PCCF + Version 4H
User's Guide

**Automated Geographic Coding Based on the
Statistics Canada Postal Code Conversion Files**

Including Postal Codes through March 2006

by

Russell Wilkins

**Health Analysis and Measurement Group
Statistics Canada
Ottawa**

June 2006

Catalogue no. 82F0086-XDB

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 (Learning resources / Postsecondary/Data Liberation Initiative). On the DLI FTP site, the *PCCF+* filenames are shown in the directory -/health/pccf4h-fccp4h. [Ressources éducatives / Niveau postsecondaire / l'initiative de démocratisation des données]. For Statistics Canada internal use, see //geodepot2/ftp/Geographie_2001_Geography/Geo_Data_Products-Produits_de_données_Géo/PCCFplus_version4H_jun06/

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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. For residence coding, edit the program GEORES4x.SAS. For coding of health facilities or office locations, edit the program GEOINS4x.SAS.

Step 2: Identifying 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 'c:\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 MISSOVER;
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: Naming 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 'c:\pccf4a\sampldat.geo'; /* the main output file */
filename GEOPROB 'c:\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 SAS 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 PCVDATC 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 PCVDATC.

```
/* ONLY CHANGE DATE BELOW IF VINTAGE IS LATER THAN 19970601: */
PCVDATC='19970601';   /* YYYYMMDD VINTAGE OF PCODES     */
                      /* MM=01-12; DD=01-31 ONLY—NOT OO 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 PCVDATC 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 PCVDATC $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 PCVDATC as a constant. Do the latter by adding the SAS comment characters as shown in the shaded text below:

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

Table 1
Files included in PCCF+ Version 4G

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
EXPLODE2.SAS + GROUPED.TXT	TRANSFORMS COUNT DATA TO EQUIVALENT INDIVIDUAL RECORDS
FIXPCBAD.SAS + PCBAD.TXT	FIX COMMON ERRORS IN CANADIAN POSTAL CODES.
BLDG9606.EGMRES.CAN	POSSIBLE RES FOR DMT E G M
BLDG0302.TXTF1EZ.CAN	BLDG NAMES & ADDRESSES
CPADR.NADR0302.CAN	NUMBER ADDRESS RANGES FOR PCODE
GEOREF01.ARDEF.CAN	AGRICULTURAL REGION (CROP DISTRICT) DEFINITIONS
GEOREF01.ARNAMES.CAN	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.DABLKPNT.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.FEDNAM03.OCT05.CAN	FEDERAL ELECTORAL DISTRICT--2003 LIST NAMES
GEOREF01.GTF01C.CAN	GEOGRAPHIC ATTRIBUTES AT BLOCK LEVEL
GEOREF01.HRDEF05B.CAN	HEALTH REGIONS DEFINITIONS
GEOREF01.HRNAM05.CAN	HEALTH REGION NAMES AND POPULATIONS
GEOREF01.INSTFLG.CAN	INSTITUTIONAL FLAG
GEOREF01.NSREL96.CAN	NORTH SOUTH RELATIONSHIP (BASED ON 1996 PRCDCSD)
GEOREF01.SUBDEF05.CAN	HEALTH DISTRICT DEFINITIONS
GEOREF01.SUBNAM05.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
PCCFyymm.BCVUNIQ.CAN#	PCODES PRIOR TO MOVE--OLD FSAs
PCCFyymm.CPCOMM.CAN	CANADA POST COMMUNITY NAMES
PCCFyymm.DUPS.CAN	ALL OCCURRENCES DUPLICATE PCODES
PCCFyymm.FSAGEOG.CAN	GEOGRAPHY AT EACH FSA
PCCFyymm.FSAGEO1.CAN#	GEOGRAPHY AT EACH FSA—OLD FSAs
PCCFyymm.FSA12GEO.CAN	GEOGRAPHY AT EACH FSA12
PCCFyymm.FSA12GE1.CAN#	GEOGRAPHY AT EACH FSA12—OLD FSAs
PCCFyymm.POINTDUP.CAN	POINTER TO 1ST DUPLICATE PCODE
PCCFyymm.RPO.CAN*	RURAL POST OFFICE LOCATIONS
PCCFyymm.UNIQ.CAN	PCODES UNIQUE ON PCCF
PCCFyymm.WCFPOINT.CAN	POINTER TO 1ST DUPLICATE PCODE ON WCF
PCCFyymm.WCFUDUPS.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.) 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.

            PCCFyymm 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 businesses 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, or helps you to do, as summarized below.

- Deal with community mail boxes and other sources of duplicate records on the 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 4H?

Routine update to include postal codes through to the end of March 2006.

What was new in Version 4G?

Routine update to include postal codes through to the end of October 2005. For the Federal Electoral Districts, 2003 Representation Order (FED2003), riding names and definitions have been updated to include changes in 2004 and 2005. Ontario health region (HR) definitions have been updated to include changes through August 2005 (LHIN Version 11).

What was new in Version 4F?

Health region and health district definitions have been updated to 1 June 2005 reference date (Statistics Canada, *Health Indicators, June 2005*, catalogue 82-221-XIE; Statistics Canada, *Health Regions 2005: Boundaries and Correspondence with Census Geography*, catalogue 82-402-XIE). Most notable changes were in Newfoundland and Labrador (amalgamation of four regions into two; other regions unchanged), Nova Scotia (definition of 9 district health authorities as subsets of health zones), Ontario (district health councils abolished in favour of 14 local health integration networks (LHINs); one public health unit dissolved and split between two other units), and Alberta (boundary change between two regions). There were also name changes for 2 health regions in Québec.

Population weights for rural areas now include estimates for under enumerated Indian reserves.

What was new in Version 4D?

In Version 4D, a new field was 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 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" (Plessis et al, 2001).

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 (EACMTFLG) 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 are 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 are 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) are 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 include 3 additional fields (BTHDATEC RETDATEC PCVDATC) 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 PRCDCSD (for SACTYPEs 5-8). Economic region (ER) codes are assigned, based on the PRCD (or PRCDCSD in Ontario only). Agricultural region (AR) codes are assigned based on PRCD (or PRCDCCS 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 V1H). 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 you 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. Supplementary files and sample programs for EA<=>DA+BLK translation across census years are now available (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 75th 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, NCSD, 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)
YK or YT	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 programs 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.

Acknowledgements

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
Total	823,556	100.0	1,987,055	100.0	2.4	671,797	100.0	29,779,095	100.0	44
Urban post office										
Urban services										
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
Rural services from urban PO										
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
Rural post office										
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.

LIST OF APPENDICES

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=UNKNN;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 PCVDATC  $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 (DMT)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 PRCDDA); 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, NCSD, 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, DUPS`, 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 V1H 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 ADRRESS 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 PCCFYYMM.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 2005, 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 HRNAM05 shows the name of each HR, including unofficial descriptive names for unnamed HRs.

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 one or two characters to represent a health district, the second and/or third characters will be blank. See Appendix H2 for a summary of health districts by province and type, and Appendix H4 for a complete list of health districts. File SUBNAM05 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. According to Statistics Canada's recommended definition, rural and small town Canada (Plessis et al, 2001) is defined as CSIZE='5'.

Neighbourhood Income Quintile (QAIPPE)

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

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            */
```

