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Drainage Regions - Variant of SDAC 2003

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Introduction

The variant Drainage Regions was developed to enable the production of integrated statistics by hydrographic areas. It provides a set of geographical units that are convenient for data collection and compilation, and useful for spatial analysis of environmental, economic and social statistics. Drainage regions are used for dissemination of data and for sampling in environmental surveys.

The variant Drainage Regions has three levels: 5 ocean drainage areas, 25 drainage regions and 974 sub-sub-drainage areas. The ocean drainage areas are drainage areas named for the five large water bodies into which Canadian waters drain: the Pacific, Arctic and Atlantic Oceans, Hudson Bay, and the Gulf of Mexico. The ocean drainage areas have been assigned a one digit numeric identifier code. All 25 drainage regions are named and have an identifying unique code. The 25 drainage regions provide a good level of disaggregating for data reporting. They are also used for area sampling in environmental surveys. These regions are considered to provide a good representation of the hydrology in Canada ¹.

This variant is defined in terms of the sub-sub-drainage areas in the Standard Drainage Area Classification (SDAC) 2003. A drainage area is composed of a drainage basin as well as adjacent areas, such as coasts and islands that may not drain into the outlet². A drainage basin is an area in which all contributing surface waters share the same drainage outlet. This classification covers drainage areas and therefore applies to all of Canada including coasts and islands that may not drain into an outlet. The variant Drainage Regions covers all the land and interior freshwater lakes of the country. Some drainage areas straddle the Canada-United States border. This classification includes only the parts within Canada since it is used for reporting Canadian data.

The relationship between the classification levels in this variant and the Standard Drainage Area Classification (SDAC) 2003 is presented in the diagram showing the Standard Drainage Area Classification.

Conformity to relevant nationally recognized standards

In 2000, Natural Resources Canada, Environment Canada and Statistics Canada formed a partnership to produce a single national drainage area dataset at a scale of 1:1,000,000. As a result of the partnership The National Scale Frameworks Hydrology - Drainage Areas, Canada, Version 5 was completed in 2003. In the drainage area classification of this Frameworks dataset, Canada has eleven major drainage areas which are divided into 164 sub-drainage areas; the 164 sub-drainage areas are then further divided into 978 sub-sub-drainage areas. All drainage areas, sub-drainage areas and sub-sub-drainage areas are named and have an identifying code. This classification is used by Statistics Canada as the basis for the Standard Drainage Area Classification (SDAC) 2003. The Standard Drainage Area

Classification (SDAC) 2003 also contains the major drainage areas, sub-drainage areas and sub-sub-drainage areas but with the following modifications:

- Some drainage areas in the Frameworks dataset straddle the Canada-United States border; the Standard Drainage Area Classification (SDAC) 2003 includes only the parts within Canada since this is used for reporting Canadian data. The SDAC (Standard Drainage Area Classification) 2003 excludes 4 of the sub-sub-drainage areas that are entirely outside the boundary of Canada. Therefore, the Standard Drainage Area Classification (SDAC) 2003 contains only the 974 sub-sub-drainage areas that are within Canada.
- The Great Lakes were not assigned a drainage area in the Frameworks dataset; Canadian islands in the Great Lakes are assigned a drainage area in the Standard Drainage Area Classification (SDAC) 2003 for the purposes of data reporting.

The variant Drainage Regions is defined in terms of the sub-sub-drainage areas in the Standard Drainage Area Classification (SDAC) 2003 and includes these modifications. The ocean drainage areas that form a level in the variant are based on the ocean drainage areas in National Scale Frameworks Hydrology - Drainage Areas, Canada, Version 5. The Frameworks dataset as well as the SDAC (Standard Drainage Area Classification) classification cover all of Canada including islands and freshwater lakes; however, the classification does not cover marine water. Further information on the development of drainage areas is presented in the [Additional information on SDAC \(Standard Drainage Area Classification\)](#).

A digital representation of the national scale frameworks hydrology - drainage areas is available for free on [Natural Resources Canada's Geogratis website](#).

- 1 Peter H. Pearse, Françoise Bertrand, and James W. MacLaren. T. 1985. Currents of Change: Final Report of the Inquiry on Federal Water Policy. Environment Canada.

 - 2 Natural Resources Canada, Canadian Centre for Remote Sensing (CCRS), GeoAccess Division, 2003, [National Scale Frameworks HYDROLOGY, Version 5.0](#), A practical guide to the datasets (accessed October 17, 2008)
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