

1991 GEOGRAPHIC ATTRIBUTE FILE

USER GUIDE

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La version française de ce guide est disponible sur demande

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ABOUT THIS GUIDE

This guide is intended for users of the 1991 Geographic Attribute File (GAF). It includes a description of the general methodology used to create the file, a Data Quality Statement, a record layout and supplementary information to provide users with further insight on the content of the file and some of its limitations.

The first section provides a general overview of the Geographic Attribute File in terms of its purpose, the geographic reference dates, how it compares with the previous file, the general methodology used and a brief description of the geographical framework. The second part of the guide focuses on the data quality of the file to ensure that users are fully aware of its suitability for a particular application. The third part provides technical specifications describing the 38 fields featured in the file, including a section relating to the content of each field, and how the geographic codes and geographic names are assigned for each geographic area covered therein. A glossary of the geographic terms used in this user guide is also included.

A supplementary document is included at the end of this guide. Its purpose is to show the EA linkage errors on the Geographic Attribute Data Base (the source from which the GAF was created) up to the time of release of this user guide and their impact on the Geographic Attribute File.

This report is based on the best information available at the time of its release. It in no way constitutes a warranty in the event that users should observe characteristics that deviate from those stated in this document.

1 OVERVIEW

1.1 Introduction

The 1991 Geographic Attribute File (formerly called the Geography Tape File) is a computer file which contains one record for each 1991 enumeration area (EA). This file is derived from the 1991 Geographic Attribute Data Base (a set of internal Statistics Canada files). Each EA record is listed along with the codes and names of all higher level standard geographic areas. The 1991 version includes the net 1991 census subdivision land area.

Each EA in Canada is uniquely identified by an 8 digit code, representing the province, federal electoral district and EA. For each EA, the names and the codes of the following higher level standard geographic areas are included: federal electoral district (FED), census division (CD), census consolidated subdivision (CCS), census subdivision (CSD) and, where applicable, the census metropolitan area (CMA) or census agglomeration (CA), primary census metropolitan area (PCMA) or primary census agglomeration (PCA), urban area (UA), census tract (CT) or provincial census tract (PCT), and subprovincial region code (SPR).

Where applicable, the population of the CSD, CMA/CA and urban area in which the EA is located is provided. The file also features additional geographic information for each EA: the EA representative point by Universal Transverse Mercator, the Lambert Conformal coordinates, and by latitude and longitude.

1.2 Geographic Reference Date

Census data reflect the census reference date of June 4, 1991. There is also a geographic reference date. This date is earlier than the census reference date in order to give Statistics Canada enough time prior to Census Day to process the necessary boundary and name changes. For the 1991 Census, the Geographic Reference Date was January 1, 1991. The Geographic Attribute File reflects all changes as of January 1, 1991, provided that the information on any changes was received by Statistics Canada from provincial or territorial authorities by March 1, 1991.

1.3 Comparison to the 1986 Geography Tape File

There are very minor differences between the formats of the 1986 Geography Tape File and the 1991 Geographic Attribute File. An additional field, the CSD net land area, was added to the 1991 version. In addition, the term EA "centroid" was changed to EA "representative point".

For census collection purposes, Canada is divided into small geographic areas (EAs), to ensure that all dwellings are enumerated. For the 1991 Census, 45,995 EAs were defined. All EAs in the Geographic Attribute File were linked to the higher level geographic codes through Statistics Canada's internal 1991 *Geographic Attribute Data Base*.

1.5 Hierarchy of Standard Geographic Areas

The enumeration area (EA) is defined as the area canvassed by one enumerator for Census collection purposes. An EA is the smallest geographic area for which census data are usually available. The EA always respects the boundaries of higher level geographic areas recognized by the census. The EA and the higher level geographic areas are part of the standard hierarchies used by Statistics Canada. Figure 1 shows these relationships as they pertain to the 1991 Geographic Attribute File (i.e., from the smallest unit, the EA, aggregated to the largest geographic units).

Figure 1. Hierarchy of Standard Geographic Areas¹

- (A) Five urban areas cross provincial boundaries.
- (B) Twelve of the 25 CMAs and two of the 115 CAs are broken down into PCMA/PCAs.
- (C) All 25 of the CMAs, but only 14 of the 115 CAs, have a census tract program.
- (D) Defined by Statistics Canada, in conjunction with the provincial authorities, as a statistical area.



¹ Some of the counts provided in the above graph have been revised, and will therefore differ from those that appear in the "1991 Census Dictionary".

2 | DATA QUALITY STATEMENT

2.1 Introduction

This Data Quality Statement pertains to the 1991 Geographic Attribute Data Base (GADB), from which the Geographic Attribute File (GAF) was created. The Data Quality Statement was modified somewhat to reflect the quality of the data (attributes) that appear on the GAF. The 1991 GADB comprises several relational files, each containing information on one or more of the standard geographic areas. It also includes selected 1991 Census data and, in some cases, comparisons to the 1986 Census. Only 1991 Census data appear on the 1991 Geographic Attribute File (i.e., all comparisons to the 1986 Census were removed). The data base contains information required for the collection and dissemination of census data by standard geographic areas. This data base provided the medium for maintaining the standard geographic areas for the 1991 Census.

Each file in the data base contains a number of data attributes for a standard geographic area. Several of the attributes are common to all standard geographic areas. These common attributes include:

- geographic names (if they have names);
- geographic codes;
- 1991 population counts;
- 1991 dwelling counts;
- 1991 land area; and
- relationships to other standard geographic areas.

The data residing on the Census Geographic Data Base are the source for numerous products, including the Digital Boundary Files and the 1991 Standard Geographical Classification reference manuals.

2.2 Purpose

The purpose of a Data Quality Statement is to provide detailed information to assist users in evaluating the suitability of the data for a particular use. Quality is reported according to five fundamental components of spatial data quality: lineage; positional accuracy; attribute accuracy; logical consistency; and completeness.

This data quality statement in no way constitutes a warranty of the data in the event that characteristics are observed that deviate from those stated below.

□ 2.3 Lineage

Lineage includes descriptions of the source material from which the data were derived and the methods of derivation, including the dates of the source material and all transformations involved in producing the final digital files.

For the purpose of brevity, the lineage is described by the various types of attribute information found on the data base.

□ 2.3.1 Geographic Name Data

Geographic name data refer to the names given to standard geographic areas. Geographic names, however, are not given to all standard geographic areas. Named geographic areas include provinces and territories, subprovincial regions, census divisions, census consolidated subdivisions, census subdivisions, census metropolitan areas and census agglomerations, primary census metropolitan areas and primary census agglomerations, urban areas, and federal electoral districts.

The initial source of geographic name data on the 1991 Geographic Attribute Data Base was the 1986 Census Geographic Master File.

For provinces and territories, the data base contains both English and French full and abbreviated names. The sources used for the long names are the statutes of the respective provinces and territories. The abbreviated names are those supplied by the Treasury Board and the Canadian Permanent Committee on Geographic Names.

For those census divisions and census subdivisions that respect the administrative fabric within the provinces, the source of the names were the provincial governments. Statistics Canada receives input from provincial governments concerning all limit, name, and type changes to their respective municipal structure. The census reflects the administrative structure within provinces that was in effect on January 1, 1991.²

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

For census consolidated subdivisions, names are derived from their component census subdivisions. The census consolidated subdivision's name usually coincides with the name of its largest census subdivision component in terms of land area.

The census metropolitan area or census agglomeration name is usually based on the largest urban centre(s) within the census metropolitan area or census agglomeration.

The primary census metropolitan area or primary census agglomeration name is usually based on the largest urban centre(s) within the primary census metropolitan area or primary census agglomeration.

Urban area names are assigned according to the following rules:

1. If the principal census subdivision in the urban area is a city, town or village, and the urban area population within the census subdivision is at least 75% of the census subdivision population, then the census subdivision name is assigned to the urban area;

² Due to operational constraints, Statistics Canada enforced a cut-off date of March 1, 1991 for the receipt of information concerning changes. This ensured that the changes could be instituted prior to Census Day, June 4, 1991.