Use of this field is not recommended, because 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;` For geography based on postal codes, a far more robust definition is Statistics Canada's recommended definition of "rural and small town Canada" (Plessis et al, 2001) -- where CSIZE='5' (all non-CMACA).

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: COMMERC/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 (PCVDATC)—for alternate programs R4xOLD, I4xOLD only

```
@144 PCVDATC $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 OLCODES 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 output from the HLTHOUT dataset

```
GEOCODES/PCCF VERSION 4 -- SAMPLE OUTPUT FROM THE HLTHOUT DATASET (.GEOG1 FILE)
-----------------------------------------------------------------------------------------
ID         PCODE  PRCDCSD CMA CT     DABLK  LAT      LONG       DPL DIAG      VER COMM HRSUB C Q S N U FED ER AR CCS EA96UID
-----------------------------------------------------------------------------------------
1304183010 H1A5H8 2466025 462 580.03 000601 45689925 073486893 000 A9D111172 R4A 3276 06    1 3 1 S 1 044 40 06 025 24045417
1304183033 H1A5G4 2466025 462 582.01 292702 45653189 073503887 000 A9D111176 R4A 3276 06    1 3 1 S 1 044 40 06 025 24045358
1304183332 G1H2C1 2423030 421 273.01 082102 46856140 071245151 000 A9D11117. R4A 2587 03    2 2 1 S 1 015 20 03 030 24016455
1304183333 G1H7B3 2423030 421 273.01 081902 46850294 071240870 000 A9F111191 R4A 2587 03    2 2 1 S 1 015 20 03 030 24016452
1304183632 G8T8L9 2437055 442 200.00 015910 46367087 072500828 000 B9D111171 R4A 2561 04    3 1 1 S 1 014 70 04 050 24014354
1304184533 J8V2P3 2481015 505 841.03 037904 45515264 075736270 000 A9D111176 R4A 2752 07    2 3 1 S 0 023 60 08 015 24015556
1304185031 G1P1H6 2423025 421 039.02 065901 46822089 071329615 000 A9D11117. R4A 3313 03    2 1 1 S 1 052 20 03 025 24054103
1304185033 G2E5Y7 2423025 421 140.03 047503 46806119 071370503 000 A9D111173 R4A 2859 03    2 4 1 S 1 052 20 03 060 24054063
1601001210 L1G3Y1 3518013 532 015.00 008602 43937498 078876105 000 A9D11117. R4A 5227 0330 3 2 1 S 1 016 30 03 013 35016270
1601002733 L8V3V5 3525005 537 005.01 059702 43217763 079851251 000 A9F111191 R4A 4809 0837 2 1 1 S 1 030 50 01 005 35030108
1601005410 R2G0E6 4611040 602 141.02 071402 49937939 097087637 000 A9D11117. R4A 6221 10   2 2 1 S 1 013 50 09 040 46008417
1601007832 P7A5G4 3558004 595 015.00 014505 48438993 089226888 000 A9F111191 R4A 5549 1662 3 1 1 S 1 087 95 05 004 35084320
1601007833 P7B3H1 3558004 595 011.01 031611 48421824 089235996 000 A9F111191 R4A 5549 1662 3 1 1 S 1 087 95 05 004 35084410
1601009010 M6S4Y8 3520005 535 050.01 147401 43637293 079471415 000 B9F111191 R4A 5562 0495B 1 4 1 S 1 064 30 03 005 35063258
1601009033 M6P2H9 3520005 535 100.00 140201 43664058 079462540 000 A9F111191 R4A 5562 0495E 1 3 1 S 1 064 30 03 005 35098002
1601010231 K7M7B4 3510010 521 014.00 013602 44250712 076533691 000 B9D111171 R4A 4951 0241 3 1 1 S 1 036 15 04 010 35037506
