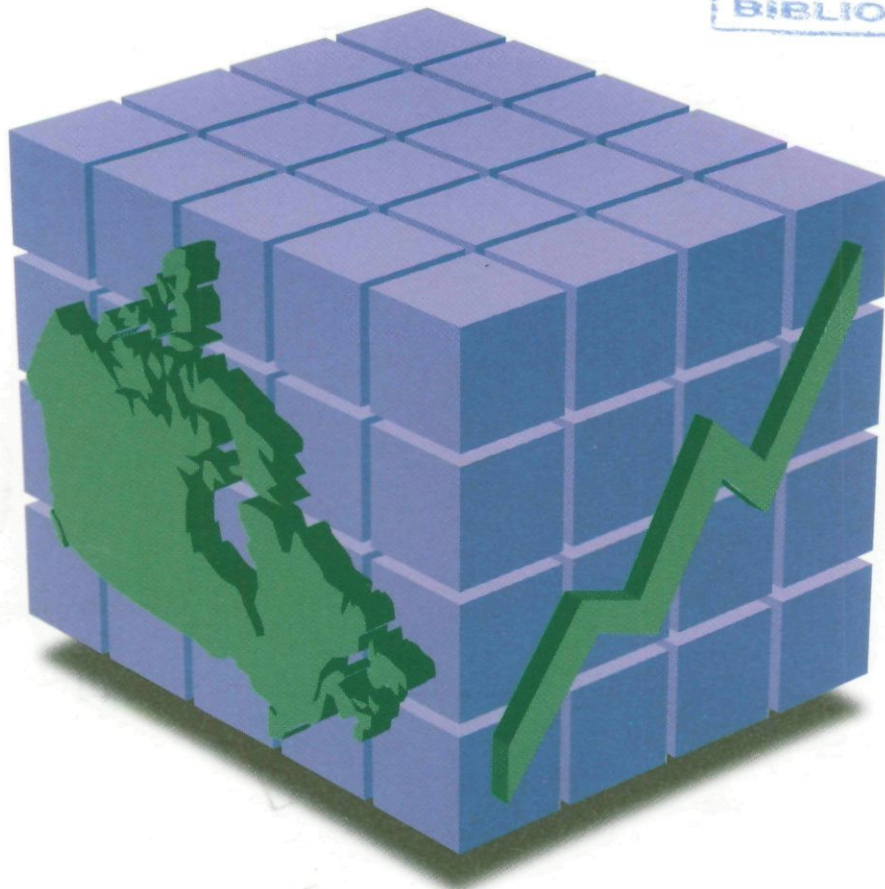
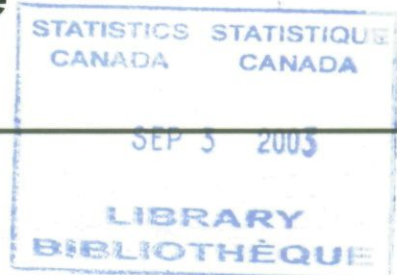
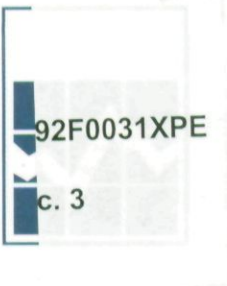


Statistics Canada

***Federal Electoral Districts (1996
Representation Order)
Digital Cartographic File***

Reference Guide



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Data in many forms

Statistics Canada disseminates data in a variety of forms. In addition to publications, both standard and special tabulations are offered. Data are available on the Internet, compact disc, diskette, computer printouts, microfiche and microfilm, and magnetic tape. Maps and other geographic reference materials are available for some types of data. Direct online access to aggregated information is possible through CANSIM, Statistics Canada's machine-readable database and retrieval system.

How to obtain more information

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You can also visit our World Wide Web site:

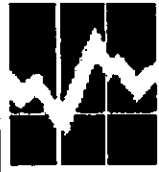
<http://www.statcan.ca>

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National telecommunications device for the hearing impaired	1 800 363-7629
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Statistics Canada

Federal Electoral Districts (1996 Representation Order)

Digital Cartographic File

Reference Guide

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July 1997

Reference Guide for Catalogue 92F0031XDE

Ottawa

Note of appreciation

Canada owes the success of its statistical system to a long-standing co-operation involving Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued co-operation and goodwill.

The first part of the report deals with the general situation in the country. It is noted that the economy is showing signs of recovery, but that there are still many difficulties. The government is working to improve the situation and to provide for the needs of the people.

In the second part, the report discusses the progress of the various departments. It is noted that the Ministry of Education has made significant progress in the field of primary education. The Ministry of Health has also made considerable progress in the field of public health.

The third part of the report deals with the financial situation. It is noted that the government has managed to reduce its deficit and to improve its financial position. This is a significant achievement and it is hoped that it will lead to a more stable and prosperous future.

Finally, the report concludes with some recommendations for the future. It is suggested that the government should continue to work to improve the economy and to provide for the needs of the people. It is also suggested that the government should continue to work to improve the education system and to provide for the needs of the health service.

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1. About this Guide

This reference guide is intended for users of the **Digital Cartographic File** for the 1996 Representation Order **Federal Electoral Districts**.

The overview section provides a description of the product and the general methodology used to create it.

Geographic terms and concepts highlighted in **bold** in the text are briefly defined in the Glossary of Terms, section 5. More details can be found in the *1996 Census Dictionary*, Catalogue No. 92-351-XPE. Supplementary information is provided in the appendices, including a list of related products and services.