2. If the urban area population is less than 75% of the census subdivision population, or if the principal census subdivision is not a city, town or village, then an appropriate place name is assigned to the urban area; and

3. A compound name is assigned to the urban area if it contains two or more principal census subdivisions.

The source for the federal electoral district names are Acts of the Canadian parliament. The 1991 Census respects the 1987 Representation Order. Federal Electoral District name changes occurring before the geographic reference date of January 1, 1991 were recognized if the information regarding such changes was received by Statistics Canada by March 1, 1991.

Although census tracts and provincial census tracts do not have geographic names, they do have numeric names. The numeric names for census tracts were developed in consultation with local authorities. The numeric names for provincial census tracts were originally developed in consultation with provincial authorities.

□ 2.3.2 Geographic Codes

Geographic codes are numeric codes that are assigned to all standard geographic areas. They are used as unique identifiers for all standard geographic areas. The initial source of the geographic codes was the 1986 Census Geographic Master File. The original source and the source used for updates are described below.

The system of geographic codes for provinces and territories, census divisions, and census subdivisions is the Standard Geographical Classification (SGC). This classification system is a hierarchical coding system that provides a unique identifier for each level of this hierarchy. This coding is developed by Statistics Canada and approved by provincial authorities.

For a census consolidated subdivision, the code is derived from the component census subdivisions. The census consolidated subdivision's code usually coincides with its largest census subdivision component in terms of land area.

The source of the geographic codes of federal electoral districts is the 1987 Representation Order -Chief Electoral Office, Elections Canada.

All other geographic codes are developed by Statistics Canada.

□ 2.3.3 Final 1991 Population Counts

The final 1991 population counts reflect the 1991 population distribution with relation to the 1991 geographic area limits. These counts are available on the GAF for all standard geographic areas.

The population counts were derived from the 1991 Census. The data were collected by census representatives for each enumeration area; the enumeration area counts were then tabulated based on the enumeration area's relationship to higher-level geographic areas. Data for enumeration areas flagged as incompletely enumerated Indian reserves were not included for any of the higher-level geographic areas.

□ 2.3.4 Final 1991 Occupied Private Dwelling Counts

The final 1991 occupied private dwelling counts reflect the 1991 occupied private dwelling distribution with relation to the 1991 geographic area limits. These counts are available on the 1991 GAF for all standard geographic areas.

The occupied private dwelling counts were derived from the 1991 Census. The data were collected by census representatives for each enumeration area; the enumeration area counts were then summed based on the enumeration area's relationship to higher-level geographic areas. Data for enumeration areas flagged as incompletely enumerated Indian reserves were not included for any of the higher-level geographic areas.

The final 1991 occupied private dwelling counts include all private dwellings occupied by usual residents as well as those occupied by foreign and/or temporary residents.

□ 2.3.5 1991 Land Area Data

The 1991 land area data values provide the net land areas for standard geographic areas whose limits have changed since the 1986 Census. The 1991 land areas are calculated on an adjustment basis. These values are not available for enumeration areas.

The steps taken for the 1991 land area calculation are as follows:

- identification of the revised limits on a map;
- calculation of the net land area affected by the revised limits; this calculation is done manually using a digital planimeter; and
- adding or subtracting the change in net land area from the final 1986 land area value, resulting in the 1991 land area value.

□ 2.3.6 Incompletely Enumerated Indian Reserve Flag

The incompletely enumerated Indian reserve flag indicates standard geographic areas affected by the incomplete enumeration of some Indian reserves. The data base contains two flags: one for the 1986 Census and one for the 1991 Census. All standard geographic areas have a 1991 incompletely enumerated Indian reserve flag, but only census subdivisions have an 1986 incompletely enumerated Indian reserve flag. A value of "1" indicates that the geographic area is affected by an incompletely enumerated Indian reserve.

The 1991 incompletely enumerated Indian reserve flag was based on a list of enumeration areas that were indicated as having a high non-response rate. These enumeration areas were given an incompletely enumerated Indian reserve flag. The higher-level geographic areas with an enumeration area component on this list were also given an incompletely enumerated Indian reserve flag; these higher-level areas were determined by the linkage between the enumeration area and higher-level geographic areas.

□ 2.3.7 Positional Data

The 1991 Geographic Attribute Data Base contains positional data on enumeration areas only. These data are the representative points for enumeration areas. The representative points are provided in UTM xzy coordinates, Lambert xy and latitude and longitude.

The source for the representative point data is dependent upon whether the enumeration area is in a digital Street Network File area or not (usually large urban centres). The EA representative points are located by the following methods:

1. For enumeration areas within Street Network Files (SNF): by an automated method using ARC/INFO[®] GIS software, which locates the point suitable for label or symbol placement in each polygon; and
2. For enumeration areas outside SNF coverage: by a manual, judgemental procedure based on the visual inspection of building and/or street patterns on enumeration area census collection maps (some of which have topographic basemap information). The representative point is located, when possible, at or beside a predominant cluster of buildings and/or streets. If

there is no predominant cluster, then the point is located more clusters. In the absence of any cluster, the point is centre of the enumeration area.

between two or placed at the visual

2.3.8 Relationships Between Geographic Areas

The relationships between the various geographic areas are:

- Federal Electoral District ⇒ Province/Territory
- Enumeration Area ⇒ Province/Territory
- Enumeration Area ⇒ Federal Electoral District
- Enumeration Area ⇒ Census Division
- Enumeration Area ⇒ Census Subdivision
- Enumeration Area ⇒ Urban Area
- Enumeration Area ⇒ Census Tract or Provincial Census Tract
- Subprovincial Region ⇒ Province/Territory
- Census Division ⇒ Province/Territory
- Census Division ⇒ Subprovincial Region
- Census Consolidated Subdivision ⇒ Province/Territory
- Census Consolidated Subdivision ⇒ Census Division
- Census Subdivision ⇒ Province/Territory
- Census Subdivision ⇒ Census Division
- Census Subdivision ⇒ Census Metropolitan Area/Census Agglomeration
- Census Subdivision ⇒ Primary Census Metropolitan Area/Primary Census Agglomeration
- Census Subdivision ⇒ Census Consolidated Subdivision
- Urban Area ⇒ Province/Territory
- Urban Area ⇒ Census Metropolitan Area/Census Agglomeration
- Urban Area ⇒ Primary Census Metropolitan Area/Primary Census Agglomeration
- Census Tract or Provincial Census Tract ⇒ Province/Territory
- Census Tract ⇒ Census Metropolitan Area/Census Agglomeration/Primary Census Metropolitan Area/Primary Census Agglomeration
- Primary Census Metropolitan Area ⇒ Census Metropolitan Area
- Primary Census Agglomeration ⇒ Census Metropolitan Area or Census Agglomeration

Agglomeration

These relationships were originally loaded from the 1986 Census Geographic Master File onto the 1991 Geographic Attribute Data Base, prior to any updating of the geographic areas for the 1991 Census. As updates occurred to the geographic areas, the relationships were analyzed and changed if necessary. Updates to the relationships were determined manually and inputted to the data base through online and batch maintenance processing.

2.4 Positional Accuracy

Positional Accuracy is the difference between the "true" position of a feature in the real world and the "estimated" position in the digital file.

The only positional data on the 1991 Geographic Attribute Data Base are the enumeration area representative points. All EA representative points are guaranteed, by an ARC/INFO® topology check, to fall within the appropriate EA.

2.5 Attribute Accuracy

Attribute Accuracy refers to the accuracy of the non-positional information attached to each geographic area.

2.5.1 Geographic Name Data

The geographic names for provinces and territories, federal electoral districts, census metropolitan areas, census agglomerations, and urban areas were reviewed by Geography Division and are correct on the 1991 Geographic Attribute Data Base.

The geographic names for census subdivisions and census divisions were reviewed by Geography Division, and provincial and territorial authorities through the interim lists produced between 1986 and 1991.³ The geographic names found on the 1991 Geographic Attribute Data Base for these areas are correct as of January 1, 1991.

□ 2.5.2 Geographic Codes

All standard geographic areas are uniquely identified by a geographic code.

