

# ISO Geodetic Registry

|                           |  |   |
|---------------------------|--|---|
| <i>Item class</i>         | Transformation   |   |
| <i>Name</i>               | <b>NAD83(CSRS) v2 to CGVD2013(CGG2013a) epoch 1997 [v1]</b>  |   |
| <i>Item status</i>        | VALID  |   |
| <i>Identifier</i>         | 971  |   |
| <i>Information source</i> | <i>Title</i>   | Referencing and Time Tagging Heights in Canada  |
|                           | <i>Author</i>  | M. Veronneau  |
|                           | <i>Publisher</i>   | Geodetic Survey Division, Natural Resources Canada, Government of Canada  |
|                           | <i>Publication date</i>  | 2018  |
|                           | <i>Series/Journal name</i>   | Internal Report   |
| <i>Information source</i> | <i>Title</i>   | Geoid Models  |
|                           | <i>Author</i>  | Canadian Geodetic Survey  |
|                           | <i>Publisher</i>   | Geodetic Survey Division, Natural Resources Canada, Government of Canada  |
|                           | <i>Revision date</i>   | 2021-12-07  |
|                           | <i>Other citation details</i>  | Website. <a href="https://webapp.geod.nrcan.gc.ca/geod/data-donnees/geoid.php?locale=en">https://webapp.geod.nrcan.gc.ca/geod/data-donnees/geoid.php?locale=en</a> (accessed 2022-01-21). |
| <i>Information source</i> | <i>Title</i>   | GPS-H   |
|                           | <i>Author</i>  | Canadian Geodetic Survey  |
|                           | <i>Publisher</i>   | Geodetic Survey Division, Natural Resources Canada, Government of Canada  |
|                           | <i>Revision date</i>   | 2021-03-15  |
|                           | <i>Other citation details</i>  | Website: <a href="https://webapp.geod.nrcan.gc.ca/geod/tools-outils/gpsh.php">https://webapp.geod.nrcan.gc.ca/geod/tools-outils/gpsh.php</a>  |
| <i>Information source</i> | <i>Title</i>   | Height Transformation version 2.0 (HTv2.0), Epochs 2002.0 and 2010.0  |
|                           | <i>Author</i>  | M. Veronneau  |
|                           | <i>Publisher</i>   | Geodetic Survey Division, Natural Resources Canada, Government of Canada  |
|                           | <i>Publication date</i>  | 2019  |
|                           | <i>Series/Journal name</i>   | Internal Report   |
| <i>Data source</i>        | ISO Geodetic Registry  |   |
| <i>Remarks</i>            | Grid transformation from NAD83(CSRS) v2 ellipsoidal heights at epoch 1997.0 to CGVD2013(CGG2013a) orthometric heights at epoch 1997.0 using the CGG2013a geoid model upon which CGVD2013(CGG2013a) is defined. Bi-linear interpolation of the grid file will give results agreeing to within 1cm 99.97% of the time. |   |
| <i>Operation version</i>  | v1   |   |
| <i>Scope</i>              | Spatial referencing.   |   |
| <i>Operation accuracy</i> | 0.05 m   |   |
| <i>Source CRS</i>         | NAD83(CSRS) v2 - LatLonEHt   |   |
| <i>Target CRS</i>         | CGVD2013(CGG2013a) epoch 1997 - OHt  |   |
| <i>Operation method</i>   | Geographic3D to Gravity Related Height (Canada)  |   |

## Extent

|                    |   |
|--------------------|---|
| <i>Description</i> | <b>Canada - onshore and offshore - Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Nunavut, Ontario,</b> |
|--------------------|---|

**Prince Edward Island, Quebec, Saskatchewan,  
Yukon.**

|                                |                             |         |
|--------------------------------|-----------------------------|---------|
| <i>Geographic Bounding Box</i> | <i>West-bound longitude</i> | -141.01 |
|                                | <i>North-bound latitude</i> | 90.0    |
|                                | <i>East-bound longitude</i> | -47.74  |
|                                | <i>South-bound latitude</i> | 40.04   |

Operation parameter values

|   |                 |
|---|-----------------|
| <i>Geoid (height correction) model file</i> | CGG2013an83.byn |
|---|-----------------|

# ISO Geodetic Registry

|                    |  |
|--------------------|--|
| <i>Item class</i>  | OperationMethod  |
| <i>Name</i>        | <b>Geographic3D to Gravity Related Height (Canada)</b>   |
| <i>Item status</i> | VALID  |
| <i>Identifier</i>  | 89   |
| <i>Data source</i> | ISO Geodetic Registry  |
| <i>Remarks</i>     | For consistency with earlier geoid models in Canada, reference software for CGG2013 and CGG2013a uses bi-quadratic interpolation over nine grid nodes. The bi-linear interpolation is sufficient for most uses as the newer models have a higher spatial resolution. See information source for file format documentation. |
| <i>Formula</i>     | The GPS Height Transformation (v2.0): An Ellipsoidal-CGVD28 Height Transformation for Use With GPS in Canada   |

## Operation parameters

*Geoid (height correction) model file*