1601011533 L5C3S8 3521005 535 527.08 069101 43577841 079654532 000 A9D111172 R4A 5106 0653 1 3 1 S 1 046 30 02 005 35049404
1601011910 S0E1E0 4714076 000 000.00 002410 53349268 104019508 000 W7C934459 R4A 6735 08    5 1 0 R 1 006 50 8A 072 47002573
1601013832 L7R4M7 3524002 537 207.01 053802 43334767 079821521 000 B9F111191 R4A 4458 0636 2 3 1 S 1 010 50 02 002 35008115
1601014733 L2G3E7 3526043 539 203.01 006904 43070976 079095668 000 A9F111191 R4A 5177 0946 3 2 1 S 1 052 50 01 043 35051016
1601015931 L4W1L1 3521005 535 527.05 032501 43624059 079608402 000 A9F111191 R4A 5106 0653 1 1 1 S 1 047 30 02 005 35047351
1601016133 L2S2M9 3526053 539 003.01 037804 43145861 079253296 000 A9F111191 R4A 5473 0946 3 1 1 S 1 051 50 01 053 35090216
1601017132 L4N2V4 3543042 568 005.00 038106 44367352 079679190 000 A9F111191 R4A 4358 0560 3 5 2 S 1 002 40 02 042 35079159
1601017421 N7S5L7 3538030 562 102.02 015804 42973744 082365802 000 A9F111191 R4A 5391 1242 4 3 2 S 1 071 70 01 030 35072209
1601017633 M4K1C1 3520005 535 069.00 383001 43669948 079342406 000 A9F111191 R4A 5562 0495I 1 2 1 S 1 008 30 03 005 35006061
1601017910 N4B2W4 3528052 547 000.00 008009 42756837 080558774 000 H9C114259 R4A 4613 1034 4 4 3 S 0 027 50 01 052 35018012
1601018131 N6G2E5 3539036 555 044.04 035003 43006922 081306309 000 A9D11117. R4A 5013 1144 3 3 1 S 1 044 60 01 036 35045463
1601019332 L5G1J8 3521005 535 540.01 037901 43553413 079585884 000 B9F111191 R4A 5106 0653 1 1 1 S N 048 30 02 005 35048068
1601019721 R2K0V9 4611040 602 133.00 070502 49927590 097100976 000 A9F111191 R4A 6221 10   2 2 1 S 1 014 50 09 040 46014203
1601020010 M4E3M6 3520005 535 022.00 379901 43677506 079285931 000 A9D11117. R4A 5562 0495K 1 5 1 S 1 003 30 03 005 35002068
1601020131 T7P1A3 4813031 000 000.00 004620 54164822 113845804 000 A9F112181 R4A 7709 26    5 4 0 R 1 001 70 06 028 48001057
1601020432 N4G4T7 3532004 546 000.00 007010 42876846 080729595 000 B9F112181 R4A 5555 1152 4 4 3 S 1 063 60 01 012 35062064
1601020610 M1C1K9 3520005 535 362.02 374802 43788038 079163502 000 A9D11117. R4A 5400 0495M 1 5 1 S 1 075 30 03 005 35077052
1601025533 T5H2X1 4811061 835 046.00 020303 53550678 113501115 000 A9F111191 R4A 7229 25    2 1 1 R 1 015 60 05 061 48012253
1601026631 K1V9K4 3506008 505 002.05 087501 45347074 075665245 000 B9F111191 R4A 5230 0151 2 3 1 S 1 060 10 04 008 35059014
1601027832 S4V0G7 4706027 705 008.02 019701 50432251 104564832 000 A9D11117. R4A 6814 04    3 5 1 S 1 013 10 2B 027 47007161
1601028831 N7S4X8 3538030 562 102.02 015903 42970869 082365165 000 A9F111191 R4A 5391 1242 4 2 2 S 1 071 70 01 030 35072208
1601028832 N7T6J8 3538030 562 008.00 019504 42982172 082396827 000 A9F111191 R4A 5391 1242 4 2 2 S 1 071 70 01 030 35072164
1601029531 T1K4A4 4802012 810 019.00 016101 49678240 112881944 000 A9D11117. R4A 7414 20    4 2 2 S 1 018 10 02 011 48017419
1601030710 L5C3L4 3521005 535 527.08 069502 43576525 079661365 000 A9F111191 R4A 5106 0653 1 4 1 S 1 046 30 02 005 35049405