□ 2.5.3 Final 1991 Population Counts

Errors in the final 1991 population counts can result from the collection or processing of the data. The errors identified will be published in the **General Review of the 1991 Census**. The 1991 Census Data Quality operations produced an estimate of the 1991 undercoverage rate. This rate estimates the percentage of the population missed in the 1991 Census. The final 1991 population counts for higher level geographic areas can also be affected by errors in the derivation process. The derivation process determines the population counts for a higher level geographic area by summing the population counts of enumeration areas related to the higher level geographic areas. If relationships between geographic areas are in error, this may cause the final 1991 population counts for higher level geographic areas to be in error. Several quality assurance operations have been applied to the final 1991 population counts. These operations include:

1. verification of the derived population counts for higher level geographic areas through an independent derivation process;
2. analysis of population changes for higher level geographic areas, to identify possible errors in population counts; and
3. challenges to the population counts from local or provincial authorities.

The last two quality assurance operations have identified several errors in the final 1991 population counts. In addition, errors in the relationship between geographic areas have been identified, and are discussed in section 2.5.7 of this document. The errors in the final 1991 population counts identified to date are provided in the attached supplement.

□ 2.5.4 Final 1991 Occupied Private Dwelling Counts

Errors in the final 1991 occupied private dwelling counts can result from the collection or processing of the data. The final 1991 occupied private dwelling counts for higher level geographic areas can also be impacted by errors in the derivation process. The derivation process determines the dwelling count for a higher level geographic area by summing the dwelling counts of enumeration areas related to the geographic area. If relationships between geographic areas are in error, this may cause the final 1991 occupied private dwelling counts for higher level geographic areas to be in error.

Several quality assurance operations have been applied to the final 1991 occupied private dwelling counts. These quality assurance operations include:

1. assurance of the derived occupied private dwelling counts for higher level geographic areas through an independent derivation process;

³ The interim list contains changes to the census subdivision and census division structure between censuses.

2. analysis of dwelling changes for higher level geographic areas, to identify possible errors in dwelling counts; and
3. challenges to the dwelling counts from local or provincial authorities.

The last two quality assurance operations have identified several errors in the final 1991 occupied private dwelling counts. Also, errors in the relationship between geographic areas have been identified, and are discussed in section 2.5.7 of this document. Errors in the final 1991 dwelling counts are provided in the attached supplement.



2.5.5 1991 Land Area Data

The 1991 land area of 97 census subdivisions is indicated as zero on the data base (Table 1). This results from Geography Division not having any sources indicating the official limits of the census subdivision. In most cases these census subdivisions do not have official limits.



2.5.6 Incompletely Enumerated Indian Reserve Flag

The 1991 "Incompletely Enumerated Indian Reserve" flag was manually reviewed for enumeration areas. Upon completion of this manual review, the flags on higher level geographic areas were derived based on the relationships between geographic areas, as found on the 1991 Geographic Attribute Data Base.

Table 1. Census Subdivisions with 1991 Land Area Set to Zero

1001105 Portugal Cove South, COM	3560057 Wabigoon Lake 27, R
	3560061 Islington 29, R
1001109 Biscay Bay, COM	3560062 Lake Of The Woods 31G, R
1001120 St. Shott's, COM	3560063 Sabaskong Bay 35D, R
1001144 Aquaforte, COM	3560064 Shoal Lake 34B 2, R
1001228 St. Bride's, COM	3560065 Lake Of The Woods 37, R
1002037 Red Harbour, COM	3560066 Kenora 38B, R
1002039 English Harbour East, COM	3560068 Shoal Lake (Part) 39A, R
1002055 Little Bay East, COM	3560069 Rat Portage 38A, R
1003002 Rencontre East, COM	3560077 Pikangikum 14, R
1003010 Seal Cove, COM	3560078 Fort Severn 89, R
1006028 Millertown, COM	3560079 Webequie, S-E
1007026 Duntara, COM	3560102 MacDowell Lake, S-E
1007029 Plate Cove East, COM	4609027 Dakota Tipi 1, R
1007040 Terra Nova, COM	4622062 Nelson House 170C, R
1008070 Nippers Harbour, COM	4623063 Highrock 199, R
1008077 Brent's Cove, COM	4623064 Pukatawagan 198, R
1009002 Great Harbour Deep, COM	4623065 Brochet 197, R
1009012 Norris Point, COM	4718801 Cumberland 20, R
1009015 Daniel's Harbour, COM	4718802 Montreal Lake 106, R
1009023 Anchor Point, COM	4718803 Stanley 157, R
1009032 St. Lunaire-Griquet, COM	4718809 Lac La Ronge 156, R
1009039 Goose Cove East, COM	4718811 Sucker River 156C, R
1009042 Bellburns, COM	4718812 Kitsakie 156B, R
1010003 Red Bay, COM	4718814 Wapachewunak 192D, R
1010007 Pinware, COM	4718816 Dipper Rapids 192C, R
1010009 Port Hope Simpson, COM	4718817 Canoe Lake 165, R
1010011 Mary's Harbour, COM	4718819 Turnor Lake 193B, R
1010012 Cartwright, COM	4718820 Pelican Narrows 184B, R
1010021 Rigolet, COM	4718821 Sturgeon Weir 184F, R
1010044 Makkovik, COM	4718828 Chicken 224, R
1010048 Hopedale, COM	4718829 La Loche 223, R
1010052 Davis Inlet, COM	4718831 Grandmother's Bay 219, R
1010056 Nain, T	4718832 Lac La Hache 220, R
1010059 Postville, COM	4810805 Makaoo (Part) 120, R
1102030 Rocky Point 3, R	4817848 Bushe River 207, R
2489802 Grand-Lac-Victoria, S-E	4817849 Upper Hay River 212, R
2490804 Obedjiwan 28, R	5909819 Kahmoose 4, R
3558062 Pic River 50, R	5933886 Nekalliston 2, R
3558063 Pays Plat 51, R	5943815 Kippase 2, R
3558065 Gull River 55, R	6104015 Clyde River, HAM
3558067 Ginoogaming First Nation 77, R	6104018 Arctic Bay, HAM
3558068 Long Lake 58, R	6105015 Arviat, HAM
3558069 Rocky Bay 1, R	6105019 Chesterfield Inlet, HAM
3560005 Whitefish Bay 33A, R	6106010 Nahanni Butte, SET
3560024 Eagle Lake 27, R	6106026 Reliance, SET
3560052 Marten Falls 65, R	6106041 Tungsten, SET
3560053 Fort Hope 64, R	6107036 Tuktoyaktuk, HAM
3560054 Cat Lake 63C, R	
3560056 Lac Seul 28, R	

2.5.7 Relationships Between Geographic Areas

The following relationships between geographic areas were reviewed manually and any errors found were corrected. There are no known errors in these relationships:

- Federal Electoral District ⇒ Province/Territory
- Subprovincial Region ⇒ Province/Territory
- Census Division ⇒ Province/Territory
- Census Division ⇒ Subprovincial Region
- Census Consolidated Subdivision ⇒ Province/Territory
- Census Consolidated Subdivision ⇒ Census Division
- Census Subdivision ⇒ Province/Territory
- Census Subdivision ⇒ Census Division
- Census Subdivision ⇒ Census Consolidated Subdivision
- Census Subdivision ⇒ Census Metropolitan Area/Census Agglomeration
- Census Subdivision ⇒ Primary Census Metropolitan Area/Primary Census Agglomeration
- Urban Area ⇒ Province/Territory
- Urban Area ⇒ Census Metropolitan Area/Census Agglomeration
- Urban Area ⇒ Primary Census Metropolitan Area/Primary Census Agglomeration

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- Census Tract or Provincial Census Tract ⇒ Province/Territory
- Census Tract ⇒ Census Metropolitan Area/Census Agglomeration/Primary Census Metropolitan Area/Primary Census Agglomeration
- Primary Census Metropolitan Area ⇒ Census Metropolitan Area
- Primary Census Agglomeration ⇒ Census Metropolitan Area or Census Agglomeration

Agglomeration

The following geographic area relationships underwent several verification checks and edits, both manually and automated, to ensure their quality.

