 320 HOPE                                      LHA
5906 330 CHILLIWACK                                LHA
5906 340 ABBOTSFORD                               LHA
5906 750 MISSION                                   LHA
5906 760 AGASSIZ-HARRISON                         LHA
5907 350 LANGLEY                                   LHA
5907 360 SURREY                                    LHA
5907 370 DELTA                                     LHA
5908 400 NEW WESTMINSTER                          LHA
5908 420 MAPLE RIDGE                              LHA
5908 430 COQUITLAM                                LHA
5909 460 SUNSHINE COAST                           LHA
5909 470 POWELL RIVER                             LHA
5909 480 HOWE SOUND                               LHA
5910 650 COWICHAN                                  LHA
5910 660 LAKE COWICHAN                            LHA
5910 670 LADYSMITH                                LHA
5910 680 NANAIMO                                   LHA
5910 690 QUALICUM                                  LHA
5910 700 ALBERNI                                   LHA

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PRHR SUB NAME / NOM                                SUBTYP
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5911 710 COURTENAY                                LHA
5911 720 CAMPBELL RIVER                            LHA
5911 830 CENTRAL COAST                             LHA
5911 840 VANCOUVER ISLAND WEST                     LHA
5911 850 VANCOUVER ISLAND NORTH                    LHA
5912 250 100 MILE HOUSE                             LHA
5912 270 CARIBOU-CHILCOTIN                         LHA
5912 280 QUESNEL                                    LHA
5912 490 BELLA COOLA VALLEY                         LHA
5913 500 QUEEN CHARLOTTE                           LHA
5913 510 SNOW COUNTRY                               LHA
5913 520 PRINCE RUPERT                             LHA
5913 530 UPPER SKEENA                              LHA
5913 540 SMITHERS                                   LHA
5913 800 KITIMAT                                    LHA
5913 870 STIKINE                                    LHA
5913 880 TERRACE                                    LHA
5913 920 NISGA'A                                    LHA
5913 940 TELEGRAPH CREEK                           LHA
5914 590 PEACE RIVER SOUTH                          LHA
5914 600 PEACE RIVER NORTH                          LHA
5914 810 FORT NELSON                                LHA
5915 550 BURNS LAKE                                 LHA
5915 560 NECHAKO                                    LHA
5915 570 PRINCE GEORGE                              LHA
5916 390 VANCOUVER                                  LHA
5916 161 CITY CENTRE VANCOUVER                      LHA
5916 162 DOWNTOWN EAST SIDE VANCOUVER              LHA
5916 163 NORTH EAST VANCOUVER                      LHA
5916 164 WEST SIDE VANCOUVER                       LHA
5916 165 MIDTOWN VANCOUVER                          LHA
5916 166 SOUTH VANCOUVER                           LHA
5917 410 BURNABY                                    LHA
5918 440 NORTH VANCOUVER                            LHA
5918 450 WEST VANCOUVER-BOWEN ISLAND               LHA
5919 380 RICHMOND                                    LHA
5920 610 GREATER VICTORIA                           LHA
5920 620 SOOKE                                      LHA
5920 630 SAANICH                                    LHA
5920 640 GULF ISLANDS                               LHA
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**APPENDIX J Census divisions, 2001**

The numeric code and corresponding census division name, including descriptive names for otherwise unnamed CDs.

