ISO Geodetic Registry

Item class	Transformation	
Name	**NGVD29 - NOHt to NAVD88 - OHt [v3]**	
Item status	VALID	
Identifier	532	
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*	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
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*	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*	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*	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*	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
Data source	ISO Geodetic Registry	
Remarks	Grid Transformation	
Operation version	v3	
Scope	Spatial referencing	
Operation accuracy	0.15 m	
Source CRS	NGVD29 - NOHt	
Target CRS	NAVD88 - OHt	
Operation method	VERTCON	

Extent

Description	**United States (USA) - onshore - eastern CONUS (Alabama, Connecticut, Delaware, Florida, Georgia, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia).**	
Geographic Bounding Box	*West-bound longitude*	-89.0
	North-bound latitude	50.0
	East-bound longitude	-66.0
	South-bound latitude	24.0

Operation parameter values

Height difference file	vertcone.94

ISO Geodetic Registry

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

Height difference file