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Survey System, NAD83 and Survey Grid Resources on the Web

Introduction

This document contains summary descriptions for and links to resources on the Web to explain North American Datum 1983 (NAD83) and related subjects.

Objective

The objective of this document is to support rapid learning about NAD 83 without having to wade through the clutter on the Web.

Audience

This document is intended to be used by:

1. IT staff who are managing a project to migrate co-ordinate data to NAD 83.
2. GIS analysts, business analysts and software developers who are part of a project team that is migrating co-ordinate data to NAD 83.
3. Exploration staffs who are interested to become more conversant with map projections and datums.
4. Management who are seeking to quickly build a summary understanding of map projections and datums.

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NAD83 Resources on the Web

Alberta Land Surveyors' Association

Alberta Land Surveyors Association - Council Report of March 1, 2005
- Council reviewed a letter from the CAPP Geomatics Committee regarding NAD83 conversion.

<http://www.alsa.ab.ca/agmcrreports/CR050301.pdf>

Association of Professional Engineers and Geoscientists of the Province of Manitoba (APEGM)

Spatial Reference Systems in Manitoba
By David Richards, Manager Manitoba Spatial Reference System Program - Manitoba Conservation

www.apegm.mb.ca/pdnet/papers/srsmb.pps

Canada Gazette

Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act
Regulations Amending Schedule I to the Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act
P.C. 2003-792 29 May, 2003

- shows change of Latitude and Longitude values for the affected areas for NAD 83

<http://canadagazette.gc.ca/partII/2003/20030618/html/sor193-e.html>

Canadian Association of Petroleum Producers (CAPP)

CAPP Approves Conversion To NAD83 As Reference Datum

http://www.veritasdgc.com/data/1/rec_docs/537_DobStatement.pdf

CAPP NAD83 Conversion Recommendation

http://www.caplacanada.org/downloads/NAD83_Stakeholders.pdf

Coordinate Integrity in the Third Millennium - User Handbook
Data Transformation NAD27 – NAD83

<http://www.capp.ca/raw.asp?x=1&dt=NTV&e=PDF&dn=64756>

Canadian Institute of Geomatics

<http://www.cig-acsg.ca/page.asp?intNodeID=7>

CAPP Geomatics Committee

Where The Hell Is That Well? (Presentation)

http://www.caplacanada.org/downloads/CAPP_Geomatics_Committee.pdf

Dane E. Ericksen, P.E. Hammett & Edison. Inc. - Consulting Engineers

NAD83: What is it and why you should care

http://www.h-e.com/pdfs/de_sbe94.pdf

Divestco NAD83 Web Resources

http://www.divestco.com/html/solutions_services_geo_data.php?select=nad

ESRI ArcGIS - Implementing NTv2

<http://www.esricanada.com/english/support/faqs/arcgis/proj1.asp>

Federal Communication Commission (FCC)

North American Datum of 1983 Coordinates - Converting Coordinates

<http://wireless.fcc.gov/uls/utilities/nadcon.html>

Government of British Columbia - Mineral Titles Online

Map Selection Updates - Government Direction

<http://www.em.gov.bc.ca/subwebs/mtonline/Updates/Update3.asp>

Government of Newfoundland and Labrador - Environment and Conversation

Frequently Asked Questions – Lands

<http://www.env.gov.nl.ca/env/lands/sm/faq.html#1>

IHS Forms Consortium

IHS Forms Consortium with Geomatics Data Management and Veritas DGC Inc. to Deliver NAD83 Standards Migration Services

<http://www.ihs.com/News/Press-Releases/2006/geomatics.htm>

Information Service Corporation

Saskatchewan Information Technology Office —

Notice of Intent to Adopt the NAD83 (CSRS98) Datum As a Provincial Standard

<http://www.isc.ca/Default.aspx?DN=719,651,14,1,Documents>

International Association of Oil and Gas Producers (OGP)

Surveying and Positioning Committee

- formed in 2005 by the absorption into OGP of the now-defunct European Petroleum Survey Group (EPSG)

<http://www.epsg.org>

NAD83: Curse or Blessing? - Steve Thomas and Ian Batty

2005 CSEG presentation

http://www.cseg.ca/conferences/2005/2005abstracts/013S0127-Thomas_S_NAD83_Curse_Or_Blessing.pdf

National Geospatial Intelligence Agency (NGA)