1601030733 L5A3T1 3521005 535 521.06 085901 43597525 079626646 000 B9F111191 R4A 5106 0653 1 2 1 S 1 047 30 02 005 35047113
1601031231 L8N2Z3 3525005 537 033.00 044701 43246956 079851089 000 A9F111191 R4A 4809 0837 2 1 1 S 1 029 50 01 005 35032002
1601032031 K8A7W4 3547064 515 000.00 004912 45817759 077093184 000 A9F112181 R4A 5256 0157 4 5 3 S 1 070 15 04 075 35068254
1601033332 R2K0K5 4611040 602 134.00 071204 49930495 097093590 000 A9F111191 R4A 6221 10   2 3 1 S 1 014 50 09 040 46014208
1601035633 R2C5B2 4611040 602 120.02 085503 49900542 096969280 000 A9F111191 R4A 6221 10   2 4 1 S 1 014 50 09 040 46014003
-----------------------------------------------------------------------------------------
```

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 99999 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 CA1            :Thompson-Nicola RD  KAMLOOPSC*
1802068310 V4T4J5 5935027 915 102.02 015502 4911 13    175  90I41994. Kelowna CA1: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  . . 99999 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  E3F111191 APARTMENT BLDG 430 MCMURCHY AVE S BRAMPTON       BRAMPTONC*
1604503732 T5H4B9@4811061 835 046.00 020808 5311 25    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  BG4F111191 BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY 4200 BURN BURNABY C*
1202190833 A1B1S5@1001519 001 013.00 025301 4705 01    000  G4F111191 ST PATRICKS MERCY HOME 146 ELIZABETH AVE ST. JOHN' ST. JOHNC*
1202154133 A2A2E1@1006017 010 000.00 003010 4805 03    000  G4F111191 CENTRAL NEWFOUNDLAND REGIONAL HEALTH CENTRE 5 GRAN GRAND FAT*
1303089633 H2C3H6@2466025 462 277.00 265801 4507 06    000  G4F111191 LES RESIDENCES LAURENDEAU,LEGARE,LOUVAIN 1725 MONT MONTRÉALV*
1603169333 M1H3A1@3520005 535 356.00 361001 4307 0495N 000  G4F111191 CEDARBROOK LODGE 520 MARKHAM RD SCARBOROUGH        TORONTO C*
1602154410 M9W4L3@3520005 535 246.00 184101 4307 0495A 000  G4F111191 KIPLING ACRES HOME FOR THE AGED 2233 KIPLING ETOBI TORONTO C*
1604515931 N2L3G1@3530016 541 106.01 029605 4308 0765  000  G4F111191 UNIVERSITY OF WATERLOO 200 UNIVERSITY AVE W WATERL WATERLOOC*
1604443433 R1N3V4@4609029 607 000.00 001414H4909 40    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  G4F111191 CANADIAN FORCES BASE WINNIPEG, KAPYONG BARRAC WINN WINNIPEGC*
1601086332 R7N1R7@4617050 000 000.00 001114 5110 60    000  G4F111191 DAUPHIN GENERAL HOSPITAL 625 3RD ST SW DAUPHIN     DAUPHIN C*
1603548732 S4S3B4@4706027 705 002.02 049002 5010 04    000  G4F111191 EXTENDICARE/PARKSIDE 4540 RAE ST REGINA           REGINA  C*
1602539533 T5K0L4@4811061 835 032.02 015604H5311 25    000  G4F111191 GENERAL HOSPITAL 11111 JASPER AVE NW EDMONTON     EDMONTONC*
1803100131 V6T1K2@5915020 933 069.00 094705 4912 32    000  G4D111171 WALTER GAGE RESIDENCE ( UBC ) 5959 STUDENT UN VANC GREATER RD
--------------------------------------------------------------------
```