This reference guide is based on the best information available at the time of its release. It in no way constitutes a warranty of the data in the event that users may observe characteristics that deviate from those stated in this document. All efforts have been made to ensure a thorough verification of this product, however, there is no guarantee that the data are 100% accurate. For further information see Section 4, **Data Quality**.

2. Overview

2.1. Introduction

The 1996 Representation Order Federal Electoral Districts (1996 FED) Digital Cartographic File (DCF) depicts the boundaries of the 301 federal electoral districts in this representation order. Where appropriate, the 1996 FED boundaries follow the coastlines and shorelines on the perimeter of Canada's land mass, including major islands. The product includes a separate map layer showing lakes, some rivers and some estuaries. This "water" layer can be used for additional reference purposes when mapping or displaying the boundaries.

The 1996 Representation Order Federal Electoral Districts Digital Cartographic File is part of the *1996 Digital Boundary File and Digital Cartographic File* series of products. However, the 1996 FEDs are not a standard level of geography for the 1996 Census and they do not correspond to groups of complete enumeration areas. The Digital Cartographic File for these new FEDs was created with a different methodology from all other 1996 geographic boundary files and, therefore, may not be entirely consistent with other files in the series.

Users should be aware that the FED boundaries used in the 1996 Census were based on the 1987 Representation Order. The 1996 Representation Order was proclaimed on January 8, 1996, and is in force on the first dissolution of Parliament that occurs at least one year after its proclamation.

2.2. Purpose of the Product

The 1996 Representation Order Federal Electoral Districts Digital Cartographic File was created to support the spatial analysis and thematic mapping of data from the 1996 Census of Population. With the appropriate computer software, this Digital Cartographic File provides the framework for thematic mapping to support applications such as demographic, social, and economic studies.

3. About this Product

3.1. Content

The 1996 FED DCF contains 2,218 polygons representing the 301 FEDs (1996 Representation Order). The following table gives a breakdown of the number of FEDs and polygons by province and territory. Users should note that polygons representing coastal islands are counted in this table.

Province / Territory	Number of polygons	Number of FEDs	Number of FEDs in more than one part
Newfoundland	358	7	7
Prince Edward Island	15	4	3
Nova Scotia	105	11	9
New Brunswick	61	10	6
Quebec	342	75	36
Ontario	355	103	27
Manitoba	14	14	0
Saskatchewan	14	14	0
Alberta	26	26	0
British Columbia	582	34	13
Yukon Territory	8	1	1
Northwest Territories	338	2	2
Canada	2,218	301	104

3.2. General Methodology

Elections Canada provided a set of digital boundaries, paper maps and a written description of the 1996 Representation Order FEDs. The paper maps identify the actual features (streets, rivers, municipal limits, etc.) forming the 1996 FED boundaries. Where possible, the digital boundaries provided by Elections Canada were adjusted to match the appropriate feature on Statistics Canada's Street Network Files and Census Subdivisions (municipalities) Digital Boundary File.

3.3. Reference Date

The 1996 Representation Order was proclaimed on January 8, 1996, and is in force on the first dissolution of Parliament that occurs at least one year after its proclamation. These Federal Electoral Districts are not a standard geography level for the 1996 Census.

3.4. Limitations

The positional accuracy of this product does not support cadastral, surveying or engineering applications.

The source data used to create the product carried a wide range of different scales. Therefore, the Digital Cartographic File will not be precise if plotted at a larger scale than the scale of the source material used in their creation. In particular, the boundaries originally digitized at a scale of 1:2,000,000 will not support large scale mapping.

4. Data Quality

The purpose of this data quality statement is to provide detailed information so that users may evaluate the suitability of the data for their use. Five fundamental components of a data quality statement are: lineage, positional accuracy, attribute accuracy, logical consistency and completeness.

4.1. 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 or map products.

4.1.1. Source Materials

Several products were used to derive the 1996 Federal Electoral Districts DCF:

- 1) A set of digital boundaries for the 1996 Representation Order of the Federal Electoral District (FED) boundaries digitized by Elections Canada at various scales (varying from 1:2,400 to 1:50,000 in some large urban centres to 1:2,000,000 elsewhere). The Federal Electoral District (FED) Names File, which contains the official name and identification code of each 1996 FED was also provided by Elections Canada.
- 2) A series of eleven publications (one for each province, one for the Northwest Territories) containing a description and a map for each Federal Electoral District. This series is published by the Chief Electoral Officer of Canada. The entire Yukon Territory is a Federal Electoral District.
- 3) Street Network Files (SNF) provided the street information used as background for adjusting the 1996 FED boundaries in large urban centres. These files were originally digitized from maps at various scales ranging from 1:2,400 to 1:50,000 and further updated to reflect information available as of Census Day, May 14, 1996.
- 4) The 1991 EA (Enumeration Area) Digital Boundary File provided the limits used as background for adjusting the 1996 FED boundaries. This file was created using different sources as described in details in the *Digital Boundary Files and Digital Cartographic Files 1996 Census Reference Guide*.
- 5) The 1991 Census Subdivision (CSD) Digital Boundary File provided limits that were used as background for adjusting the 1996 FED boundaries, where appropriate. The geographic reference date for 1991 CSDs is January 1, 1991.
- 6) The 1996 Census Subdivision (CSD) Digital Boundary File provided the limits used as background for adjusting the 1996 FED boundaries, where appropriate. The geographic reference date for 1996 CSDs is January 1, 1996.
- 7) A separate map layer showing lakes, some rivers and some estuaries. Refer to *Digital Boundary Files and Digital Cartographic Files 1996 Census Reference Guide* for detailed information on the creation of this separate hydrographic map layer.