- Enumeration Area ⇒ Province/Territory
- Enumeration Area ⇒ Federal Electoral District
- Enumeration Area ⇒ Census Division
- Enumeration Area ⇒ Census Subdivision
- Enumeration Area ⇒ Urban Area
- Enumeration Area ⇒ Census Tract or Provincial Census Tract

The first check performed on these relationships was a manual verification of the relationships during the enumeration area delineation process. The check utilized a print listing of the relationships on the data base and compared these to the map sources used for the determination of the relationships. Any errors detected were then corrected on the data base.

The second check utilized the 1986 - 1991 Enumeration Area Correspondence File. This check included both automated and manual verification components. The automated component of the check compared the 1991 enumeration area's relationships to higher level geographic areas with the corresponding 1986 enumeration area(s)'s relationships to higher level geographic areas. A list of the differences were then printed, and reviewed manually. This manual review utilized the print listing of the relationships on the data base and compared these to the map sources used for the determination of the relationships. Any errors detected were then corrected on the data base.

The third check occurred during compilation and production of the 1991 census division and census subdivision, and census metropolitan area and census agglomeration reference maps. Visual checks identified suspected gross errors in enumeration area relationships to census divisions, census subdivisions, urban areas, and census tracts. The suspected enumeration areas with incorrect relationships to higher level geographic areas were then manually reviewed. This review utilized the relationships on the data

base and compared these to the map sources used for the determination of the relationships. Any errors detected were then corrected on the data base.

The fourth check included both automated and manual components. It utilized a preliminary version of the 1991 Enumeration Area Boundary File. This check included:

- higher level geographic areas rolled-up from the enumeration area boundary file were checked by ARC/INFO® to determine if they were in more than one piece; if a geographic area was in more than one piece, a list of the related enumeration areas was produced; and
- 1986 higher level boundary files were overlaid onto the enumeration area representative points, then the enumeration areas' relationships to the 1986 geographic areas (as determined by the 1986 boundary file) were compared to the enumeration areas' relationship to the 1991 geographic areas indicated on the data base. If the enumeration area's relationship to 1986 and 1991 geographic areas were not identical, it was printed on a listing.

The two listings produced were then analyzed manually. This verification process utilized the print listings from the automated components of the check, and compared these to the map sources used for the determination of the relationships. Any errors detected were then corrected on the data base.

The 1991 Geographic Attribute Data Base was "frozen" in March 1992 to ensure consistency with the 1991 Census retrieval data base. Since that time, several errors in geographic area relationships have been identified. The following relationships have errors:

- Enumeration Area ⇒ Census Division
- Enumeration Area ⇒ Census Subdivision
- Enumeration Area ⇒ Urban Area
- Enumeration Area ⇒ Census Tract or Provincial Census Tract

The errors in these relationships are provided in the attached supplement.

2.6 Logical Consistency

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

2.6.1 Geographic Name Data

The only logical consistency that exists concerning the geographic name data is between the census subdivisions and census consolidated subdivisions. For census consolidated subdivisions, the names are derived from the component census subdivisions. The census consolidated subdivision's name usually coincides with its largest census subdivision component in terms of land area. The name of the census consolidated subdivision was compared to the name of the census subdivision, where their codes were the same.

2.6.2 Geographic Codes

All geographic codes underwent a logical consistency check. This check ensures that the geographic code for every geographic area on the 1991 Geographic Attribute Data Base is unique.

2.6.3 Final 1991 Population Counts

The logical consistency among geographic areas for final 1991 population counts was verified by summing the data for various geographic areas to a common geographic level. Table 2 presents information regarding the logical consistency checks performed on the final 1991 population count data.

In Table 2 (p.17), the rows indicate what geographic areas were checked, and the columns indicate what geographic areas were used for comparisons. The cells of the table that are filled with geographic area acronyms indicate at what geographic level the comparison occurred. Table 2 does not contain any shaded cells since the final 1991 population count data are logically consistent among geographic areas.

Table 2. Logical Consistency Check of Final 1991 Population Counts

COMPARISON OF GEOGRAPHIC AREAS												
G E O G R A P H I C A R E A S		EA	CSD	CCS	CD	CT	PCT	CT & PCT	CMA/CA	PCMA/PCA	UA	PR
	EA											
	CSD			CCS	CD	CMA/CA PCMA/PCA		PR	CMA/CA	PCMA/PCA		PR
	CCS		CCS		CD							
	CD		CD	CD								
	CT		CMA/CA PCMA/PCA						CMA/CA	PCMA/PCA		
	PCT											
	CT & PCT		PR									PR
	CMA/CA		CMA/CA			CMA/CA						
	PCMA/PCA		PCMA/PCA			PCMA/PCA						
	UA											
	PR		PR					PR				

2.6.4 Final 1991 Dwelling Counts

The logical consistency among geographic areas for final 1991 dwelling counts was verified by summing the data for various geographic areas to a common geographic level. Table 3 presents information regarding the logical consistency checks performed on the final 1991 dwelling counts.

In Table 3 (p.19), the rows indicate what geographic areas were checked, and the columns indicate what geographic areas were used for comparisons. The cells of the table that are filled with geographic area acronyms indicate at what geographic level the comparison occurred. Table 3 does not contain any shaded cells since the final 1991 dwelling counts are logically consistent among geographic areas.

Table 3. Logical Consistency Check of Final 1991 Dwelling Counts

COMPARISON OF GEOGRAPHIC AREAS												
	EA	CSD	CCS	CD	CT	PCT	CT & PCT	CMA/CA	PCMA/PCA	UA	PR	
G E O G R A P H I C A R E A S	EA											
	CSD			CCS	CD	CMA/CA	PR	CMA/CA	PCMA/PCA		PR	
					PCMA/PCA							
	CCS		CCS		CD							
	CD		CD	CD								
	CT		CMA/CA					CMA/CA	PCMA/PCA			
			PCMA/PCA									
	PCT											
	CT & PCT		PR									PR
	CMA/CA		CMA/CA			CMA/CA						
	PCMA/PCA		PCMA/PCA			PCMA/PCA						
	UA											
PR		PR					PR					

2.6.5 1991 Land Area Data

The logical consistency among geographic areas for 1991 land area was verified by summing the data for various geographic areas to a common geographic level. Table 4 presents information regarding the logical consistency checks performed on the 1991 land area.

In Table 4 (p.21), the rows indicate what geographic areas were checked, and the columns indicate what geographic areas were used for comparisons. The cells of the table that are filled with geographic area acronyms indicate at what geographic level the comparison occurred. Cells of the table that are shaded indicate that the comparison found inconsistency between the land area data among some geographic areas.

Table 4. Logical Consistency Check of 1991 Land Area

		COMPARISON OF GEOGRAPHIC AREAS										
		EA	CSD	CCS	CD	CT	PCT	CT & PCT	CMA/CA	PCMA/PCA	UA	PR
G E O G R A P H I C A 	EA											
	CSD			CCS	CD	CMA/CA PCMA/PCA		PR	CMA/CA	PCMA/PCA		PR
	CCS		CCS		CD							
	CD		CD	CD								
	CT		CMA/CA PCMA/PCA						CMA/CA	PCMA/PCA		
	PCT											
	CT & PCT		PR									PR
	CMA/CA		CMA/CA			CMA/CA						
	PCMA/PCA		PCMA/PCA			PCMA/PCA						
	UA											
	PR		PR					PR				

2.6.6 Positional Data

No logical consistency checks were performed on enumeration area representative points.

2.6.7 Relationships Between Geographic Areas

The relationships between geographic entities underwent an automated logical consistency check. This check ensured that the geographic areas existed in 1991. In other words, the geographic codes used for the relationship between one geographic area and another had to exist on the files for the geographic areas.

2.7 Completeness

The 1991 Geographic Attribute File contains one record for each of the 45,995 enumeration areas of the 1991 Census. The relationship between the EA structure and all higher-level standard geographic areas is found on the file. As a result, the file also contains the codes of all higher-level geographic areas, including other attributes. The three appendices listed below indicate the number of geographic areas found on the file:

- Appendix A indicates the number of standard geographic areas by province.
- Appendix B indicates the number of census subdivision types by province.
- Appendix C indicates the number of census metropolitan areas and census agglomerations with their component primary census metropolitan areas and primary census agglomerations, showing census tracts and Street Network File coverage.