APPENDIX E

APPENDICE 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

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

APPENDIX F1	Geographic coding from the first character of the postal code
APPENDIX F2	Geographic coding from the first two characters of the postal code
APPENDIX F3	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 SUBDIVISON (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 PRCDCSD  PCSD  AVLAT    AVLONG    T
-----------------------------------------------------------------
```

NEWFOUNDLAND AND LABRADOR - TERRE-NEUVE ET LABRADOR
```
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
```

NOVA SCOTIA - NOUVELLE ECOSSE
```
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
```

PRINCE EDWARD ISLAND - ILE DU PRINCE-EDOUARD
```
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
```

NEW BRUNSWICK - NOUVEAU BRUNSWICK
```
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
```

QUEBEC
```
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
-----------------------------------------------------------------------
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 SUBDIVISON (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
-----------------------------------------------------------------------
HLTH.PCCF0209.FSAGEOG.CAN
```

APPENDIX H Health Regions and Health Districts

APPENDIX H1
Summary List of Health Regions, by Province and Type, Canada, June 2005

PR	Health Region Type	HRTYP	Number
Total			49
NF	Regional Integrated Health and Authority	RIH	4
PE	Health Region	HRE	4
NS	Health Zone	ZON	6
NB	Region	REG	7
QC	Région socio-sanitaire	RSS	18
ON	Local Health Integration Network	LHN	14
MB	Regional Health Authority	RHA	11
SK	Regional Health Authority	RHA	12
	Health Authority	HAU	1
AB	Regional Health Authority	RHA	3
	Health Region	HRE	3
	Health	HLT	3
BC	Health Service Delivery Area	HSD	16
	Regional Health Authority (roll-up)	RHA	5
YK	Territory	TER	1
NT	Territory	TER	1
NU	Territory	TER	1

The 16 Health Service Delivery Areas in BC roll up to 5 Regional 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, June 2005

PR	Health District Type	SUBTYP	Number
Total			149
NS	District Health Authority	DHA	9
QC	Centre local de services communautaires	CLS	174
ON	Public Health Unit (incl Toronto)	PHU	36
	Health Planning Area (Toronto only)	HPA	16
BC	Local Health Area	LHA	89

For Version 4H of PCCF+, the health district codes for BC are not shown. Ontario health districts (PHUs) are defined without reference to Ontario health region (LHN) boundaries. In all other provinces, health districts roll up to health regions.

APPENDIX H3:
HEALTH REGIONS, CANADA, JUNE 2005
REGIONS SOCIO-SANITAIRES, CANADA, JUIN 2005

```
---------------------------------------------------------
PRHR   HEALTH REGION / REGION SOCIO-SANITAIRE      HRTYP
---------------------------------------------------------

NEWFOUNDLAND / TERRE-NEUVE
1011   EASTERN                                     RIH
1012   CENTRAL                                     RIH
1013   WESTERN                                     RIH
1014   LABRADOR-GRENFELL                           RIH


PRINCE EDWARD ISLAND / ILE DU PRINCE-EDOUARD
1101   WEST PRINCE                                 HRE
1102   EAST PRINCE                                 HRE
1103   QUEENS                                      HRE
1104   KINGS                                       HRE


NOVA SCOTIA / NOUVELLE ECOSSE
1201   BRIDGEWATER-YARMOUTH                        ZON
1202   KENTVILLE                                   ZON
1203   TRURO-AMHERST                               ZON
1204   NEW GLASGOW-ANTIGONISH                      ZON
1205   CAPE BRETON                                 ZON
1206   HALIFAX                                     ZON