4.1.2. Method of Derivation

As an initial step, the boundary file provided by Elections Canada was reconciled to the 1991 EA Boundary file. In this process, 1996 FED boundaries were modified to respect the geographic framework established for the 1991 Census. This facilitated the validation of the 31 Federal Electoral Districts unchanged from the 1987 Representation

Order and augmented the level of consistency between the 1996 FED boundaries and other digital products available from Statistics Canada.

Each FED boundary (reconciled to Statistics Canada geographic digital framework) was verified against the paper map and delineation summary found in Elections Canada's *Federal Electoral Districts - Representation Order of 1996* publications. In these publications, federal electoral districts are described in terms of territorial divisions such as a county, parish, city, town or village as they existed or were bounded on the first day of September 1993. The geographic reference date of the equivalent territorial divisions defined for the 1991 Census is January 1, 1991, and for the 1996 Census, January 1, 1996.

All FEDs described as following CSD boundaries were verified against Statistics Canada's 1991 and 1996 Census Subdivisions Digital Boundary Files and latest Street Network Files. In cases where the CSD boundaries changed between January 91 and January 1996, the FED boundary was aligned with the CSD boundary as it existed on September 1, 1993. Detailed maps and documents describing municipal changes were examined to resolve discrepancies.

Where available, Street Network Files were used to establish FED boundaries following visible features such as a street, highway, river or a creek.

FED boundaries that did not follow CSD boundaries or visible features found in the SNF were taken as is. Several examples of this situation are found in Manitoba, Saskatchewan and Alberta where federal electoral districts are often described in terms of sections, townships, ranges and meridians.

Inconsistencies were corrected in MapInfo® and the visual verification process was repeated. This process continued until the boundaries coincided with the description provided by Elections Canada.

The resulting file was exported to ARC/INFO® for topological verification. This operation ensured that no gaps or overlaps existed in the files. Given the reconciliation to EA and CSD boundaries, the scale of the final product varies from one area to another based on the scale of the source files (summarised under Section 4.1.1 *Lineage*).

Population estimates for the final boundaries were retrieved from the 1991 Census using the geocoding framework established in Statistics Canada. This framework supports Census data retrieval for non-standard geographic areas. It approximates the population count for any given geographic area by associating several households to a point located in the same area. The estimates of population obtained through geocoding were compared to the 1991 Census population figures published in the *Federal Electoral District Representation Order of 1996* series of publications (refer to Section 4.4.2 Consistency with other products). The counts published by Elections Canada were compiled by Statistics Canada using detailed information at the household level.

The 1996 DCF national water coverage was used to create shorelines and water features for the final product. Statistics Canada's Street Network Files and a portion of the Digital Hydrographic Base Information for Canada (provided by Geomatics Canada, Natural Resources Canada) were used in the creation of this separate water layer. Users can consult the Digital Boundary File and Digital Cartographic File Reference Guide for further details..

This work was done using ARC/INFO® version 7.04 and MapInfo® version 4.1. All processing was done in a Lambert Conic Conformal Conic projection. This projection was transformed to latitude/longitude using ARC/INFO®.

4.2. Positional Accuracy

Positional accuracy is the difference between the "true" position of a feature in the real world and the "estimated" position stored in the digital file or other product.

For this document, the "true" FED boundary is considered to be the boundary as depicted on the source materials provided by Elections Canada.

Positional accuracy depends on the quality of the source material used. No numerical measurements of positional accuracy have been made. Positional accuracy is presented here in terms of descriptive statements comparing the digital files to the source base materials.

A visual check of each 1996 FED was completed with the aid of the Provincial/Territorial *Federal Electoral Districts Representation Order of 1996* published by the Chief Electoral Officer of Canada, the 1991 Street Network File, both the 1996 and 1991 CSD boundary files and various local road maps. Identified inconsistencies were corrected and the visual verification process was repeated. This process continued until the boundaries coincided with the written description and paper maps established by Elections Canada. In Manitoba, Saskatchewan and Alberta, several federal electoral districts are delineated based on the Dominion Lands system of survey (sections, townships, ranges and meridians). In these cases, the boundaries were reconciled to the 1991 EA framework, with no further refinements.

4.3. Attribute Accuracy

Attribute accuracy refers to the accuracy of the non-positional information attached to each feature such as feature name and code.

Boundaries

A visual check of each FED was performed to assess the accuracy of the associated name, code (FED unique identifier), and province unique identifier.

Water coverage

Each polygon of the separate water layer contains an area (in square meters) and a perimeter (in meters) measurements. These attributes were calculated in ARC/INFO® during the processing phase performed in the Lambert Conic Conformal projection. These attributes provide an approximate measurement of water polygons. No measures of the accuracy of those two attributes are available.

There are no names associated with water polygons.

4.4. Logical Consistency

Logical consistency is the degree to which features are accurately represented in the data structure and fulfil all the internal requirements of the data structure. In other words, how well elements of the data structure follow the rules imposed on them. For example, all polygons must close properly and lines should intersect only where intended.

4.4.1. Internal Consistency

Automated processing through ARC/INFO® verified that all polygons were topologically correct and that they closed with no overlaps, overshoots or slivers. Lines are intersected only where intended and no lines are entered twice.

4.4.2. Consistency with Other Products

The 1996 Representation Order Federal Electoral Districts is not a standard geography for the 1996 Census. The 1996 Representation Order Federal Electoral Districts Digital Cartographic File is not consistent with digital cartographic files based on 1996 enumeration areas (refer to *1996 Digital Boundary and Digital cartographic Files Reference Guide*).