PRCD	TYP	CDname		
1001	DIV	Avalon Peninsula	2417	MRC L'Islet
1002	DIV	Burin Peninsula	2418	MRC Montmagny
1003	DIV	South Coast	2419	MRC Bellechasse
1004	DIV	Stephenville	2420	MRC L'île-d'Orléans
1005	DIV	Corner Brook	2421	MRC La Côte-de-Beaupré
1006	DIV	Central Newfoundland	2422	MRC La Jacques-Cartier
1007	DIV	Bonavista Bay	2423	CU Québec
1008	DIV	Notre Dame Bay	2424	MRC Desjardins
1009	DIV	Northern Peninsula	2425	MRC Les Chutes-de-la-Chaudière
			2426	MRC La Nouvelle-Beauce
			2427	MRC Robert-Cliche
1010	DIV	Labrador	2428	MRC Les Etchemins
1101	CTY	Kings	2429	MRC Beauce-Sartigan
1102	CTY	Queens	2430	MRC Le Granit
1103	CTY	Prince	2431	MRC L'Amiante
			2432	MRC L'Érable
1201	CTY	Shelburne	2433	MRC Lotbinière
1202	CTY	Yarmouth	2434	MRC Portneuf
1203	CTY	Digby	2435	MRC Mékinac
1204	CTY	Queens	2436	MRC Le Centre-de-la-Mauricie
1205	CTY	Annapolis	2437	MRC Francheville
1206	CTY	Lunenburg	2438	MRC Bécancour
1207	CTY	Kings	2439	MRC Arthabaska
1208	CTY	Hants	2440	MRC Asbestos
1209	CTY	Halifax	2441	MRC Le Haut-Saint-François
1210	CTY	Colchester	2442	MRC Le Val-Saint-François
1211	CTY	Cumberland	2443	MRC La Région-Sherbrookoise
1212	CTY	Pictou	2444	MRC Coaticook
1213	CTY	Guysborough	2445	MRC Memphrémagog
1214	CTY	Antigonish	2446	MRC Brome-Missisquoi
1215	CTY	Inverness	2447	MRC La Haute-Yamaska
1216	CTY	Richmond	2448	MRC Acton
1217	CTY	Cape Breton	2449	MRC Drummond
1218	CTY	Victoria	2450	MRC Nicolet-Yamaska
			2451	MRC Maskinongé
1301	CTY	Saint John	2452	MRC D'Autray
1302	CTY	Charlotte	2453	MRC Le Bas-Richelieu
1303	CTY	Sunbury	2454	MRC Les Maskoutains
1304	CTY	Queens	2455	MRC Rouville
1305	CTY	Kings	2456	MRC Le Haut-Richelieu
1306	CTY	Albert	2457	MRC La Vallée-du-Richelieu
1307	CTY	Westmorland	2458	MRC Champlain
1308	CTY	Kent	2459	MRC Lajemmerais
1309	CTY	Northumberland	2460	MRC L'Assomption
1310	CTY	York	2461	MRC Joliette
1311	CTY	Carleton	2462	MRC Matawinie
1312	CTY	Victoria	2463	MRC Montcalm
1313	CTY	Madawaska	2464	MRC Les Moulins
1314	CTY	Restigouche	2465	MRC Laval
1315	CTY	Gloucester	2466	CU Montréal
			2467	MRC Roussillon
2401	MRC	Les Îles-de-la-Madeleine	2468	MRC Les Jardins-de-Napierville
2402	MRC	Le Rocher-Percé	2469	MRC Le Haut-Saint-Laurent
2403	MRC	La Côte-de-Gaspé	2470	MRC Beauharnois-Salaberry
2404	MRC	La Haute-Gaspésie	2471	MRC Vaudreuil-Soulanges
2405	MRC	Bonaventure	2472	MRC Deux-Montagnes
2406	MRC	Avignon	2473	MRC Thérèse-De Blainville
2407	MRC	La Matapédia	2474	MRC Mirabel
2408	MRC	Matane	2475	MRC La Rivière-du-Nord
2409	MRC	La Mitis	2476	MRC Argenteuil
2410	MRC	Rimouski-Neigette	2477	MRC Les Pays-d'en-Haut
2411	MRC	Les Basques	2478	MRC Les Laurentides
2412	MRC	Rivière-du-Loup	2479	MRC Antoine-Labelle
2413	MRC	Témiscouata	2480	MRC Papineau
2414	MRC	Kamouraska	2481	CU Outaouais
2415	MRC	Charlevoix-Est	2482	MRC Les Collines-de-l'Outaouais
2416	MRC	Charlevoix	2483	MRC La Vallée-de-la-Gatineau