NEW BRUNSWICK / NOUVEAU-BRUNSWICK
1301   MONCTON                                     REG
1302   SAINT JOHN                                  REG
1303   FREDERICTON                                 REG
1304   EDMUNDSTON                                  REG
1305   CAMPBELLTON                                 REG
1306   BATHURST                                    REG
1307   MIRAMICHI                                   REG


QUEBEC
2401   BAS-SAINT-LAURENT                           RSS
2402   SAGUENAY--LAC-SAINT-JEAN                    RSS
2403   CAPITALE-NATIONALE                          RSS
2404   MAURICIE ET CENTRE DU QUEBEC                RSS
2405   ESTRIE                                      RSS
2406   MONTREAL                                    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   CHAUDIERE-APPALACHES                        RSS
2413   LAVAL                                       RSS
2414   LANAUDIERE                                  RSS
2415   LAURENTIDES                                 RSS
2416   MONTEREGIE                                  RSS
2417   NUNAVIK                                     RSS
2418   TERRES-CRIES-DE-LA-BAIE-JAME                RSS
```

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-----------------------------------------------------------
PRHR  HEALTH REGION / REGION SOCIO-SANITAIRE       HRTYP
-----------------------------------------------------------
ONTARIO
3501  EIRIE ST. CLAIR                              LHN
3502  SOUTH WEST                                   LHN
3503  WATERLOO WELLINGTON                          LHN
3504  HAMILTON NIAGARA HALDIMAND BRANT             LHN
3505  CENTRAL WEST                                 LHN
3506  MISSISSAUGA HALTON                           LHN
3507  TORONTO                                      LHN
3508  CENTRAL                                      LHN
3509  CENTRAL EAST                                 LHN
3510  SOUTH EAST                                   LHN
3511  CHAMPLAIN                                    LHN
3512  NORTH SIMCOE MUSKOKA                         LHN
3513  NORTH EAST                                   LHN
3514  NORTH WEST                                   LHN

MANITOBA
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

SASKATCHEWAN
4701  SUN COUNTRY                                  RHA
4702  FIVE HILLS                                   RHA
4703  CYPRESS                                      RHA
4704  REGINA QU'APPELLE                            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

ALBERTA
4820  CHINOOK                                      RHA
4821  PALLISER                                     HRE
4822  CALGARY                                      HRE
4823  DAVID THOMPSON                               RHA
4824  EAST CENTRAL                                 HLT
4825  CAPITAL                                      HLT
4826  ASPEN                                        RHA
4827  PEACE COUNTRY                                HLT
4828  NORTHERN LIGHTS                              HRE
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-----------------------------------------------------------------
PRHR  HEALTH REGION / REGION SOCIO-SANITAIRE        HRTYP
-----------------------------------------------------------------
BRITISH COLUMBIA / COLOMBIE-BRITANNIQUE
591   INTERIOR                                      HAU
5911  EAST KOOTENAY                                 HSD
5912  KOOTENAY-BOUNDARY                             HSD
5913  OKANAGAN                                      HSD
5914  THOMPSON/CARIBOO                              HSD
592   FRASER                                        HAU
5921  FRASER EAST                                   HSD
5922  FRASER NORTH                                  HSD
5923  FRASER SOUTH                                  HSD
593   VANCOUVER CENTRAL                             HAU
5931  RICHMOND                                      HSD
5932  VANCOUVER                                     HSD
5933  NORTH SHORE/COAST GARIBALDI                   HSD
594   VANCOUVER ISLAND                              HAU
5941  SOUTH VANCOUVER ISLAND                        HSD
5942  CENTRAL VANCOUVER ISLAND                      HSD
5943  NORTH VANCOUVER ISLAND                        HSD
595   NORTHERN                                      HAU
5951  NORTHWEST                                     HSD
5952  NORTHERN INTERIOR                             HSD
5953  NORTHEAST                                     HSD