Standard and custom data retrievals from the 1996 Census will be available for the 1996 FEDs. Statistics Canada uses geocoding to code and link households to non-standard geographic units in support of data retrieval. This technique links households to a point that approximates the location of the dwellings. Each point may represent a street segment (block-face) or an entire enumeration area. Block-face representative points offer the most precise estimate of a dwelling location. When that level of precision cannot be attained, households are linked to a point representing the enumeration area that corresponds to the household place of residence. Each household is linked to one and only one point. Together, these points form the digital coverage of points necessary to retrieve data for non-standard geography areas.

Population estimates from the 1991 Census were obtained by aggregation of the population represented by each representative point falling within the digital boundaries of each 1996 FED. More precise population counts were prepared by Statistics Canada to meet the requirements of Elections Canada in the delineation of the 1996 Representation Order. The difference between the two sets of population counts is always below one percent (1%). In fact, the estimates obtained by aggregation of representative points is identical to the count used by Elections Canada for 181 or (60%) of the 301 FEDs. Only 9 FEDs show a discrepancy greater or equal to 0.5%.

The 1996 Representation Order Federal Electoral Districts Digital Cartographic File will be used in Statistics Canada to support the retrieval of 1996 Census data for the 1996 FEDs.

4.5. Completeness

Completeness expresses the degree to which the geographic entities (features) are captured according to the data capture specifications. It also contains information about selection criteria, definitions used and other relevant mapping rules.

All 301 federal electoral districts of the 1996 Representation Order are represented.

4.6. Technical Specifications

The 1996 Representation Order federal Electoral Districts Digital Cartographic File is available for in two formats: ARC/INFO® EXPORT and MapInfo® Version 4.0 for Windows.

This product is available for the country as a whole and is named GF96000B.EXT. The separate map layer of lakes and rivers for this product is named GPRE000C.EXT.

The file name extension (EXT) varies by format. For the ARC/INFO® EXPORT file, the extension is E00. In MapInfo® for Windows, four files with different extensions are provided for each geographic coverage. These files can be opened directly (no requirement to import). The four extensions are: TAB, DAT, ID and MAP.

4.6.1. Record Layout

The following table shows the format of the attributes contained on the boundary files and on the separate water layer.

Item Name	WIDTH	OUTPUT	TYPE	DECIMALS
AREA ¹	4	12	F	3
PERIMETER ¹	4	12	F	3
Username # ¹	4	5	B	0
Username-ID ¹	4	5	B	0
Items for boundary files				
FEDuid	5	5	C	-
PRuid	2	2	C	-
FEDname	58	58	C	-
Items for the separate water layer				
WATER	1	1	I	-
AREA M2	8	12	F	0
PERIMETER M	8	12	F	0

¹ Items included with ARC/INFO Export files only

Item Description

AREA	of the polygon - maintained by ARC/INFO® (item not included in MapInfo® files)
PERIMETER	of the polygon - maintained by ARC/INFO® (item not included in MapInfo® files)
username#	maintained by ARC/INFO® for internal processing (item not included in MapInfo® files)
username-ID	maintained by ARC/INFO® for internal processing (item not included in MapInfo® files)
FEDuid	uniquely identifies a 1996 FED
PRuid	uniquely identifies a province or territory
FEDname	official name of the 1996 Representation order Federal Electoral District
WATER	value of "1" for water and, in ARC/INFO® only, "0" for empty polygons (such as holes representing islands on a lake)
AREA_M2	is an approximate measurement of the area of the water feature in square metres
PERIMETER_M	is an approximate measurement of the perimeter of the water feature in metres

4.6.2. File Sizes

	File name (boundaries)	File size ARC/INFO Export	File size MapInfo	File name (water)	File size ARC/INFO Export	File size MapInfo
Canada	GF96000B	21.9 MB	3.84 MB	GPRE000C	13.9 MB	6.0 MB

5. *Glossary of Terms*

Brief definitions of geographic terms and census concepts are presented here in summary form only. Users should refer to the 1996 Census Dictionary (Catalogue No. 92-351-XPE) for the full definitions and additional remarks related to these concepts and definitions.

Census Subdivision (CSD)

Census subdivision is the general term applying to municipalities (as determined by provincial legislation) or their equivalent (for example, Indian reserves, Indian settlements and unorganized territories).

In Newfoundland, Nova Scotia and British Columbia, the term also describes geographic areas that have been created by Statistics Canada in cooperation with the provinces as equivalents for municipalities for the dissemination of statistical data.

Digital Boundary Files (DBFs)

Digital boundary files (DBFs) are computer files that depict the official boundaries of standard census geographic areas. The boundaries sometimes extend beyond shorelines into water.

Digital Cartographic Files (DCFs)

Digital cartographic files (DCFs) are computer files that depict boundaries of standard census geographic areas which have been modified to follow shorelines and to include lakes.

Enumeration Area (EA)

An enumeration area (EA) is the geographic area canvassed by one census representative. It is the smallest standard geographic area for which census data are reported. All the territory of Canada is covered by EAs.

Federal Electoral District (FED)

A federal electoral district refers to any place or territorial area entitled to elect a representative member to serve in the House of Commons (source: *Canada Elections Act*, 1990). There are 295 FEDs in Canada according to the 1987 Representation Order and there are 301 FEDs in Canada according to the 1996 Representation Order.

