

NAD83 (CSRS) DATA PRODUCTS

Introduction

Coordinates and other information for Alberta Survey Control Markers (ASCMs) are available from the Spatial Information System (SPIN - <https://alta.registries.gov.ab.ca/spinii/logon.aspx>) and directly from Geodetic Control. Until 1999, the coordinates of ASCMs were referred to the North American Datum 1983 (Original) - NAD83 (Original) and North American Datum 1927. Beginning August 1999, the coordinates of a selected subset of ASCMs were also being referred to NAD83 (Canadian Spatial Reference System - CSRS). This fact sheet reviews the available data products and the details of this conversion.

Available Data Products

ASCM information for a subset of control markers referenced to NAD83 (CSRS) is available in an excel spreadsheet. The spreadsheet contains specific information regarding the marker's geographic/UTM/3TM coordinates (referenced to NAD83 (CSRS)), elevation, horizontal and vertical integration status, and geoid data for all ASCMs within the subset.

Urban and rural index maps are also available. Urban index maps show the location of ASCMs within municipalities and districts that made up the Municipal Integrated Surveying and Mapping (MISAM) program. Rural index maps show the location of ASCMs outside these areas. Urban index maps are typically produced at a scale of 1:20 000. Rural index maps are produced at a scale of 1:250 000. Tiff-format index map images can be downloaded at:

[Geodetic Control Unit](#)

Preliminary CSRS Coordinates

In April of 1998 NRCAN (Geomatics Canada) produced NAD83 (CSRS) coordinates based on ITRF96, VLBI stations, CACS stations, CBN stations and some other GPS on BM stations. These coordinates are only published to the nearest centimetre.

Final CSRS Coordinates

In April 1999, a subsequent NAD83 (CSRS) Alberta readjustment was completed. This adjustment has since been superseded by a second NAD83 (CSRS) Alberta readjustment completed in April 2004. The NAD83 (CSRS) coordinates differ from NAD83 (Original) values by up to several decimeters. Note that NAD83 (CSRS) coordinates are only published for a subset group of ASCMs as opposed to the whole ASCM database.

CSRS Data Products

The following data products are available from the Geodetic Control Unit: An excel spreadsheet of subset ASCMs referenced to NAD83 (CSRS); NAD83 (Original) ID cards; and an excel spreadsheet of NAD27 referenced ASCMs based on their integrated coordinates as of June 1, 1994. Users can also obtain NAD83 (Original) ID cards from the SPIN. The excel format spreadsheets are available from <http://srd.alberta.ca/ManagingPrograms/Lands/DirectorOfSurveys/GeodeticControlUnit.aspx>. A transformation package to transform between NAD83 (CSRS) and NAD83 (Original) can be obtained directly from Dispositions and Technical Services, Geodetic Control.

Phase-out of NAD83(Original)

As users move to NAD83 (CSRS) as the geodetic spatial referencing system in Alberta, NAD83 (Original) coordinates will no longer be rigorously computed for new ASCMs. This transition is expected to take a number of years in which both NAD83 (Original) and NAD83 (CSRS) coordinate values will be derived. It is noted that NAD83 (CSRS) coordinate values will only be derived for new markers that are a part of the ASCM CSRS subset.

More Information

This fact sheet is one of a series published by Lands Division, Geodetic Control Unit. For more information, please visit our web site at:

[Geodetic Control Unit](#) or

contact us at (780) 422-1291 or fax (780) 427-1493.