TERRITORIES / TERRITOIRES
6001  YUKON                                         TER
6101  NORTHWEST                                     TER
6102  NUNAVUT                                       TER
-----------------------------------------------------------------
FILE=HRNAM05.CAN
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APPENDIX H4:
HEALTH DISTRICTS, CANADA, JUNE 2005
DISTRICTS SOCIO-SANITAIRES, CANADA, JUIN 2005

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-------------------------------------------------------------
PRHR SUB NAME / NOM                        SUBTYP   POP2001
-------------------------------------------------------------
NOVA SCOTIA / NOUVELLE-ÉCOSSE
12011    BRIDGEWATER                         DHA     59314
12012    YARMOUTH                            DHA     62622
12023    KENTVILLE                           DHA     80639
12034    TRURO                               DHA     69946
12035    AMHERST                             DHA     32605
12046    NEW GLASGOW                         DHA     46965
12047    ANTIGONISH                          DHA     47154
12058    CAPE BRETON                         DHA    129705
12059    HALIFAX                             DHA    379057


QUEBEC
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-MAURICE                   CLS     15862
2404402 MEKINAC                              CLS     12809
2404403 CENTRE-DE-LA-MAURICIE                CLS     64841
2404404 MASKINONGE                           CLS     23401
2404405 TROIS-RIVIERES                       CLS     80286
2404406 DES CHENAUX                          CLS     12127
2404407 CAP-DE-LA-MADELEINE                  CLS     45942
2404501 NICOLET-YAMASKA                      CLS     23496
2404502 BECANCOUR                            CLS     19088
2404503 DRUMMOND                             CLS     87808
2404504 ARTHABASKA                           CLS     64089
2404505 DE L'ERABLE                          CLS     24021
2405101 GRANIT                               CLS     21830
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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
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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 SAINT CONSTANT - 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 SAINT-JEAN-SUR-RICHELIEU - SAINT-LUC            CLS    99474
2416013 SAINT-BRUNO - BELOEIL - SAINT-HILAIRE           CLS    93736
2416014 CHAMBLY-CARIGNAN-MARIEVILLE                     CLS    51380
2416015 BAS RICHELIEU                                    CLS    50066
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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
3546 NIAGARA                                       PHU    410574
3547 NORTH BAY - PARRY SOUND                       PHU    1200353
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 - MUSKOKA                              PHU    430156
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
3595A TORONTO WEST              AREA 1A            HPA
3595B TORONTO WEST              AREA 1B            HPA
3595C TORONTO CENTRAL WEST      AREA 2A            HPA
3595D TORONTO CENTRAL WEST      AREA 2B            HPA
3595E TORONTO CENTRAL WEST      AREA 2C            HPA
3595F TORONTO CENTRAL WEST      AREA 2D            HPA
3595G TORONTO CENTRAL EAST      AREA 3A            HPA
3595H TORONTO CENTRAL EAST      AREA 3B            HPA
3595I TORONTO CENTRAL EAST      AREA 3C            HPA
3595J TORONTO CENTRAL SOUTH     AREA 4A            HPA
3595K TORONTO CENTRAL SOUTH     AREA 4B            HPA
3595L TORONTO EAST              AREA 5A            HPA
3595M TORONTO EAST              AREA 5B            HPA
3595N TORONTO EAST              AREA 5C            HPA
3595O TORONTO EAST              AREA 5D            HPA
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-------------------------------------------------------------
PRHR SUB NAME / NOM                                     SUBTYP
-------------------------------------------------------------
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
```

```
-------------------------------------------------------------
PRHR SUB NAME / NOM                                    SUBTYP
-------------------------------------------------------------
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
-------------------------------------------------------------
FILE=H:\GTF2001\hr200506\SUBNAM05.CAN + THDIST2.COD
```