NGA Coordinate Systems Analysis Team (CSAT) Home Page ... formerly 'Grids and Projections'

<http://earth-info.nga.mil/GandG/grids/>

National Geospatial Intelligence Agency (NGA)

North America Datums Table

Shows calculation values for various regional NAD27 and NAD 83 datums

<http://earth-info.nga.mil/GandG/datums/dtp/CountryNorthAmericaTable.html>

National Geospatial Intelligence Agency (NGA) - Geodesy and Geophysics

Defence Mapping Agency

Technical Manual 8358.1 Datums, Ellipsoids, Grids, And Grid Reference Systems

<http://earth-info.nga.mil/GandG/tm83581/toc.htm>

National Oceanic and Atmospheric Administration

NADCON - North American Datum Conversion Utility

NAD 83 - NAD 27 Datum Shifts in Seconds of Arc

<http://www.ngs.noaa.gov/TOOLS/Nadcon/Nadcon.html>

Natural Resources Canada – Geodic Survey Division

National Transformation (NTv2) - NAD27 to NAD83

Computation Online Demonstration

http://www.geod.nrcan.gc.ca/index_e/online_apps_e/appNtv2_e/appntv2_e.html

Natural Resources Canada – Geodic Survey Division

National Transformation (NTv2) - NAD27 to NAD83 Geographic Transformation

Single Point Processing

http://www.geod.nrcan.gc.ca/index_e/online_apps_e/appNtv2_e/appntv2_geo_e.html

Natural Resources Canada – Geodic Survey Division

National Transformation (NTv2) - NAD27 to NAD83 Geographic Transformation

Geographic File Transformation - Data File Processing

http://www.geod.nrcan.gc.ca/cgi-bin/NTv2_GEO_bfile_e.cgi

Natural Resources Canada - Geodetic Survey Division

Spatial Reference Systems in Canada - A Brief History

http://www.geod.nrcan.gc.ca/index_e/geodesy_e/reference04_e.html

Natural Resources Canada – Geodic Survey Division

National Transformation Version 2 (NTv2)

http://www.geod.nrcan.gc.ca/index_e/products_e/software_e/ntv2_e.html

Natural Resources Canada - The Atlas of Canada

NAD27-83 Coordinate Conversion

http://atlas.gc.ca/site/english/learningresources/carto_corner/carto_corner_nad.html

Mentor Software Inc.

Exploring a New Reference System - By Wendy J. Woodbury Straight, L.S.

<http://mentorsoftwareinc.com/profile/newref.htm>

Open Geodata Interoperability Specification (OGIS) - Open GIS Consortium (OGC)

OGIS NAD27-NAD83 Conversion

<http://www.msls.org/new/New%20Folder/3zones/MaineOGIS/Maine%20Office%20of%20GIS%20Homepage.htm>

PetroCanada - Stephen M. Thomas, Calgary, Canada

Where The Hell Is That Well?

http://www.cseg.ca/conferences/2004/2004abstracts/008S0129-Thomas_S_Where_The_Hell_Is_That_Well.pdf

PPDM Association

Migrating oil & gas Positional Data to NAD 83

PPDM Association - Data Management Conference

November 2nd and 3rd, 2004

http://www.ppdm.org/file_downloads/public/fallconference2004/tuesday/10_Migrating_Oil_and_Gas.pdf

The SeisSoft Company

Projection & Datum FAQ

http://www.connect.net/jbanta/FAQ.html?bcsi_scan_08824EE5C8D7DF55=0&bcsi_scan_filename=FAQ.html

The U.S Fish and Wildlife Services

Map Projections and Datums

www.fws.gov/southeast/gis/training_2k5/coordinates_datums_projections_APR_04.ppt

Tower Maps

Latitude and Longitude, Coordinate Systems and Projections - NAD27 and NAD83

<http://www.towermaps.com/nad.htm>

UofA Biological Science - GIS

Transforming Between NAD83 to NAD27- Using ArcView's Project Utility Wizard

<http://www.biology.ualberta.ca/facilities/gis/uploads/instructions/AVDatumTransform.pdf>

Veritas DGC

NAD83 References

- NAD83 Background Information
- Where the Hell is that Well?
- NAD83 Redefinition
- The North American Datum of 1983
- Demystifying Reference Systems

http://www.veritasdgc.com/data/1/rec_docs/481_NAD83.pdf

Veritas DGC

Why Move from NAD27 to NAD83?