Geocoding

Geocoding is the process of assigning geographic identifiers (codes) to map features and data records. The resulting geocodes permit data to be linked geographically. Statistics Canada's geocoding service links census households to small geographic units. This process makes it possible to produce census data tabulations for non-standard geographic areas such as provincial and municipal electoral districts, local planning areas and school districts.

Geographic Reference Date

The geographic reference date is a date determined by Statistics Canada for the purpose of finalizing the geographic framework for which census data will be collected, tabulated and reported. For the 1996 Census, the geographic reference date is January 1, 1996.

Lambert Conformal Conic

The Lambert Conformal Conic projection is widely used for general maps of Canada at small scales. It provides good directional and shape relationships for mid-latitude regions having a mainly east-to-west extent. Standard parallels at 49 degrees North and 77 degrees North are most commonly used. Scale is correct along the standard parallels only.

Latitude/Longitude

Latitude and longitude is a system of measuring location on the surface of the earth which recognizes that the earth is spherical. Latitude is the angle north or south of the equator, ranging from zero (0) degrees at the equator to ninety (90) degrees at the poles. Longitude is the angle east or west of the prime meridian (which runs through Greenwich, England), ranging from zero (0) degrees at the prime meridian to 180 degrees. For the land mass of Canada, latitudes range from roughly 42 to 83 degrees north of the equator and longitudes range from roughly 52 to 141 degrees west of the prime meridian. Latitude and longitude are often referred to as geographic coordinates.

Latitude/longitude coordinates are convenient for transferring and disseminating spatial digital data, but maps of Canada should not be plotted using latitude and longitude coordinates. The *digital boundary files* (DBFs), digital boundary files and *street network files* (SNFs) are disseminated with latitude/longitude coordinates.

Map Projection

A map projection is both the process and result of transforming positions on the spherical surface of the earth onto a plane (flat) surface.

Province/Territory

Province and territory refer to the major political divisions of Canada. From a statistical point of view, they are a basic unit for which data are tabulated and cross-classified. The ten provinces combined with the two territories cover the complete country.

Representative Point

A representative point is a single point that represents a linear feature (*block-face*) or an areal feature (*enumeration area*). The point's location generally indicates either dwelling concentrations or centrality.

Street Network Files (SNFs)

The street network files (SNFs) are digital files representing the street network for most large urban centres in Canada. The files also contain other visible physical and cultural features (such as hydrography, railroads, pipelines) and attribute information (for example, street and hydrographic names, and address ranges for streets with assigned addresses).

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Geography Products and Services

This section provides brief descriptions of Geography products and services related to the 1996 Census. For additional details, contact the nearest Statistics Canada Regional Reference Centre.

General Reference Products

92F0085XCB GeoSuite

GeoSuite is a powerful data retrieval and tabular output tool with software and data on a CD-ROM. GeoSuite allows users to explore the links between all standard levels of geography and to determine geographic codes, names, and population and dwelling counts. In addition to the standard census areas, GeoSuite provides EA correspondence data (for 1996 census EAs and 1991 EAs) and an EA reference map listing that facilitates identification of appropriate EA reference maps.

Reference Maps

Reference maps identify census geographic areas and assist users in locating boundaries, allowing them to relate census data to actual physical locations. Over 7,500 reference maps are available for geographic areas that range in size from enumeration areas (the census collection unit) to federal electoral districts (Members of Parliament's ridings), from census tracts (neighbourhoods) to census agglomerations and census metropolitan areas (large urban centres), and from census subdivisions (municipalities) to census divisions (counties). Reference maps are available individually or as sets.

92F0087XPB Federal Electoral Districts/Enumeration Areas (FED/EA) Reference Maps (1987 Representation Order)

These reference maps show 1996 Census enumeration areas by federal electoral district. The federal electoral district boundaries are based on the 1987 Representation Order which was in effect on Census Day (May 14, 1996). These FED/EA maps are designed for the general reference of EA boundaries. For more specific identification of enumeration areas, users should refer to the more detailed EA Reference Maps for Large Urban (92F0090XPB), Small Urban (92F0088XPB) and Rural (92F0091XPB) areas. The FED/EA maps are reproduced on demand.

92F0090XPB Large Urban Enumeration Areas (EA) Reference Maps

These black and white EA reference maps cover all 25 census metropolitan areas (CMAs) and the 18 census agglomerations (CAs) that are in the Census Tract Programme. Approximately 4,200 maps - generally one map per census tract - show enumeration area (EA) boundaries and codes on a background of detailed street networks and other visible features. Also shown on the maps are census tract, census subdivision, federal electoral district and CMA or CA boundaries. These maps are reproduced on demand. Package prices are available when all Large Urban (92F0090XPB), Small Urban (92F0088XPB) and Rural (92F0089XPB) EA Reference Maps for Canada or Provinces and Territories are purchased together.

92F0088XPB Small Urban Enumeration Areas (EA) Reference Maps

Approximately 870 reference maps cover smaller urban municipalities (census subdivisions) not in the Census Tract Programme. The maps depict enumeration area (EA) boundaries and codes. Federal electoral districts are also

shown on these maps. The size and scale of the maps vary, depending on the area covered. These maps are reproduced on demand. Package prices are available when all Large Urban (92F0090XPB), Small Urban (92F0088XPB) and Rural (92F0089XPB) EA Reference Maps for Canada or Provinces and Territories are purchased together.

