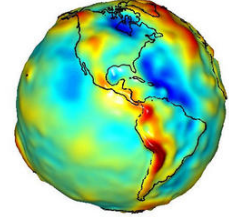


Information Note: New Canadian Vertical Datum Published

Federal Communication - November 28th, 2013

The Canadian Geodetic Vertical Datum of 2013 (CGVD2013) is now available!

Natural Resources Canada (NRCan) is pleased to announce the release of the Canadian Geodetic Vertical Datum of 2013 (CGVD2013), which is now the reference standard for heights across Canada. This new height reference system replaces the Canadian Geodetic Vertical Datum of 1928 (CGVD28).



The chosen reference height of CGVD2013 derives from collaborative work and is formalized in an agreement between Geodetic organizations in United States of America and Canada. The vertical datum is now compatible with Global Navigation Satellite Systems (GNSS) such as GPS.

The height of benchmarks is also now available in CGVD2013. These heights come from a readjustment of the entire existing federal first-order levelling network. Please note that the age of the benchmarks and the impact of regional instability since they were last observed may render them unreliable. Re-observation is always recommended for critical applications requiring utmost accuracy.

NRCan is maintaining the publication of heights at benchmarks in CGVD28 for those who prefer to continue using the old reference and to assure a smooth and gradual transition period to the new height reference system.

More information is available at the [web site](#) of the Canadian Geodetic Survey, Surveyor General Branch, Geomatics Canada.

Province of BC Communication - January 2014

In response to the above federal communication, the Province of BC (GeoBC) is currently preparing and executing plans to adopt the new vertical datum within the Province. This document is to initiate the communication phase of the project. There will be ongoing communications and extensive work to do over the next couple of year leading towards a Spring 2016 adoption of CGVD2013. for the entire province.

At this time (i.e. at the initiation of the communication of the changes) we are anticipating and proposing this tentative schedule:

Task	Start	End	Comments
Planning	Mar. 1, 2013	Sep. 30, 2013	<ul style="list-style-type: none"> Working with federal and provincial governments via CGRSC.
Investigate Legal/Legislative Issues	Mar. 1, 2013	Mar. 31, 2014	<ul style="list-style-type: none"> Review of provincial legislation for issues. Review of provincial business areas for issues.
Vertical Readjustment	Jan. 1, 2014	Dec. 31, 2015	<ul style="list-style-type: none"> Modification of MASCOT web interface to permit display of CGVD28 and/or CGVD2013 elevations; data preparation; readjustment of secondary and municipal leveling networks. Possible phased adoption of new vertical datum based on regional adjustments. Includes: testing and communication with local governments.
Full Provincial Adoption		Apr. 2016	<ul style="list-style-type: none"> Full adoption & publication of all elevations. Provisioning of tools for the users.
Communications:	Jan. 1, 2014	Dec. 31, 2016	<ul style="list-style-type: none"> Ongoing via seminars, papers and communiqués.

NOTE: Please note that all dates are based on current availability of resources (staff, budget and IM/IT systems).

Additional information with regard to the above tasks, are:

Legislative/Legal Issues – GeoBC has reviewed and identified statutes and regulations that reference some definition of the vertical datum to delineate boundaries and land rights. The areas of responsibility for each statute or regulation will be contacted to determine the impact of the change.

Vertical Adjustment – NRCan has completed the adjustment of the primary benchmarks defining the datum. Their results will be provided to GeoBC and the provincial Geodetic Control Monuments (GCM) will be adjusted to determine CGVD2013 elevations. Note that both CGVD28 and CGVD2013 elevations will be available to end users. This means that agencies will be able to retain their existing elevation data into the future.

Testing – CGVD2013 will be determined through the use of a new geoid model, known as CGG2013, allowing accurate elevations to be determined across the province using Global Satellite Navigation Systems technology (e.g. GPS). Field tests will be undertaken to confirm the expected absolute and relative accuracy.

Communication – This task will be an ongoing process to ensure that stakeholders are aware of the new datum and how it will affect their business, including discussions on steps required to move to CGVD2013. GeoBC will circulate information on this initiative through various avenues (e.g. Association of British Columbia Land Surveyors meetings, ICIS, APEGBC, etc.). The Branch website will provide news items and progress reports at http://geobc.gov.bc.ca/base-mapping/atlas/gsr/vertical_modernization.html.

Adoption – The process has already started. GeoBC has started data snooping some time ago in preparation to receive the adjustment results from NRCan, whose adjustment of federal first-order benchmarks was completed in November 2013. GeoBC will initially publish these first-order federal benchmarks and then incorporate the results of that adjustment into a provincial adjustment executed regionally. The resulting CGVD2013 elevations on the provincial and local monuments will be published possible in phases. Full province-wide adoption is expected to happen by Spring 2016.

A snapshot of the current CGVD28 elevations will be retained so users will be able to select either the CGVD28 or CGVD2013 datum for control for their projects. When the adjustment is complete listings of the new elevations will be provided to local governments. Tools will be available so users can transfer between datums, and use the new geoid model CGG2013 for GNSS projects.

What Does This Change Mean To My Elevations?

The change in elevation from existing elevations due to CGVD2013 will vary across the province:

- Coastal BC - +10cm – +20cm
- NW BC - +25cm
- NE BC - +4cm
- Eastern BC - +50cm
- Okanagan – SE BC - +20cm

For example:

Benchmark 94C350 near Nanaimo:
CGVD28 = 79.557 m → CGVD2013=79.718m.

Benchmark 68C077 at Revelstoke
CGVD28 = 547.458 m → CGVD2013=547.875m.

Provincial Contacts:

If you have any questions / concerns please contact GeoBC at:

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