# ISO Geodetic Registry

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|---|---|---|
| *Item class* | Transformation | |
| *Name* | **NGVD29 - NOHt to NAVD88 - OHt [v2]** | |
| *Item status* | VALID | |
| *Identifier* | 541 | |
| *Information source* | *Title* | National Vertical Control Network - Proposed Action |
| | *Author* | US Government |
| | *Publisher* | Office of Federal Register, NARA |
| | *Publication date* | 1973-05-16 |
| | *Edition date* | 1973-05-16 |
| | *Series/Journal name* | Federal Register Notice |
| | *Issue identification* | Volume 38, No. 94, Document 73-9694 |
| | *Page* | 12840.0 |
| | *Other citation details* | Proposed use of NGVD 29 to replace SLD 29 |
| *Information source* | *Title* | Affirmation of Vertical Datum for Surveying and Mapping Activities |
| | *Author* | US Government |
| | *Publisher* | Office of Federal Register, NARA |
| | *Publication date* | 1993-06-24 |
| | *Edition date* | 1993-06-24 |
| | *Series/Journal name* | Federal Register Notice |
| | *Issue identification* | Volume 58, No. 120, Document: 93-14922, Docket No. 930650-3150 |
| | *Other citation details* | Mandates use of NAVD 88 |
| *Information source* | *Title* | Notice to Adopt a Standard Model for Mathematical Vertical Datum Transformations |
| | *Author* | US Government |
| | *Publisher* | Office of Federal Register, NARA |
| | *Publication date* | 2007-07-11 |
| | *Edition date* | 2007-07-11 |
| | *Series/Journal name* | Federal Register Notice |
| | *Issue identification* | Volume 72, No. 132, Document: 07-3377 |
| | *Page* | 37732.0 |
| | *Other citation details* | Mandates use of VERTCON for official transformations between datums |
| *Information source* | *Title* | National Vertical Control Network - Notice of Final Action |
| | *Author* | US Government |
| | *Publisher* | Office of Federal Register, NARA |
| | *Publication date* | 1976-05-14 |
| | *Edition date* | 1976-05-17 |
| | *Series/Journal name* | Federal Register Notice |
| | *Issue identification* | Volume 41, No. 96, Document 76-14245 |
| | *Page* | 20202.0 |
| | *Other citation details* | Formally adopted usage of NGVD 29 as datum name |
| *Information source* | *Title* | Annual Report of the Director, United States Coast and Geodetic Survey to the Secretary of Commerce for the Fiscal Year Ended June 30, 1930 |
| | *Author* | US Government |
| | *Publisher* | Government Printing Office |
| | *Publication date* | 1930-06-30 |
| | *Edition date* | 1930-06-30 |
| | *Page* | 33.0 |
| | *Other citation details* | NGVD29 |

| | | |
|---|---|---|
| *Information source* | *Title* | Results of the General Adjustment of the North American Vertical Datum of 1988 |
| | *Author* | D.B. Zilkoski, J.H. Richards, G.M. Young |
| | *Publisher* | American Cobgress on Surveying and Mapping |
| | *Publication date* | 1992-03-01 |
| | *Edition date* | 1992-03-01 |
| | *Series/Journal name* | Surveying and Land Information Systems |
| | *Issue identification* | Volume 52, No. 3 |
| | *Page* | 133-149 |
| | *Other citation details* | One of many NAVD 88 publiations. Nothing definitive was every written, but this is most cited |
| *Information source* | *Title* | VERTCON User Manual |
| | *Author* | National Geodetic Survey |
| | *Publisher* | National Oceanic and Atmospheric Administration (NOAA), National Geodetic Survey (NGS) |
| | *Publication date* | 2003-09-29 |
| | *Edition date* | 2003-09-29 |
| | *Other citation details* | NGS Online Readme File; Provides grids and usage of VERTCON for transformations between NGVD 29 and NAVD 88 |
| *Data source* | ISO Geodetic Registry | |
| *Remarks* | Grid Transformation | |
| *Operation version* | v2 | |
| *Scope* | Spatial referencing | |
| *Operation accuracy* | 0.15 m | |
| *Source CRS* | NGVD29 - NOHt | |
| *Target CRS* | NAVD88 - OHt | |
| *Operation method* | VERTCON | |

## Extent

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|---|---|---|
| *Description* | **United States (USA) - onshore - central CONUS (Arkansas, Illinois, Iowa, Kansas, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, Texas, Wisconsin).** | |
| *Geographic Bounding Box* | *West-bound longitude* | -107.0 |
| | *North-bound latitude* | 50.0 |
| | *East-bound longitude* | -84.0 |
| | *South-bound latitude* | 24.0 |

## Operation parameter values

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|---|---|
| *Height difference file* | vertconc.94 |

# ISO Geodetic Registry

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|---|---|
| *Item class* | OperationMethod |
| *Name* | **VERTCON** |
| *Item status* | VALID |
| *Identifier* | 84 |
| *Alias* | Grid transformation using VERTCON 2.1 |
| *Data source* | ISO Geodetic Registry |
| *Remarks* | The relationship between NGVD29 height and NAVD88 height vertical coordinate reference systems for the coterminous US is available through three gridded data files of offsets (sometimes called height differences). The vertical offset at a point is first interpolated within the grid of values using bi-linear interpolation. The interpolated offset is then applied as an offset: • If a NAVD88 height is desired when a NGVD29 height is given, add the interpolated offset to the NGVD29 height. • If a NGVD29 height is desired when a NAVD88 height is given, subtract the interpolated offset from the NAVD88 height. Most horizontal positions of the bench marks used to generate the VERTCON grids were scaled from USGS topographic maps. The estimated uncertainty of the scaled positions, 6 arc-seconds, is greater than the differences between NAD27 and NAD83 coordinates. Therefore the latitude and longitude used for interpolation of the grids can be referenced to either NAD27 or to NAD83(1986) or to any of the NAD83(NSRS) realisations (HARN, NSRS2007 or 2011). |

## Operation parameters

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|---|
| *Height difference file* |