92F0091XPB Rural Enumeration Areas (EA) Reference Maps

Approximately 2,400 maps depict enumeration area boundaries and codes in rural areas of Canada. Also shown are boundaries for census subdivisions, census divisions, federal electoral districts, census metropolitan areas and tracted census agglomerations. The maps, based on Natural Resources Canada's national topographic series, are at a scale of 1:50,000 or 1:250,000 for the 10 provinces and at a scale of 1:1,000,000 for Yukon Territory and 1:4,000,000 for Northwest Territories. These maps are reproduced on demand. Package prices are available when all Large Urban (92F0090XPB), Small Urban (92F0088XPB) and Rural (92F0089XPB) EA Reference Maps for Canada or Provinces and Territories are purchased together.

92F0089XPB Census Divisions and Census Subdivisions (CD/CSD) Reference Maps: Individual Maps

A total of 21 provincial maps showing the boundaries, names and codes for census divisions (areas such as counties and regional districts) and census subdivisions (such as cities, municipalities, towns, villages, other local municipal entities, townships and Indian reserves) are available for sale individually. The maps also show the boundaries for census metropolitan areas and census agglomerations. Each province is covered by one to four maps, with scales ranging from 1:375,000 to 1:6,000,000. The maps have the same general look as in 1991, although they have been produced using computer-assisted technology from digital geographic databases. The reference information, including water bodies, major roads and railroads, comes from the Digital Chart of the World (DCW).

Note: The entire set of provincial maps are available in the publication, Standard Geographical Classification, Volume II (Catalogue No. 12-572-XPB). Also included in the publication are three maps of Canada at 1:10,000,000 scale, one showing census divisions, one showing economic regions, and one showing point locations of census metropolitan areas and census agglomerations,

92-354-XPB Census Metropolitan Areas, Census Agglomerations and Census Tracts (CMA/CA/CT) Reference Maps

This publication includes reference maps of all census metropolitan areas (55 maps covering 25 CMAs) and census agglomerations with census tracts (29 maps covering 18 CAs). The maps show boundaries and names of the census tracts, census subdivisions, primary census metropolitan areas and primary census agglomerations which make up the CMAs/CAs, as well as the urban core, urban fringe and rural fringe. Also shown are rivers, lakes, railroad tracks, provincial boundaries and other significant features. The map scales range from 1:25,000 to 1:2,000,000. The publication also includes a Canada map (1:10,000,000 scale) showing point locations of census metropolitan areas and census agglomerations in 1996.

92F0092XPB Census Metropolitan Areas, Census Agglomerations and Census Tracts (CMA/CA/CT) Reference Maps - Individual Maps

Individual reference maps for census metropolitan areas (55 maps covering 25 CMAs) and census agglomerations with census tracts (29 maps covering 18 CAs) are available. The maps show boundaries and names of the census tracts, census subdivisions, primary census metropolitan areas and primary census agglomerations which make up the

CMAAs/CAs, as well as the urban core, urban fringe and rural fringe. Also shown are rivers, lakes, railroad tracks, provincial boundaries and other significant features. The map scales range from 1:25,000 to 1:2,000,000.

Note: The entire set of maps is available in the publication *Census Metropolitan Areas, Census Agglomerations and Census Tracts. Reference Maps* (Catalogue No. 92-354-XPB).

Population and Dwelling Counts

Population and dwelling counts from the 1996 Census are available in a variety of formats and geographic breakdowns. In addition to the publication and CD-ROM described below, population and dwelling counts are available in GeoSuite (92F0085XCB) and the Block-face Data File (92F0026XDB).

93-357-XPB A National Overview. Population and Dwelling Counts

This publication provides population and dwelling counts established by the 1996 Census of Canada. The levels of geography covered are: provinces and territories, federal electoral districts (1987 Representation Order), census divisions, census subdivisions, designated places, census metropolitan areas and census agglomerations, urban and rural areas. The geographic boundaries of these areas are those that were in force on January 1, 1996 (geographic reference date for the 1996 Census of Canada). The publication also includes population and dwelling counts for forward sortation areas (first three characters of the postal code) as reported by census respondents on Census Day (May 14, 1996).

92F0086XCB Postal Code Counts

Postal Codes Counts is a new product for 1996 that contains population and dwelling counts for all six-character postal codes reported by respondents. The population and dwelling counts are provided by individual postal code, by forward sortation area (FSA - first three characters of the six-character postal code) and by province or territory. The data are provided with Windows™-based software that enables users to perform simple data manipulations such as searching the data set for specific postal codes, importing groups of postal codes for which counts are required and exporting groupings of postal codes. Documentation and reference material are contained in electronic form on the CD-ROM.

Digital Boundary Files and Digital Cartographic Files

Digital Boundary Files (DBFs) portray the official boundaries used for 1996 Census collection and, therefore, often extend as straight lines into bodies of water. In Digital Cartographic Files (DCFs), these boundaries were modified to follow the coastlines and shorelines on the perimeter of Canada's land mass, including major islands. The DCFs also include a separate map layer showing lakes and some rivers and estuaries. This "water" layer can be used for additional reference purposes when mapping or displaying the boundaries. DCFs provide a framework for thematic mapping and geographic analysis that are possible using commercially available geographic information systems (GIS) or other mapping software. DBFs may not be suitable for mapping or display where realistic shoreline is required. The DCFs are available by standard packages and prices; DBFs are available on request for the same price.

92F0029XDE Provinces and Territories Digital Boundary File/Digital Cartographic File

The Provinces and Territories Digital Boundary File (DBF) and Digital Cartographic File (DCF) are two of a series of products that depict boundaries of standard geography levels. The boundaries of the provinces and territories were

generalised to meet the requirements of most desk-top mapping packages. Consequently, this product is not consistent with others in the series. The Provinces and Territories DCF is available as a standard package for Canada.