2484 MRC Pontiac	4605 DIV Turtle Mountain
2485 MRC Témiscamingue	4606 DIV Wallace
2486 MRC Rouyn-Noranda	4607 DIV Brandon
2487 MRC Abitibi-Ouest	4608 DIV Swift Current
2488 MRC Abitibi	4609 DIV Portage la Prairie
2489 MRC Vallée-de-l'Or	4610 DIV Macdonald-Cartier
2490 MRC Le Haut-Saint-Maurice	4611 DIV Winnipeg
2491 MRC Le Domaine-du-Roy	4612 DIV Springfield-Broken Head
2492 MRC Maria-Chapdelaine	4613 DIV St Andrews
2493 MRC Lac-Saint-Jean-Est	4614 DIV Rookwood-Woodlands
2494 MRC Le Fjord-du-Saguenay	4615 DIV Langford-Minto
2495 MRC La Haute-Côte-Nord	4616 DIV Lake of the Prairies
2496 MRC Manicouagan	4617 DIV Dauphin
2497 DIV Sept-Rivières--Caniapiscau	4618 DIV Interlake South-Gimli
2498 DIV Minganie--Basse-Côte-Nord	4619 DIV Lake Winnipeg-Winnipegosis
2499 DIV Nord-du-Québec	4620 DIV Swan River
	4621 DIV Moose Lake
3501 UC Stormont, Dundas and Glengarry	4622 DIV Thompson
3502 UC Prescott and Russell	4623 DIV Hudson Bay
3506 DIV Ottawa	4701 DIV Estevan
3507 UC Leeds and Grenville	4702 DIV Weyburn
3509 CTY Lanark	4703 DIV Lake of the Rivers
3510 CTY Frontenac	4704 DIV Maple Creek
3511 CTY Lennox and Addington	4705 DIV Melville
3512 CTY Hastings	4706 DIV Regina
3513 DIV Prince Edward	4707 DIV Moose Jaw
3514 CTY Northumberland	4708 DIV Swift Current
3515 CTY Peterborough	4709 DIV Yorkton
3516 DIV Kawartha Lakes	4710 DIV Big Quill-Foam Lake-Kutawa
3518 RM Durham	4711 DIV Saskatoon
3519 RM York	4712 DIV Battleford-Biggar-Vanscoy
3520 DIV Toronto	4713 DIV Kindersley-Unity
3521 RM Peel	4714 DIV Star City-Nipawin-Hudson Bay
3522 CTY Dufferin	4715 DIV Prince Albert
3523 CTY Wellington	4716 DIV North Battleford
3524 RM Halton	4717 DIV Lloydminster-Meadow Lake
3525 DIV Hamilton	4718 DIV Northern Saskatchewan
3526 RM Niagara	
3528 RM Haldimand-Norfolk	4801 DIV Medicine Hat
3529 CTY Brant	4802 DIV Lethbridge
3530 RM Waterloo	4803 DIV Southwest (Cardston-Willow/Pincher Creek)
3531 CTY Perth	4804 DIV Hanna-Oyen-Consort
3532 CTY Oxford	4805 DIV Drumheller
3534 CTY Elgin	4806 DIV Calgary
3536 DIV Chatham-Kent	4807 DIV Stettler-Wainwright
3537 CTY Essex	4808 DIV Red Deer
3538 CTY Lambton	4809 DIV Rocky Mountain House
3539 CTY Middlesex	4810 DIV Camrose-Vermillion River-Lloydminster
3540 CTY Huron	4811 DIV Edmonton
3541 CTY Bruce	4812 DIV Cold Lake
3542 CTY Grey	4813 DIV Woodlands
3543 CTY Simcoe	4814 DIV Yellowhead
3544 DM Muskoka	4815 DIV Jasper-Banff
3546 CTY Haliburton	4816 DIV Wood Buffalo
3547 CTY Renfrew	4817 DIV Peace River
3548 DIS Nipissing	4818 DIV Greenview
3549 DIS Parry Sound	4819 DIV Grande Prairie
3551 DIS Manitoulin	
3552 DIS Sudbury District	5901 RD East Kootenay
3553 DIV Greater Sudbury	5903 RD Central Kootenay
3554 DIS Timiskaming	5905 RD Kootenay Boundary
3556 DIS Cochrane	5907 RD Okanagan-Similkameen
3557 DIS Algoma	5909 RD Fraser Valley
3558 DIS Thunder Bay	5915 RD Greater Vancouver
3559 DIS Rainy River	5917 RD Capital
3560 DIS Kenora	5919 RD Cowichan Valley
	5921 RD Nanaimo
4601 DIV Lac du Bonnet-Alexander	5923 RD Alberni-Clayoquot
4602 DIV Hanover	5925 RD Comox-Strathcona
4603 DIV Stanley	5927 RD Powell River
4604 DIV Lorne-Pembina	