3 TECHNICAL SPECIFICATIONS

3.1 Record Layout

The following record layout provides a list of the 38 fields included in the 1991 Geographic Attribute File. The record layout is divided as follows: field number, size of field, field type (i.e., numeric or alphanumeric), field position and description.

Field	Size	Type	Position	Description
1	2	N	1-2	Province/territory code
2	3	N	3-5	Federal electoral district (FED) code (1987 Representation Order)
3	3	N	6-8	Enumeration area (EA) code
4	2	N	9-10	Census division (CD) code
5	3	N	11-13	Census subdivision (CSD) code
6	7	N	14-20	1991 CSD population
7	10.2	N	21-30	1991 CSD Net Land Area
8	3	N	31-33	Census consolidated subdivision (CCS) code
9	3	N	34-36	Census metropolitan area (CMA)/Census agglomeration (CA) code
10	1	A	37	CMA/CA type
11	3	N	38-40	Primary census metropolitan area / Primary census agglomeration (PCMA/PCA) code
12	1	A	41	PCMA/PCA type
13	1	N	42	Urban/Rural Status code
14	7	N	43-49	CMA/CA population
15	4	N	50-53	Census tract (CT)/Provincial census tract (PCT) code
Field	Size	Type	Position	Description
16	7.2	N	54-60	CT/PCT name
17	2	N	61-62	Subprovincial region (SPR) code
18	4	N	63-66	Urban/Rural Area Code
19	7	N	67-73	Urban area population
20	4	N	74-77	1991 EA population
21	3	N	78-80	EA occupied dwelling counts
22	1	A	81	Incompletely enumerated Indian reserve or Indian settlement flag
23	2	N	82-83	UTM zone number of EA representative point

24	6	N	84-89	UTM x-coordinate (easting) of EA representative point
25	7	N	90-96	UTM y-coordinate (northing) of EA representative point
26	9.6	N	97-105	Latitude of EA representative point
27	10.6	N	106-115	Longitude of EA representative point
28	7	N	116-122	Lambert x-coordinate (easting) of EA representative point
29	7	N	123-129	Lambert y-coordinate (northing) of EA representative point
30	6	AN	130-135	National Topographic System (NTS) map number
31	47	A	136-182	Federal electoral district (FED) name
32	46	AN	183-228	Census division (CD) name
33	49	AN	229-277	Census subdivision (CSD) name
34	3	A	278-280	Census subdivision (CSD) type
35	49	AN	281-329	Census consolidated subdivision (CCS) name
36	24	A	330-353	Census metropolitan area (CMA)/census agglomeration (CA) name
37	25	A	354-378	Primary census metropolitan area (PCMA)/primary census agglomeration (PCA) name
38	32	A	379-410	Urban area (UA) name

3.2 Field Descriptions

Field 1: Province/Territory Code

The province/territory is designated by a 2-digit code that is based on the Standard Geographical Classification (SGC). The code is assigned from east to west. The first digit represents the region of Canada to which the province/territory belongs; the second digit denotes one of the ten provinces and two territories.

<u>Region</u>	<u>Province</u>	<u>Code</u>
Atlantic	Newfoundland	10
	Prince Edward Island	11
	Nova Scotia	12
	New Brunswick	13
Quebec	Quebec	24
Ontario	Ontario	35
Prairies	Manitoba	46
	Saskatchewan	47
	Alberta	48
B.C. Territories	British Columbia	59
	Yukon Territory	60
	Northwest Territories	61

The 2-digit province/territory code is a unique identifier that must be used when identifying a specific area within the hierarchy (i.e., FED, EA, CD, CCS, CSD and SPR).

Field 2: Federal Electoral District (FED) Code (1987 Representation Order)

The FED is designated by a 3-digit code. In order to uniquely identify each FED in Canada, the code must be preceded by the 2-digit province code. For example:

<u>PR/FED Code</u>	<u>FED Name</u>
12 005	Central Nova
47 005	Regina-Lumsden
59 001	Burnaby-Kingsway
61 001	Nunatsiaq

Field 3: Enumeration Area (EA) Code

The EA is designated by a 3-digit code. In order to uniquely identify each EA in Canada, the code must be preceded by the 2-digit province code and the 3-digit FED code. For example:

<u>PR/FED/EA Code</u>	<u>Description</u>
12 009 251	Province 12: Nova Scotia FED 009: Halifax West EA: 251
35 009 251	Province 35: Ontario FED 009: Cambridge EA: 251
46 009 251	Province 46: Manitoba FED 009: Winnipeg North EA: 251

Field 4: Census Division (CD) Code

The CD is designated by a 2-digit code based on the Standard Geographical Classification (SGC). In order to uniquely identify each CD in Canada, the code must be preceded by the 2-digit province code. For example:

<u>PR/CD Code</u>	<u>CD Name</u>
12 03	Digby County
24 03	La Côte-de-Gaspé
35 15	Peterborough County
59 15	Greater Vancouver Regional District

Field 5: Census Subdivision (CSD) Code

The CSD is designated by a 3-digit code based on the Standard Geographical Classification (SGC). In order to uniquely identify each CSD in Canada, the code must be preceded by the 2-digit province code and the 2-digit CD code. For example:

<u>PR/CD/CSD Code</u>	<u>CSD Name</u>
12 09 021	Halifax
35 09 021	Perth

Field 6: 1991 CSD Population

This field provides the 1991 population of the CSD in which the EA is located.

Field 7: 1991 CSD Net Land Area

The 1991 CSD net land area refers to land area in square kilometres and excludes discernable bodies of water found on maps used to calculate land area.

Field 8: Census Consolidated Subdivision (CCS) Code

The code assigned to each CCS is based on the Standard Geographical Classification (SGC) code of one of its component CSDs, usually the one with the largest land area.

Field 9: Census Metropolitan Area (CMA)/Census Agglomeration (CA) Code

The CMA/CA is designated by a 3-digit code that uniquely identifies each urban centre in Canada. The first digit of the CMA/CA code uses the second digit of the province code (except for the Territories where the CMA/CA code starts with number 9). If a CMA or CA crosses a provincial boundary, the first digit of the code reflects the province that contains the CMA portion with the higher population (e.g., CMA code 505 for Ottawa-Hull). The second and third digits are assigned in numeric order from 1 to 99 by province.

For example:

<u>CMA/CA Code</u>	<u>CMA/CA Name</u>	<u>Province</u>
001	St. John's	10
205	Halifax	12
421	Québec	24
505	Ottawa-Hull	35
935	Victoria	59
990	Whitehorse	60
995	Yellowknife	61

NOTE: The CMA/CA code will read as "000" in cases where the EA is not inside the boundaries of the CMA/CA.

Field 10: CMA/CA Type

This field identifies the type of CMA or CA in which the EA is located. For example:

<u>Code</u>	<u>CMA/CA Type</u>
A	Consolidated CMA
B	Regular CMA
C	Consolidated CA
D	Regular CA

NOTE: This field will be left blank in cases where the EA is not inside the boundaries of CMAs/CAs.

In some parts of Canada, adjacent CMAs and/or CAs are socially and economically interrelated. When this occurs, they are grouped into a single consolidated CMA. A regular CMA, on the other hand, is free-standing. It is either not adjacent to or not sufficiently related to another CMA or CA to be consolidated. Also, adjacent CAs may be socially and economically interrelated. When this occurs, they are grouped into a single consolidated CA. A regular CA, on the other hand, is free-standing. It is either not adjacent to or not sufficiently related to another CMA or CA to be consolidated.

Field 11: Primary Census Metropolitan Area/Primary Census Agglomeration (PCMA/PCA) Code

The PCMA/PCA is designated by a 3-digit code that uniquely identifies each PCMA/PCA in Canada. The first digit of the PCMA/PCA code uses the second digit of the province code. If a PCMA or PCA crosses a provincial boundary, the first digit of the code reflects the province that contains the PCMA portion with the higher population (e.g., PCMA code 505 for Ottawa-Hull). The second and third digits are assigned in numeric order from 1 to 99 by province.

<u>PCMA/PCA Code</u>	<u>PCMA/PCA Name</u>	<u>PROV</u>
225	Sydney	12
531	Newcastle	35
837	Spruce Grove	48

NOTE: The PCMA/PCA code field will read as "000" in cases where the EA is not inside the boundaries of a PCMA/PCA.