http://www.veritasdgc.com/bins/content_page.asp?cid=5-346-347-2397

Veritas DGC - NAD83 Consulting Services

The link to Complimentary Maps is prominent on the NAD83 web page.

http://www.veritasdgc.com/bins/content_page.asp?cid=5-3215-2397

Veritas Geoservices - Sean Callaghan and Dan Boudreault

Moving to NAD83: Impacts and Issues for Oil & Gas Companies in Western Canada

http://www.cseg.ca/conferences/2002/2002abstracts/Callaghan_S_Boudreault_D_Moving_To_NAD83_BUS-1.pdf

West Virginia GIS Technical Centre - Larry Moore, U.S. Geological Survey

Datum Shifts and Digital Map Coordinate Displays

http://wvgis.wvu.edu/stateactivities/standardsandguidelines/coordinatesystems/datum_shifts_v2.pdf

Dominion Land Survey (DLS) Resources on the Web

Answers.com – Encyclopaedia

Dominion Land Survey (DLS) Upgrades

<http://www.answers.com/topic/dominion-land-survey>

Saskatchewan Industry and Resources

Explanation of the Canada Dominion Land Survey System and the United States Bureau of Land Management system

<http://www.ir.gov.sk.ca/files/co2monitoring/PDFs/Can%20Us%20Land%20grid%20system.pdf>

Veritas

Dominion Land Survey (DLS) Upgrades

ATS and STS version comparison maps

http://www.veritasdgc.com/bins/content_page.asp?cid=5-346-347-1848-1852

Dominion Land Survey (DLS) – Alberta

Alberta Energy and Utility Board (EUB) – Alberta Geological Survey (AGS)

Alberta Township System (ATS)

http://www.ags.gov.ab.ca/GIS/ATS_GIS_conversion_explanation.shtml

Alberta Energy and Utility Board (EUB) – Bulletin 2005-16

Notice of Intention to Upgrade to and Use Alberta Township Survey (ATS) Grid March 2005

July 11, 2005

<http://www.eub.gov.ab.ca/BBS/requirements/gbs/bulletin-2005-16.htm>

Alberta Land Surveyors' Association

Alberta's Township System

<http://www.alsa.ab.ca/system.htm>

Altalis – Digital Mapping for Alberta

Government of Alberta (COA) Adopts March 2005 ATS Coordinate Files

<http://altalis.com/altalisandannouncements/index.html>

Altalis – Digital Mapping for Alberta

Property – Alberta Township System (ATS)

<http://www.altalis.com/productsandsamples/cadastralats/index/html>

Government of Alberta - Alberta Centennial

Understanding the Alberta Township System

File:

C:\Data_Tablet_PC\corvelle\marketing\NAD83_Best_Practices\Corvelle_Web_Content\Corvelle_NAD83_Survey_Grid_Web_Resources.doc

<http://www3.gov.ab.ca/srd/land/recaccess/township.html>

Sustainable Resource Development - Digital Integrated Dispositions

DIDs Website Launched

<http://www3.gov.ab.ca/srd/land/index.html>

http://www3.gov.ab.ca/srd/land/u_oilgas_dids.html

Dominion Land Survey (DLS) – British Columbia

British Columbia Land Surveyors (BCLS)

<http://www.bclandsurveyors.bc.ca/>

- Publications List

<http://www.bclandsurveyors.bc.ca/exams.htm>

Land and Resource Data Warehouse (LRDW)

<http://www.lrdw.ca>

Dominion Land Survey (DLS) – Manitoba

The Association of Manitoba Land Surveyors

Document Centre

<http://www.amls.ca/>

Manitoba Land Initiative

<http://web2.gov.mb.ca/mli/index.html>

Manitoba Government

Manitoba Geology

<http://www.gov.mb.ca/iedm/mrd/geo/exp-sup/mbgeology.html>

<http://www.gov.mb.ca/iedm/mrd/geo/index.html>

Manitoba Conservation

Geodesy and Control Surveys Section

Survey Services Branch

http://www.gov.mb.ca/conservation/survey_services

Dominion Land Survey (DLS) – Saskatchewan

Information Service Corporation of Saskatchewan

Measuring Land in Saskatchewan

<http://www.isc.ca/adx/asp/adxGetMedia.asp?DocID=28,11,1,Documents&MediaID=1482&Filename=Measuring+Land+in+Saskatchewan+-+2004+11+04.pdf>