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

2484 MRC Pontiac
2485 MRC Témiscamingue
2486 MRC Rouyn-Noranda
2487 MRC Abitibi-Ouest
2488 MRC Abitibi
2489 MRC Vallée-de-l'Or
2490 MRC Le Haut-Saint-Maurice
2491 MRC Le Domaine-du-Roy
2492 MRC Maria-Chapdelaine
2493 MRC Lac-Saint-Jean-Est
2494 MRC Le Fjord-du-Saguenay
2495 MRC La Haute-Côte-Nord
2496 MRC Manicouagan
2497 DIV Sept-Rivières--Caniapiscau
2498 DIV Minganie--Basse-Côte-Nord
2499 DIV Nord-du-Québec

3501 UC Stormont, Dundas and Glengarry
3502 UC Prescott and Russell
3506 DIV Ottawa
3507 UC Leeds and Grenville
3509 CTY Lanark
3510 CTY Frontenac
3511 CTY Lennox and Addington
3512 CTY Hastings
3513 DIV Prince Edward
3514 CTY Northumberland
3515 CTY Peterborough
3516 DIV Kawartha Lakes
3518 RM Durham
3519 RM York
3520 DIV Toronto
3521 RM Peel
3522 CTY Dufferin
3523 CTY Wellington
3524 RM Halton
3525 DIV Hamilton
3526 RM Niagara
3528 RM Haldimand-Norfolk
3529 CTY Brant
3530 RM Waterloo
3531 CTY Perth
3532 CTY Oxford
3534 CTY Elgin
3536 DIV Chatham-Kent
3537 CTY Essex
3538 CTY Lambton
3539 CTY Middlesex
3540 CTY Huron
3541 CTY Bruce
3542 CTY Grey
3543 CTY Simcoe
3544 DM Muskoka
3546 CTY Haliburton
3547 CTY Renfrew
3548 DIS Nipissing
3549 DIS Parry Sound
3551 DIS Manitoulin
3552 DIS Sudbury District
3553 DIV Greater Sudbury
3554 DIS Timiskaming
3556 DIS Cochrane
3557 DIS Algoma
3558 DIS Thunder Bay
3559 DIS Rainy River
3560 DIS Kenora

4601 DIV Lac du Bonnet-Alexander
4602 DIV Hanover
4603 DIV Stanley
4604 DIV Lorne-Pembina

4605 DIV Turtle Mountain
4606 DIV Wallace
4607 DIV Brandon
4608 DIV Swift Current
4609 DIV Portage la Prairie
4610 DIV Macdonald-Cartier
4611 DIV Winnipeg
4612 DIV Springfield-Broken Head
4613 DIV St Andrews
4614 DIV Rookwood-Woodlands
4615 DIV Langford-Minto
4616 DIV Lake of the Prairies
4617 DIV Dauphin
4618 DIV Interlake South-Gimli
4619 DIV Lake Winnipeg-Winnipegosis
4620 DIV Swan River
4621 DIV Moose Lake
4622 DIV Thompson
4623 DIV Hudson Bay
4701 DIV Estevan
4702 DIV Weyburn
4703 DIV Lake of the Rivers
4704 DIV Maple Creek
4705 DIV Melville
4706 DIV Regina
4707 DIV Moose Jaw
4708 DIV Swift Current
4709 DIV Yorkton
4710 DIV Big Quill-Foam Lake-Kutawa
4711 DIV Saskatoon
4712 DIV Battleford-Biggar-Vanscoy
4713 DIV Kindersley-Unity
4714 DIV Star City-Nipawin-Hudson Bay
4715 DIV Prince Albert
4716 DIV North Battleford
4717 DIV Lloydminster-Meadow Lake
4718 DIV Northern Saskatchewan

4801 DIV Medicine Hat
4802 DIV Lethbridge
4803 DIV Southwest (Cardston-Willow/Pincher)
4804 DIV Hanna-Oyen-Consort
4805 DIV Drumheller
4806 DIV Calgary
4807 DIV Stettler-Wainwright
4808 DIV Red Deer
4809 DIV Rocky Mountain House
4810 DIV Camrose-Vermillion River-Lloydminster
4811 DIV Edmonton
4812 DIV Cold Lake
4813 DIV Woodlands
4814 DIV Yellowhead
4815 DIV Jasper-Banff
4816 DIV Wood Buffalo
4817 DIV Peace River
4818 DIV Greenview
4819 DIV Grande Prairie

5901 RD East Kootenay
5903 RD Central Kootenay
5905 RD Kootenay Boundary
5907 RD Okanagan-Similkameen
5909 RD Fraser Valley
5915 RD Greater Vancouver
5917 RD Capital
5919 RD Cowichan Valley
5921 RD Nanaimo
5923 RD Alberni-Clayoquot
5925 RD Comox-Strathcona
5927 RD Powell River
5929 RD Sunshine Coast

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

APPENDIX K   Economic regions and 2001 populations

```
PRER ERNAME                                          ERPOP01
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
```

```
PRER ERNAME                                     ERPOP01
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

PR AR ARNAME	PR AR ARNAME
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-Wainwritht
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-de-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.

APPENDIX N
SUPPLEMENTARY PROGRAM EXPLODE2.SAS

`EXPLODE2.SAS` is a supplementary program to read in a data file containing counts for postal codes, and transform it into a file containing individual records, including a unique `ID`, for each occurrence of those postal codes. This is necessary for the data to be coded using *PCCF+*.

Basic familiarity with SAS programming is required for use of this supplementary program. A sample data file for testing this program is provided (`GROUPED.TXT`).

APPENDIX O
SUPPLEMENTARY PROGRAM FIXPCBAD.SAS

Appendix O is a supplementary program for fixing common errors in Canadian postal codes. It is intended for preprocessing of files prior to coding using PCCF+. A sample data file for testing this program is provided (`PCBAD.TXT`).