Field 12: PCMA/PCA Type

This field identifies the type of PCMA or PCA in which the EA is located. For example:

<u>Code</u>	<u>Type</u>
A	PCMA
C	PCA

NOTE: This field will be left blank in cases where the EA is not inside the boundaries of a PCMA/PCA.

Field 13: Urban/Rural Status Code

This code indicates the urban/rural status of EAs inside and outside CMAs/CAs. For example:

1	Urbanized core - EAs inside CMA/CA
2	Urban fringe - EAs inside CMA/CA
3	Rural fringe - EAs inside CMA/CA
4	Urban area - EAs outside CMAs/CAs
5	Rural area - EAs outside CMAs/CAs

The urbanized core, urban fringe and rural fringe are traditionally referred to as "CMA/CA parts".

Field 14: CMA/CA Population

This field provides the 1991 population of the CMA or CA in which the EA is located.

Field 15: Census Tract (CT)/Provincial Census Tract (PCT) Code

The CT/PCT is designated by a unique 4-digit code. CT codes are 4-digit numbers less than 7000; provincial census tract codes are 4-digit numbers greater than or equal to 7000.

<u>CT</u>	<u>PCT</u>
0001-6999	7000-9999

Field 16: CT/PCT Name

The CT name is a unique 7-digit number (including leading blanks [b] and the decimal point), assigned in ascending order within a CMA or CA. However, CT names may not be unique between CMAs or CAs.

The PCT name is also a 7-digit number (with no leading blanks and including the decimal point), assigned in ascending order within a province. If a CT or a PCT is split into two or more parts due to a population increase, the numbers after the decimal point identify the splits. For example:

CT Name Code

<u>CT Name in 1986</u>	<u>CT Name in 1991</u>
<u>b</u> 400.00	<u>b</u> 400. <u>01</u> <u>b</u> 400. <u>02</u>

PCT Name Code

<u>PCT Name in 1986</u>	<u>PCT Name in 1991</u>
1000.00	1000. <u>01</u> 1000. <u>02</u>

Field 17: Subprovincial Region Code (SPR)

The SPR is designated by a 2-digit code. In order to uniquely identify each EA in Canada, the code must be preceded by the 2-digit province code. For example:

<u>PROV/SPR</u>	<u>SPR Name</u>
10 10	Avalon Peninsula
35 10	Eastern Ontario
46 30	Southwestern Manitoba
48 30	Calgary

Field 18: Urban/Rural Area Code

This field provides the identification of the urban area, or indicates that the EA is in a rural area.

Urban Area (UA) Code

The UA is designated by a 4-digit code which uniquely identifies each UA in Canada, ranging from "0001" to "9999". There are 5 urban areas which cross provincial boundaries.

<u>Urban Area Name</u>	<u>Urban Area Code</u>	<u>Province Codes</u>
Campbellton	0122	13 and 24
Hawkesbury	0365	24 and 35
Ottawa-Hull	0616	24 and 35
Flin-Flon	0282	46 and 47
Lloydminster	0478	47 and 48

Rural Area Code

Rural areas are indicated by "0000".

Field 19: Urban Area Population

This field identifies the 1991 Census population of the urban area.

Field 20: 1991 EA Population

This field provides the 1991 Census population of the EA.

Field 21: EA Occupied Dwelling Counts

This field provides the total number of occupied private dwellings in each EA.

Field 22: Incompletely Enumerated Indian Reserve or Indian Settlement Flag

This field designates those EAs located in incompletely enumerated Indian reserves and Indian settlements. On some Indian reserves and Indian settlements in the 1991 Census, enumeration was either not permitted or was interrupted before it could be completed. The EAs represented by this field are identified by a "1"; however, the field is left blank in cases where the EAs it represents are not part of incompletely enumerated Indian reserves or Indian settlements.

Field 23: UTM zone number of EA representative point

This field denotes the UTM zone in which the EA representative point is located. This field should be used in conjunction with the x and y coordinate values of the EA representative point (ZXY = ZONE + XCOORD + YCOORD).

<u>Region</u>	<u>Province</u>	<u>Code</u>	<u>UTM Zone (s)</u>
Atlantic	Newfoundland	10	19,20,21,22
	Prince Edward Island	11	20
	Nova Scotia	12	19,20,21
	New Brunswick	13	19,20
Quebec	Quebec	24	17,18,19,20,21
Ontario	Ontario	35	15,16,17,18
Prairies	Manitoba	46	14,15
	Saskatchewan	47	12,13,14
	Alberta	48	11,12
B.C.	British Columbia	59	7,8,9,10,11
Territories	Yukon Territory	60	7,8,9,10
	Northwest Territories	61	8,9,10,11,12,13, 14,15,16,17,18, 19,20,21

Sixteen UTM zones cover Canada, bearing numbers 7 to 22 from west to east.

Field 24: UTM x-coordinate (easting) of EA representative point

The UTM x-coordinate or easting of the EA representative point is a 6-digit value in metres.

Eastings are measured from the central meridian (called the 500,000 metre line) for each zone. The points west of the central meridian have easting values of less than 500,000; points east of the central meridian have values greater than 500,000. Eastings are all greater than 0 and less than 1,000,000.

Field 25: UTM y-coordinate (northing) of EA representative point

The UTM y-coordinate or northing of the EA representative point is a 7-digit value in metres.

Northings are measured by their distance in metres from the equator. Because Canada's southernmost point is about 4,620,000 metres from the equator, all points in Canada have a northing value greater than 4,620,000.

Field 26: Latitude of EA representative point

This field identifies the latitude (in degrees and decimals north of the equator) of the EA representative point.

Latitude is the angle, measured north or south from the equator, that identifies a particular parallel. It ranges from 0° at the equator to 90° at the poles, and requires the letter N or S to establish its position north or south of the equator.

Field 27: Longitude of EA representative point

This field represents the longitude (in degrees and decimals west of the prime meridian) of the EA representative point.

Longitude is the angle that identifies a meridian. Measured east or west as indicated by the letter E or W, it ranges from 0° at the prime meridian (anchored by international agreement through the Royal Observatory at Greenwich, England) to 180° at the approximate location of the International Date Line.

Field 28: Lambert x-coordinate (easting) of EA representative point

This field identifies the x-coordinate or easting of the EA representative point in metres relative to a predefined origin so that the coordinate is positive. For Canada maps, the false easting is normally 6,200,000 metres.

Field 29: Lambert y-coordinate (northing) of EA representative point

This field identifies the y-coordinate or northing of the EA representative point in metres relative to a predefined origin so that the coordinate is positive. For Canada maps, the false northing is normally 3,000,000 metres.

Field 30: National Topographic System (NTS) Map Number

This field identifies the NTS map number in which the EA representative point is located. The NTS map numbering system is based on the partitioning of 1:1,000,000 primary quadrangles for the various NTS map series (for example, 21M represents a quadrangle for the 1:250,000 series and 21M13 represents a quadrangle for the 1:50,000 series). However, for the Geographic Attribute File, the NTS map number is based on the 1:50,000 series only.

Field 31: Federal Electoral District (FED) Name

This field identifies the name of the FED in which the EA is located.

FED names are official names created by the Chief Electoral Officer and passed into law through an act of Parliament. Similarly, FED names can only be changed through such an act.

Field 32: Census Division (CD) Name

This field identifies the name of the CD in which the EA is located.

Field 33: Census Subdivision (CSD) Name

This field identifies the name of the CSD in which the EA is located.