Information Service Corporation of Saskatchewan

Survey Systems

<http://www.isc.ca/default.aspx?DN=28,11,1,Documents&print=true>

National Topographic System (NTS) Resources on the Web

Information Services Incorporation of Saskatchewan

National Topographic System (NTS) Maps

<http://www.isc.ca/default.aspx?DN=1001,982,979,11,1,Documents>

National Resources Canada

The National Topographic System of Canada

http://maps.nrcan.gc.ca/topo_e.php

National Resources Canada

National Topographic System (NTS) Map Sheet Manager

Mike Wulder and David Seemann, Canadian Forest Service (Pacific Forestry Centre)

http://www.pfc.forestry.ca/profiles/wulder/NTS_Manager/index_e.html

Federal Permit System (FPS) Resources on the Web

PPDM Association

PPDM Version 3.6:

Spatially Enabling 2003 Reference Guide Version 3.6.1

http://www.ppdm.org/file_downloads/public/spatial/spatial_2003_ref_guide.pdf

Canada Oil and Gas Land Regulations (C.R.C., c. 1518)

Click on Land Division

<http://laws.justice.gc.ca/en/T-7/C.R.C.-c.1518>

Geomatic Conversion Tool Resources on the Web

Alberta Township System (ATS) and Universal Transverse Mercator (UTM)

Cartographic Conversion Tools

http://www.ags.gov.ab.ca/GIS/conversion_tools.shtml

Links of Lower Relevance

Association of Canada Lands Surveyors

<http://www.acls-aatc.ca/default.htm>

ACLS - October 15, 2003 Offshore Seminar

<http://www.acls-aatc.ca/ENGLISH/seminars/seminars.htm>

Workstation SEGY Standards (2D, 3D, gathers and field) January 30, 2006

<http://segy.ca/segy/index.html>

Georeferencing Challenges in the Crown of the Continent Electronic Data

<http://www.rockies.ca/CRP/Papers/Geomatics96/paper2.htm>

Council Report – Alberta Land Surveyors Association of June 26, 2002.

<http://www.alsa.ab.ca/agmcrreports/CR020626.pdf>

Fusing Lidar, Ifsar Dems: A seven step methodology

<http://www.tec.army.mil/publications/fusing/p1041.html>

Using USGS DEMS in Arc view GIS

http://data.geocomm.com/dem/sdts2dem_demo.html

FOOTHILLS Model Forest: RAPPORT 2000-2001

Text in French

http://www.fmf.ca/CE/CE_Ar01_translated.pdf

Blue Moon Survey Solutions Geographic Wizard - Version 2.00

<http://www.geowiz.ca/download/GeoWiz2%20Manual.pdf>

How CORS Position and Velocities were Derived.

<http://www.ngs.noaa.gov/CORS/Derivation.html>

Projections used for datasets

<http://dbwww.essc.psu.edu/notes/projections.html>

Corvelle Service Offering - NAD 83 Data Migration

http://www.corvelle.com/services/descriptions/Corvelle_NAD83_Desc.pdf

Horizontal Datum Conversions

Vermont Centre for Geographic Information

http://www.vcgi.org/techres/standards/partiii_section_k.pdf

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The North American Datum Of 1983

By John W. McCrea - Illinois Department Of Transportation
<http://www.lib.niu.edu/ipo/im881117.html>

Geographic Information Coordinating Council

GIS Technical Advisory Committee
Position Paper 99-01
Official Method for Horizontal Reference Conversions
<http://www.cgia.state.nc.us/gicc/policy/nadcon.pdf>

Impact of Global Positioning System (GPS)

<http://www.zianet.com/globalcogo/GD008.pdf>

Canadian Province Association Directory

Professional Surveyor Magazine
<http://www.profsurv.com/canprov.htm>

Dominion Land Survey

Absolute Astronomy.com - Encyclopaedia
http://www.absoluteastronomy.com/encyclopedia/D/Do/Dominion_Land_Survey.htm

Dominion Land Survey

Biography.ms
<http://dominion-land-survey.biography.ms/>

Georeferencing

The University of British Columbia – Department of Geography
<http://www.geog.ubc.ca/courses/geog470/notes/GIScience/georeferencing.pdf>

History - Dominion Land Surveyors Grow Restless

Association of Canada Lands Surveyors