92F0030XDE Federal Electoral Districts (1987 Representation Order) Digital Boundary File/Digital Cartographic File

The Federal Electoral Districts (1987 Representation Order) Digital Boundary File and Digital Cartographic File were created by aggregating the component EA boundaries from the 1996 Census. They may differ slightly from the Digital Boundary File based on 1991 enumeration areas (92F0070XDB). The Federal Electoral Districts Digital Cartographic File is a new product and is available in two versions. The boundaries of the first version are consistent with all other levels of standard geography. A more generalised version is also available for small scale mapping of the country as a whole. The two versions of the FED DCF are available as a standard package for Canada.

92F0031XDE Federal Electoral Districts (1996 Representation Order) Digital Cartographic File

The Federal Electoral Districts (1996 Representation Order) Digital Cartographic File depicts the boundaries of the Federal Electoral Districts (FEDs) according to the 1996 Representation Order. Since this is not a standard level of geography for the 1996 Census, the cartographic file was created with a different methodology and, therefore, is not entirely consistent with other files in the series. Users should be aware that the FED boundaries used for the taking of the 1996 Census were based on the 1987 Representation Order. The 1996 representation order was proclaimed on January 8, 1996 and is in force on the first dissolution of Parliament that occurs at least one year after its proclamation. The Federal Electoral Districts (1996 Representation Order) DCF is available as a standard package for Canada.

92F0032XDE Census Divisions Digital Boundary File/Digital Cartographic File

The Census Divisions Digital Boundary File (DBF) and Digital Cartographic File (DCF) are two of a series of products that depict boundaries of standard geography levels. The Census Divisions DCF is available in two versions. The boundaries of the first version are consistent with all other levels of standard geography. A more generalised version is also available for small scale mapping of the country as a whole. The two versions of the Census Divisions DCFs are available as a standard package for Canada.

92F0033XDE Census Consolidated Subdivisions Digital Boundary File/Digital Cartographic File

The Census Consolidated Subdivisions Digital Boundary (DBF) and Digital Cartographic File (DCF) are two of a series of products that depict boundaries of standard geography levels. Census Consolidated Subdivisions DCFs are available as standard packages for Canada and the provinces and territories.

92F0034XDE Census Subdivisions Digital Boundary File/Digital Cartographic File

The Census Subdivisions Digital Boundary File (DBF) and Digital Cartographic File (DCF) are two of a series of products that depict boundaries of standard geography levels. The Census Subdivisions DCF is available as a standard package for Canada, provinces and territories, census metropolitan areas (CMAs) and census agglomerations (CAs) with census tracts.

92F0035XDE Census Metropolitan Areas/Census Agglomerations Digital Boundary File/Digital Cartographic File

The 1996 Census Metropolitan Areas/Census Agglomerations Digital Boundary File (DBF) and Digital Cartographic File (DCF) are two of a series of products that depict boundaries of standard geography levels. The Census Metropolitan Areas/Census Agglomerations DCF is available as a standard package for Canada.

92F0036XDE Census Tracts Digital Boundary File/Digital Cartographic File

Users of the 1991 Census Tracts Digital Cartographic File will notice a major difference between the 1991 and the 1996 product. In 1991, all bodies of water were integrated with the boundaries on a single map layer. The 1996 boundaries follow the coastlines and shorelines on the perimeter of Canada's land mass, including major islands. Users can see the remaining shorelines (in-land bodies of water) by overlaying the separate "water" layer. The 1996 Census Tracts DCFs are consistent with all other levels of standard geography. This was not case in 1991. The Census Tracts DCFs are available as standard packages for Canada, the provinces, census metropolitan areas and census agglomerations with census tracts.

92F0037XDE Urban Areas Digital Boundary File/Digital Cartographic File

The Urban Areas Digital Boundary File (DBF) and Digital Cartographic File (DCF) are two of a series of products that depict boundaries of standard geography levels. The Urban Areas DCF is available as a standard package for Canada.

92F0038XDE Designated Places Digital Boundary File/Digital Cartographic File

The Designated Places Digital Boundary File (DBF) and Digital Cartographic File (DCF) are two of a series of products that depict boundaries of standard geography levels. Designated places are a new standard geography level for 1996. The Designated Places DCF is available as a standard package for Canada.

92F0039XDE 1996 Census Forward Sortation Areas Digital Cartographic File

The 1996 Census Forward Sortation Areas (FSAs) Digital Cartographic File depicts FSA boundaries derived from postal codes captured from the 1996 Census questionnaires. By analysing the postal codes reported by census households, a single FSA was assigned to each enumeration area (most often the FSA reported by the largest number of census households). FSA polygons were formed by grouping enumeration areas. Therefore, the Census based FSA boundaries respect enumeration area boundaries. The 1996 Census Forward Sortation Areas DCF is available as a standard package for Canada.

92F0040XDE Enumeration Areas (EA) Digital Boundary File/Digital Cartographic File

The Enumeration Areas Digital Cartographic File (DCF) is available for the first time. In 1991, only the Digital Boundary File was available. The EA DCFs are available as standard packages for Canada, the provinces and territories and Census Metropolitan Areas (CMA) and some Census Agglomerations (CA).

Digital Street Files

Geography Division maintains a street network database of Canada's large urban centres on an ongoing basis. While this database represents less than 1 % of Canada's land area, it accounts for 62% of Canada's population. Several

products originate from this database including very detailed Street Network Files, less detailed Skeletal Street Network Files, and the Block-face Data File.