Field 34: Census Subdivision (CSD) Type

The CSD type indicates the municipal status of a census subdivision. The following list indicates all CSD types and their abbreviations:

<u>Abbreviation</u>	<u>CSD types</u>
BOR	Borough
C	City - Cité
CM	County (municipality)
COM	Community
CT	Canton (municipalité de)
CU	Cantons unis (municipalité de)
DM	District municipality
HAM	Hamlet
ID	Improvement district
IGD	Indian government district
LGD	Local government district
LOT	Township and royalty
MD	Municipal district
NH	Northern hamlet
NV	Northern village
P	Paroisse (municipalité de)
PAR	Parish
R	Indian reserve - Réserve indienne

RM	Rural municipality
RV	Resort village
SA	Special area
SCM	Subdivision of county municipality
SD	Sans désignation (municipalité)
S-E	Indian settlement - Établissement indien
SET	Settlement
SRD	Subdivision of regional district
SUN	Subdivision of unorganized
SV	Summer village
T	Town
TP	Township
TR	Terres réservées
UNO	Unorganized - Non organisé
V	Ville
VC	Village cri
VK	Village naskapi
VL	Village
VN	Village nordique

Field 35: Census Consolidated Subdivision (CCS) Name

This field identifies the name of the CCS in which the EA is located. CCS names usually reflect the name of the largest (in terms of land area) CSD component.

Field 36: Census Metropolitan Area (CMA)/Census Agglomeration (CA) Name

Where applicable, this field identifies the name of the CMA/CA in which the EA is located. CMA/CA names are usually based on the largest urban centre(s) within the CMA/CA.

Field 37: Primary Census Metropolitan Area (PCMA)/Primary Census Agglomeration Area (PCA) Name

Where applicable, this field identifies the name of the PCMA/PCA in which the EA is located. PCMA/PCA names are usually based on the largest urban centre(s) within the PCMA/PCA.

Field 38: Urban Area (UA) Name

Where applicable, this field indicates the name of the urban area in which the EA is located.

UA names are assigned according to the following rules:

- a) If the principal CSD within the urban area is a town, village or city and the urban area population within the CSD is at least 75% of the CSD population, then the CSD name is assigned to the urban area;
- b) If the urban area population is less than 75% of the CSD population, or if the principal CSD is not a city, town or village, then an appropriate place name is assigned to the urban area; and
- c) A compound name is assigned to the urban area if it contains two or more census subdivisions.

Appendix A. Standard Geographic Areas by Province and Territory, 1991 Census

	Total	Newfound-land	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat-chewan	Alberta	British Columbia	Yukon	Northwest Territories
Federal electoral district	295	7	4	11	10	75	99	14	14	26	32	1	2
Subprovincial region	68	4	1	5	5	16	5	8	6	8	8	1	1
Census division	290	10	3	18	15	99	49	23	18	19	30	1	5
Division (census)	74	10	-	-	-	4	-	23	18	19	-	-	-
Communauté urbaine	3	-	-	-	-	3	-	-	-	-	-	-	-
County	6	-	3	18	15	-	24	-	-	-	-	-	-
District	10	-	-	-	-	-	10	-	-	-	-	-	-
District municipality	1	-	-	-	-	-	1	-	-	-	-	-	-
Metropolitan municipality	1	-	-	-	-	-	1	-	-	-	-	-	-
Municipalité régionale de comté	92	-	-	-	-	92	-	-	-	-	-	-	-
Region	7	-	-	-	-	-	-	-	-	-	1	1	5
Region district	29	-	-	-	-	-	-	-	-	-	29	-	-
Region municipality	10	-	-	-	-	-	10	-	-	-	-	-	-
United county	3	-	-	-	-	-	3	-	-	-	-	-	-
Census consolidated subdivision	2,630	87	69	54	150	1,153	526	127	302	73	83	1	5
Census subdivision	6,006	404	126	118	287	1,637	951	293	953	438	691	36	72
Census metropolitan area	25	1	-	1	1	6*	10*	1	2	2	2	-	-
Census agglomeration	115	4	2	4	5*	28*	32*	4*	8*	9*	21	1	1

* CMAs/CAs, PCMs/PCAs and urban areas crossing provincial boundaries are counted in both provinces.

Appendix A. Standard Geographic Areas by Province and Territory, 1991 Census - Cont'd

	Total	Newfound-land	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat-chewan	Alberta	British Columbia	Yukon	Northwest Territories
Primary census metropolitan area	12	1	-	-	-	3*	6*	-	-	2	1	-	
Primary census agglomeration	21	1	-	2	-	4	8	-	-	3	3	-	
Census tract	4,068	40	-	75	67	1,052	1,731	156	98	385	464	-	
Provincial census tract	1,815	84	26	117	98	491	410	91	146	161	179	5	7
Urban area	893	42	7	38	36*	222*	246*	42*	69*	99*	92*	1	4
Enumeration area	45,995	1,155	249	1,442	1,266	10,912	15,119	2,030	2,799	4,602	6,162	97	162
Street network coverage	342	2	-	3	16	116	113	9	5	4	74	-	

* CMAs/CAs, PCMs/PCAs and urban areas crossing provincial limits are counted in both provinces

Appendix B. Census Subdivision Types by Province and Territory, 1991 Census

	Total	Newfound-land	P.E.I.	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat-chewan	Alberta	British Columbia	Yukon	Northwest Territories
Census subdivision	6,006	404	126	118	287	1,637	951	293	953	438	691	36	72
BOR : Borough	1	-	-	-	-	-	1	-	-	-	-	-	-
C : City - Cité	141	3	1	3	6	2	51	5	13	16	39	1	1
CM : County (municipality)	30	-	-	-	-	-	-	-	-	30	-	-	-
COM : Community	184	139	45	-	-	-	-	-	-	-	-	-	-
CT : Canton (municipalité de)	103	-	-	-	-	103	-	-	-	-	-	-	-
CU : Canton unis (municipalité de)	10	-	-	-	-	10	-	-	-	-	-	-	-
DM : District municipality	48	-	-	-	-	-	-	-	-	-	48	-	-
HAM : Hamlet	38	-	-	-	-	-	-	-	-	-	-	3	35
ID : Improvement district	22	-	-	-	-	-	3	-	-	19	-	-	-
IGD : Indian government district	2	-	-	-	-	-	-	-	-	-	2	-	-

Appendix B. Census Subdivision Types by Province and Territory, 1991 Census - Cont'd

	Total	Newfound-land	P.E.I.	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat-chewan	Alberta	British Columbia	Yukon	Northwest Territories
LGD : Local government district	21	-	-	-	-	-	-	21	-	-	-	-	-
LOT : Township and royalty	68	-	68	-	-	-	-	-	-	-	-	-	-
MD : Municipal district	35	-	-	12	-	-	-	-	-	23	-	-	-
NH : Northern hamlet	14	-	-	-	-	-	-	-	14	-	-	-	-
NV : Northern village	10	-	-	-	-	-	-	-	10	-	-	-	-
P : Paroisse (municipalité de)	406	-	-	-	-	406	-	-	-	-	-	-	-
PAR : Parish	151	-	-	-	151	-	-	-	-	-	-	-	-
R : Indian reserve - Réserve indienne	917	1	4	23	19	27	128	74	104	63	468	4	2
RM : Rural municipality	403	-	-	-	-	-	-	105	298	-	-	-	-
RV : Resort village	40	-	-	-	-	-	-	-	40	-	-	-	-
SA : Special area	3	-	-	-	-	-	-	-	-	3	-	-	-
SCM : Subdivision of county municipality.	41	-	-	41	-	-	-	-	-	-	-	-	-

Appendix B. Census Subdivision Types by Province and Territory, 1991 Census - Cont'd

	Total	Newfound-land	P. E. I.	Nova Scotia	New Brunswi-ck	Quebe-c	Ontario	Manitob-a	Saskat-chewan	Alberta	British Columbi-a	Yukon	Northwes-t Territories
SD : Sans désignation (municipalité)	485	-	-	-	-	485	-	-	-	-	-	-	-
S-E : Indian settlement-Établissement indien	27	-	-	-	-	3	9	4	1	-	3	7	-
SET : Settlement	35	-	-	-	-	-	-	-	-	-	-	13	22
SRD : Subdivision of regional district	70	-	-	-	-	-	-	-	-	-	70	-	-
SUN : Subdivision of unorganized	90	90	-	-	-	-	-	-	-	-	-	-	-
SV: Summer village	54	-	-	-	-	-	-	-	-	54	-	-	-
T: Town	706	171	8	39	27	-	148	35	146	109	15	3	5
TP: Township	475	-	-	-	-	-	475	-	-	-	-	-	-
TR: Terres réservées	9	-	-	-	-	9	-	-	-	-	-	-	-
UNO: Unorganized - Non organisé	155	-	-	-	-	117	20	10	2	-	-	1	5
V: Ville	255	-	-	-	-	255	-	-	-	-	-	-	-
VC : Village cri	8	-	-	-	-	8	-	-	-	-	-	-	-
VK : Village naskapi	1	-	-	-	-	1	-	-	-	-	-	-	-
VL : Village	934	-	-	-	84	197	116	39	325	121	46	4	2
VN : Village nordique	14	-	-	-	-	14	-	-	-	-	-	4	-



Supplement

**EA LINKAGE ERRORS ON THE
1991 GEOGRAPHIC ATTRIBUTE DATA BASE**

Geography Division
Statistics Canada

March 1993

This supplement documents the errors found on the Geographic Attribute Data Base (GADB). These errors have been identified up to the time of releasing this User Guide or other GEO products that use GADB as a source file.