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5929 RD	Sunshine Coast	5955 RD	Peace River
5931 RD	Squamish-Lillooet	5957 REG	Stikine
5933 RD	Thompson-Nicola	5959 RD	Northern Rockies
5935 RD	Central Okanagan		
5937 RD	North Okanagan	6001 TER	Yukon
5939 RD	Columbia-Shuswap		
5941 RD	Cariboo	6106 REG	Fort Smith
5943 RD	Mount Waddington	6107 REG	Inuvik
5945 RD	Central Coast		
5947 RD	Skeena-Queen Charlotte	6204 REG	Baffin
5949 RD	Kitimat-Stikine	6205 REG	Keewatin
5951 RD	Bulkley-Nechako	6208 REG	Kitikmeot
5953 RD	Fraser-Fort George		

**APPENDIX K Economic regions and 2001 populations**

<b>PRER</b>	<b>ERNAME</b>	<b>ERPOP01</b>
1010	Avalon Peninsula	242875
1020	South Coast - Burin Peninsula	43741
1030	West Coast - Northern Peninsula - Labrador	110583
1040	Notre Dame - Central Bonavista Bay	115731
1110	Prince Edward Island	135294
1210	Cape Breton	147454
1220	North Shore	158282
1230	Annapolis Valley	121152
1240	Southern	121936
1250	Halifax	359183
1310	Campbellton - Miramichi	169880
1320	Moncton - Richibucto	182820
1330	Saint John - St. Stephen	167981
1340	Fredericton - Oromocto	124850
1350	Edmundston - Woodstock	83967
2410	Gaspésie - îles-de-la-Madeleine	96924
2415	Bas-Saint-Laurent	200630
2420	Capitale-Nationale	638917
2425	Chaudière - Appalaches	383376
2430	Estrie	285613
2433	Centre-du-Québec	218502
2435	Montérégie	1276397
2440	Montréal	1812723
2445	Laval	343005
2450	Lanaudière	388495
2455	Laurentides	461366
2460	Outaouais	315546
2465	Abitibi - Témiscamingue	146097
2470	Mauricie	255268
2475	Saguenay - Lac-Saint-Jean	278279
2480	Côte-Nord	97766
2490	Nord-du-Québec	38575
3510	Ottawa	1119141
3515	Kingston - Pembroke	424021
3520	Muskoka - Kawarthas	340723
3530	Toronto	4930990
3540	Kitchener - Waterloo - Barrie	1053891
3550	Hamilton - Niagara Peninsula	1274833
3560	London	584008
3570	Windsor - Sarnia	609655
3580	Stratford - Bruce Peninsula	286341
3590	Northeast	551672
3595	Northwest	234771
4610	Southeast	86552
4620	South Central	52126
4630	Southwest	103020
4640	North Central	47389
4650	Winnipeg	621451
4660	Interlake	82365
4670	Parklands	44253
4680	North	82427
4710	Regina - Moose Mountain	271123
4720	Swift Current - Moose Jaw	104255
4730	Saskatoon - Biggar	285380
4740	Yorkton - Melville	88752
4750	Prince Albert	197394
4760	Northern	32029

<b>PRER</b>	<b>ERNAME</b>	<b>ERPOP01</b>
4810	Lethbridge - Medicine Hat	238895
4820	Camrose - Drumheller	182374
4830	Calgary	1021060
4840	Banff - Jasper - Rocky Mountain House	80512
4850	Red Deer	153049
4860	Edmonton	975477
4870	Athabasca - Grande Prairie - Peace River	222107
4880	Wood Buffalo - Cold Lake	101333
5910	Vancouver Island and Coast	687901
5920	Lower Mainland - Southwest	2283125
5930	Thompson - Okanagan	465042
5940	Kootenay	145153
5950	Cariboo	160976
5960	North Coast	62569
5970	Nechako	42172
5980	Northeast	60800
6010	Yukon	28674
6110	Northwest Territories	37360
6210	Nunavut	26745