92F0024XDE Street Network Files (SNF)

The Street Network Files (SNFs) are digital files representing the street network for most large urban centres in Canada. The files also contain other visible physical and cultural features (such as hydrography, railroads, pipelines) and attribute information (for example, street and hydrographic names and address ranges for streets with assigned addresses). Streets and addresses are updated to reflect the information collected on Census Day - May 14, 1996. In combination with the user's appropriate software, the Street Network Files are useful for route planning, delivery services and mapping. The SNFs are available as standard packages for Canada, all provinces but Prince Edward Island, and for Census Metropolitan Areas (CMA) and some Census Agglomerations (CA).

92F0025XDE Skeletal Street Network Files (SSNF)

The Skeletal Street Network Files (SSNF) are "thinned-out" Street Network Files consisting of cartographic reference features such as major streets (with street names but no address ranges) and some railway features used to define the census tract boundaries. The SSNFs are available as standard packages for Canada, Census Metropolitan Areas (CMA) and some Census Agglomerations (CA).

92F0026XDB Block-Face Data File (BFDF)

The Block-Face Data File (BFDF) contains 1996 Census population and dwelling counts for block-faces in urban centres covered by the Street Network Files (92F0024XDE). A block-face is generally one side of a city street between two consecutive intersections; it is also the smallest geographical unit available from Statistics Canada. The BFDF also links the block-face to all other levels of standard geography (enumeration areas and above) through geographic codes. The file includes street names with address ranges as well as co-ordinates for a point representing the approximate centre of each block-face. The BFDFs are available as standard packages for Canada and for large urban centres.

Postal Code Products

The postal code products described below use postal codes that are obtained regularly from Canada Post Corporation. Two other products listed above, Postal Code Counts (92F0086XCB) and 1996 Census Forward Sortation Areas Digital Cartographic File (93F0038XDE), are based on postal codes provided by respondents on census questionnaires.

92F0027XDB 1996 Postal Code Conversion File (PCCF)

The Postal Code Conversion File (PCCF) provides a link between the six-character postal code and the standard 1996 Census geographic areas (such as enumeration areas, municipalities, census tracts, etc.). It also provides the x,y co-ordinates for a point representing the approximate location of the postal code to support mapping. The PCCF is available as standard packages for Canada, the provinces and territories, and for large urban centres.

92F0027UDB 1996 Postal Code Conversion File (PCCF) - Update

The Postal Code Conversion File (PCCF) provides a link between the six-character postal code and the standard 1996 Census geographic areas (such as enumeration areas, municipalities, census tracts, etc.). It also provides the x,y co-

ordinates for a point representing the approximate location of the postal code to support mapping. The PCCF is updated on a semi-annual basis. Updates released in July provide new postal codes as of January of the release year. Updates released in January provide new postal codes as of July of the previous year. Clients must purchase the Postal Code Conversion File (92F0027XDB) at the initial cost; then subsequent updated files may be purchased at the update rate. An additional discount on updates is given to PCCF update subscribers. The subscription will require that they pay in advance for at least one updated file per year until the new PCCF for the 2001 Census is released. The PCCF updates are available as standard packages for Canada and provinces and territories.

92F0028XDB Postal Codes by Federal Ridings (1996 Representation Order) File

The Postal Codes by Federal Ridings (1996 Representation Order) File (PCFRF) is a flat ASCII file which provides a link between the six character postal code and Canada's federal electoral districts (1996 Representation Order). A federal electoral district (FED) is any place or territorial area entitled to return a member of Parliament (MP) to serve in the House of Commons and is commonly referred to as a federal riding. The PCFRF is available as standard packages for Canada and for 5 regions - Atlantic Provinces, Quebec, Ontario, Prairie Provinces and Northwest Territories, and British Columbia and Yukon Territory.

92F0028UDB Postal Codes by Federal Ridings (1996 Representation Order) File (PCFRF) - Update

The Postal Codes by Federal Ridings (1996 Representation Order) File (PCFRF) is a flat ASCII file which provides a link between the six character postal code and Canada's federal electoral districts (1996 Representation Order). A federal electoral district (FED) is any place or territorial area entitled to return a member of Parliament (MP) to serve in the House of Commons and is commonly referred to as a federal riding. The PCFRF is updated on a semi-annual basis. Updates released in July provide new postal codes as of January of the release year. Updates released in January provide new postal codes as of July of the previous year. Clients must purchase the PCFRF (92F0028XDB) at the initial cost; then subsequent updated files may be purchased at the update rate. The PCFRF updates are available for Canada and for 5 regions - Atlantic Provinces, Quebec, Ontario, Prairie Provinces and Northwest Territories, and British Columbia and the Yukon Territory.

Services

97C0005 Geocoding Service

The Geocoding service allows users to define their own geographic areas of study (user defined areas or aggregations of standard census geographic areas) for census data tabulations. This custom geography is produced from an aggregation at the block-face level in large urban centres with Street Network File coverage, and at the enumeration level in small urban centres and rural areas. The user is thereby able to purchase census data for these custom areas. Cost estimates for this service will be provided based on the complexity of the request.

97C0006 Geography Custom Services

If the standard geography products do not satisfy a user's need, Geography Custom Services are available to produce non-standard geographic products by special request. Examples include alternative packaging of Digital Cartographic Files, special data retrievals, manipulations or merges using any of the geography computer files (postal codes, attribute files, boundary files and Street Network Files). Cost estimates for this service will be provided based on the nature and complexity of the request.

97C0007 Geography Custom Mapping

Thematic maps and other custom maps may be produced as a special request. Cost estimates for this service will be provided based on the complexity of the request.

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