The Geographic Attribute Data Base is a set of relational files that contain a number of attributes for standard geographic areas (such as names, codes, land area, population and dwelling counts) and linkages between the areas. In particular, GADB defines not only EA linkages to higher level standard geographic areas, but also linkages between all standard geographic areas. GADB is also linked to other census operational data bases. These linkages are used for various processes, such as creating digital boundary files and aggregating EA-level census data. The data bases were "frozen" in March 1992, just prior to the first release of census data. Errors identified after that date cannot be corrected on the data bases without losing the integrity between the many interrelated data bases. Consequently, errors in 1991 Census data resulting from EA linkage errors are documented and released as "Errata" with the appropriate census publications.

The supplement indicates the linkage errors between the various geographic areas, the effective date(s), the correct linkage and population/dwelling counts, and whether the errors were corrected on the Digital Boundary Files.¹ The following tables are included:

- Table 1. Linkage Errors Between EAs and CDs.
- Table 2. Linkage Errors Between EAs and CCSs.
- Table 3. Linkage Errors Between EAs and CSDs.
- Table 4. Linkage Errors Between EAs and CTs/PCTs.
- Table 5. Linkage Errors Between EAs and UAs.
- Table 6. Effect of EA-CSD Linkage Errors on CSD Population and Dwelling Counts

This supplement will be updated as additional errors are identified.

¹ If errors were corrected on the Digital Boundary Files, there may be a discrepancy between these files and a boundary file that users create by aggregating EAs and linking EA codes using the Geographic Attribute File or using other Statistics Canada products created from the Geographic Attribute Data Base.

Table 1. Linkage Errors Between EAs and CDs (as of November 4, 1992)

PROV-FED-EA <input type="text"/>	PROV-CD Linkage in GADB	Correct PROV-CD Linkage	Corrected on Digital Boundary Files	1991 EA Population and Dwelling Counts
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				Population	Occupied Private Dwellings
61 001 209	61 08	61 06	YES	0	

Table 2. Linkage Errors Between EAs and CCSs (as of December 22, 1992)

PROV-FED-EA <input type="text"/>	PROV-CD-CCS Linkage in GADB	Correct PROV-CD-CCS Linkage	1991 EA Population Count
35 017 413	35 20 014	35 20 008	253
35 017 465	35 20 014	35 20 008	245
35 017 466	35 20 014	35 20 008	208
48 016 272	48 11 061	48 11 052	0
61 001 209	61 08 098	61 06 097	0

Table 3. Linkage Errors Between EAs and CSDs (as of December 22, 1992)

PROV-FED-EA <input type="text"/>	PROV-CD-CSD Linkage in GADB	Correct PROV-CD-CSD Linkage	Corrected on Digital Boundary Files	1991 EA Population and Dwelling Counts	
				Population	Occupied Private Dwellings
24 047 163	24 66 055	24 66 025	NO	0	0
24 047 164	24 66 055	24 66 025	NO	171	57
24 047 165	24 66 055	24 66 025	NO	0	0
24 047 209	24 66 060	24 66 055	NO	176	126
24 047 210	24 66 060	24 66 055	NO	196	124
24 047 211	24 66 060	24 66 055	NO	328	219
24 047 212	24 66 060	24 66 055	NO	379	248
24 047 213	24 66 060	24 66 055	NO	347	232
35 017 413	35 20 014	35 20 008	YES	253	132
35 017 465	35 20 014	35 20 008	YES	245	128
35 017 466	35 20 014	35 20 008	NO	208	0
47 001 274	47 12 042	47 12 046	NO	16	5
47 001 275	47 12 042	47 12 046	NO	15	3
48 016 272	48 11 061	48 11 052	YES	0	0
59 020 360	59 15 043	59 15 063	YES	4	2
59 024 165	59 17 045	59 17 047	YES	0	0
61 001 209	61 08 098	61 06 097	YES	0	0

Table 4. Linkage Errors Between EAs and CTs/PCTs (as of December 22, 1992)

PROV-FED-EA <input type="text"/>	Linkage in GADB		Correct Linkage		Corrected on Digital Boundary Files	1991 EA Population and Dwelling Counts	
	PCMA/PCA or CMA/CA	CT Name	PCMA/PCA or CMA/CA	CT Name		Population	Occupied Private Dwellings
24 015 305	505	841.02	505	841.01	NO	812	256
24 065 127	462	510.00	462	415.01	YES	0	0
24 065 128	462	510.00	462	415.01	YES	0	0
35 013 274	535	260.03	535	263.01	YES	535	326
					YES		116

Table 5. Linkage Errors Between EAs and UAs (as of December 22, 1992)

PROV-FED-EA <input type="text"/>	UA Code in GADB	Correct UA Linkage	Corrected on Digital Boundary Files	1991 EA Population and Dwelling Counts	
				Population	Occupied Private Dwellings
48 022 070	1258	0000	NO	4	0
48 022 071	1258	0000	NO	0	0

Table 6. Effect of EA-CSD Linkage Errors on CSD Population and Dwelling Counts (as of December 22, 1992)

PROV-CD-CSD	CSD Name and Type	1991 Population and Dwelling Counts	Incorrect Count	Correct Count	Difference
24 66 025	Montreal, V	Population	1,017,666	1,017,837	171
		Occupied Private Dwellings	464,880	464,937	57
24 66 055	Côte-Saint-Luc, C	Population	28,700	29,955	1,255
		Occupied Private Dwellings	11,672	12,564	892
24 66 060	Hamstead, V	Population	8,645	7,219	(1426)
		Occupied Private Dwellings	3,498	2,549	(949)
35 20 014	York, C	Population	140,525	139,819	(706)
		Occupied Private Dwellings	56,335	56,075	(260)
35 20 008	North York, C	Population	562,564	563,270	706
		Occupied Private Dwellings	204,067	204,327	260
47 12 042	Biggar No. 347, RM	Population	1,086	1,055	(31)
		Occupied Private Dwellings	298	290	(8)
47 12 046	Biggar, T	Population	2,322	2,353	31
		Occupied Private Dwellings	967	975	8
48 11 061	Edmonton, C	Population	No Impact		
		Occupied Private Dwellings	No Impact		

Table 6. Effect of EA-CSD Linkage Errors on CSD Population and Dwelling Counts (as of December 22, 1992) - Cont'd

PROV-CD-CSD	CSD Name and Type	1991 Population and Dwelling Counts	Incorrect Count	Correct Count	Difference
48 11 052	Strathcona County No. 20, CM	Population	No Impact		
		Occupied Private Dwellings	No Impact		
59 15 043	Port Moody, C	Population	17,712	17,708	(4)
		Occupied Private Dwellings	6,201	6,199	(2)
59 15 063	Greater Vancouver, Subd. B, SRD	Population	2,459	2,463	4
		Occupied Private dwellings	963	965	2
59 17 045	Capital Subd. B, SRD	Population	No Impact		
		Occupied Private Dwellings	No Impact		
59 17 047	View Royal, T	Population	No Impact		
		Occupied Private Dwellings	No Impact		
61 06 097	Fort Smith, Unorganized, UNO	Population	No Impact		
		Occupied Private Dwellings	No Impact		
61 08 098	Kitikmeot Unorganized, UNO	Population	No Impact		
		Occupied Private Dwellings	No Impact		