**APPENDIX L Census agricultural regions, 2001**

including unofficial descriptive names for otherwise unnamed regions

<b>PR AR ARNAME</b>	<b>PR AR ARNAME</b>
10 01 Southeastern	47 1A Estevan
10 02 Central	47 1B Elcapo-Moosomin
10 03 Western and Labrador	47 2A Weyburn
	47 2B Regina-Moose Jaw
11 01 Eastern	47 3P Gravelbourg-Enfield (3AN)
11 02 Central	47 3Q Lake of the Rivers-Laurier-Hart Butte (3AS)
11 03 Western	47 3R Swift Current (3BN)
	47 3S Grassy Creek (3BS)
12 01 Southwestern	47 4A Maple Creek-White Valley
12 02 Annapolis Valley	47 4B Gull Lake-Happyland
12 03 Central	47 5A Yorkton
12 04 Eastern	47 5B Cote-Good Lake-Preeceville
12 05 Cape Breton	47 6A Lumsden
	47 6B Saskatoon
13 01 Northwestern - Nord-Ouest	47 7A Kindersley-St Andrews
13 02 Southwestern - Sud-Ouest	47 7B Biggar-Round Valley
13 03 Southeastern - Sud-Est	47 8A Star City-Nipawin-Hudson Bay
13 04 Northeastern - Nord-Est	47 8B Humbolt
	47 9A Prince Albert-North Battleford
24 01 Bas-Saint-Laurent	47 9B Britannia-Meadow Lake-Battle River
24 02 Saguenay--Lac-Saint-Jean/Côte-Nord	47 00 Northern Saskatchewan
24 03 Québec	
24 04 Maurice	48 01 Medicine Hat-Hanna
24 05 Estrie	48 02 Lethbridge-Drumheller
24 06 Montréal/Laval	48 03 Calgary-Foothills
24 07 Lanaudière	48 4A Stettler-Wainwright
24 08 Outaouais	48 4B Camrose-Vermillion River-Lloydminster
24 09 Laurentides	48 05 Edmonton-Red Deer-Rocky Mountain House
24 10 Abitibi-Témiscamingue/Nord-du-Québec	48 06 Yellowhead-Woodlands-Cold Lake-Wood Buffalo
24 11 Gaspésie--Îles-d-la-Madeleine	48 07 Peace River-Grande Prairie
24 12 Chaudière-Appalaches	
24 13 Montérégie	59 01 Vancouver Island-Coast
24 14 Centre-du-Québec	59 02 Lower Mainland-Southwest
	59 03 Thompson-Okanagan
35 01 Southern Ontario - Sud de l'Ontario	59 04 Kootenay
35 02 Western Ontario - Ouest de l'Ontario	59 05 Cariboo
35 03 Central Ontario - Centre de l'Ontario	59 06 North Coast
35 04 Eastern Ontario - Est de l'Ontario	59 07 Nechako
35 05 Northern Ontario - Nord de l'Ontario	59 08 Peace River
46 01 Southwestern	60 00 Yukon
46 02 Brandon-Wallace	
46 03 Neepawa-Minnedosa-Shoal Lake	61 00 Northwest Territories
46 04 Lake of the Prairies	
46 05 Swan River	62 00 Nunavut
46 06 Dauphin	
46 07 Centre-West	
46 08 Centre-South	
46 09 Centre-East	
46 10 Southeastern	
46 11 Centre-North	
46 12 Northern	

**APPENDIX M**  
**SUPPLEMENTARY PROGRAM DIST4X.SAS**

DIST4x.SAS is a supplementary program for calculating distances from each record on one file to the closest of many records on a second file.

Use of this program requires that you have already generated two output files through previous use of *PCCF+* Version 4x. It first reads in both files. Then, for each record in the first file, it calculates the distance to each record in the second file. It retains only the minimum distance, plus the ID of the record in the second file for which the minimum distance was found.

By default, the program assumes that you have previously defined two categories of records in the second file (for example, specialist and non-specialist physicians, or general hospitals and children's hospitals). You can modify the program to work with additional or fewer categories, defined and coded however you want.

Basic familiarity with SAS programming is required for use of this supplementary program.