

# ISO Geodetic Registry

<i>Item class</i>	GeodeticCRS
<i>Name</i>	<b>NAD 83 (CORS96) Epoch 1997.0 - LatLonEHt</b>
<i>Item status</i>	VALID
<i>Identifier</i>	385
<i>Alias</i>	North American Datum of 1983 (CORS96) Epoch 1997.0
<i>Information source</i>	<p><i>Title</i> NGS No Longer Updates Published CORS Coordinates in the Following Reference Frames</p> <p><i>Author</i> National Geodetic Survey</p> <p><i>Publisher</i> National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS)</p> <p><i>Revision date</i> 2017-03-16</p> <p><i>Edition date</i> 2017-03-16</p> <p><i>Series/Journal name</i> NGS Online listing of transformation parameters</p> <p><i>Other citation details</i> webpage</p>
<i>Information source</i>	<p><i>Title</i> NADCON 5.0: Geometric Transformation Tool for points in the National Spatial Reference System</p> <p><i>Author</i> D. Smith, A. Bilich</p> <p><i>Publisher</i> NOAA's National Geodetic Survey</p> <p><i>Publication date</i> 2017-03-27</p> <p><i>Edition date</i> 2017-03-27</p> <p><i>Series/Journal name</i> NGS Technical Report</p> <p><i>Other citation details</i> Replaces version 4.2 and all earlier. Provides gridding algorithm, datum transformations, and extents of covnversion grids.</p>
<i>Information source</i>	<p><i>Title</i> Continuously Operating Reference Station (CORS): History, Applications, and Future Enhancements</p> <p><i>Author</i> R.A. Snay, T. Soler</p> <p><i>Publisher</i> ASCE</p> <p><i>Publication date</i> 2008-04-01</p> <p><i>Edition date</i> 2008-04-01</p> <p><i>Series/Journal name</i> Journal of Surveying Engineering</p> <p><i>Issue identification</i> Volume 134, No. 4</p> <p><i>Page</i> 95-104</p> <p><i>Other citation details</i> NAD83 (CORS96) Epoch 1996.0,NAD83 (CORS96) Epoch 1997.0,NAD83 (CORS96) Epoch 2002.0</p>
<i>Information source</i>	<p><i>Title</i> Notice to Adopt Standard Method for Horizontal Datum Transformation</p> <p><i>Author</i> US Government</p> <p><i>Publisher</i> Office of Federal Register, NARA</p> <p><i>Publication date</i> 1990-08-10</p> <p><i>Edition date</i> 1990-08-10</p> <p><i>Series/Journal name</i> Federal Register Notice</p> <p><i>Issue identification</i> Volume 55, No. 155, Document: 00-18809</p> <p><i>Page</i> 32681.0</p> <p><i>Other citation details</i> Mandates use of NADCON for official transformations between datums</p>
<i>Data source</i>	ISO Geodetic Registry
<i>Scope</i>	Spatial referencing
<i>Datum</i>	North American Datum of 1983 (CORS96) Epoch 1997.0
<i>Coordinate System</i>	Ellipsoidal 3D CS. Axes: latitude, longitude, ellipsoidal height. Orientations: north, east, up. UoM: degree, degree, metre.

Extent

<i>Description</i>	<b>United States and Territories - onshore and offshore: Puerto Rico. United States (USA) - Alaska, CONUS (Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming). Virgin Islands (US).</b>	
<i>Geographic Bounding Box</i>	<i>West-bound longitude</i>	167.65
	<i>North-bound latitude</i>	74.71
	<i>East-bound longitude</i>	-63.88
	<i>South-bound latitude</i>	14.92

# ISO Geodetic Registry

<i>Item class</i>	GeodeticDatum
<i>Name</i>	<b>North American Datum of 1983 (CORS96) Epoch 1997.0</b>
<i>Item status</i>	VALID
<i>Identifier</i>	139
<i>Alias</i>	NAD83(CORS96)
<i>Information source</i>	<p><i>Title</i> NGS No Longer Updates Published CORS Coordinates in the Following Reference Frames</p> <p><i>Author</i> National Geodetic Survey</p> <p><i>Publisher</i> National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS)</p> <p><i>Revision date</i> 2017-03-16</p> <p><i>Edition date</i> 2017-03-16</p> <p><i>Series/Journal name</i> NGS Online listing of transformation parameters</p> <p><i>Other citation details</i> webpage</p>
<i>Information source</i>	<p><i>Title</i> Continuously Operating Reference Station (CORS): History, Applications, and Future Enhancements</p> <p><i>Author</i> R.A. Snay, T. Soler</p> <p><i>Publisher</i> ASCE</p> <p><i>Publication date</i> 2008-04-01</p> <p><i>Edition date</i> 2008-04-01</p> <p><i>Series/Journal name</i> Journal of Surveying Engineering</p> <p><i>Issue identification</i> Volume 134, No. 4</p> <p><i>Page</i> 95-104</p> <p><i>Other citation details</i> NAD83 (CORS96) Epoch 1996.0,NAD83 (CORS96) Epoch 1997.0,NAD83 (CORS96) Epoch 2002.0</p>
<i>Data source</i>	ISO Geodetic Registry
<i>Remarks</i>	Replaces NAD83(1986). Replaced by NAD83(CORS96) Epoch 2002.0.
<i>Anchor definition</i>	Realization of NAD83. The frame is defined by a time-dependent seven parameter transformations of ITRF96 and ITRF97 3D geocentric Cartesian coordinates and velocities at reference epoch 1997.0. The frame is kept aligned to North America at other epochs using the NNR-NUVEL-1A estimate of three Cartesian rotation rates of change representing the tectonic plate motion of North America. The origin, scale and orientation of the frame are nominally defined to be that for the BIH Terrestrial System 1984 (BTS84).
<i>Release date</i>	1998
<i>Coordinate Reference Epoch</i>	1997.0
<i>Scope</i>	Spatial referencing
<i>Ellipsoid</i>	GRS 1980
<i>Prime Meridian</i>	Greenwich

## Extent

<i>Description</i>	<b>United States and Territories - onshore and offshore: Puerto Rico. United States (USA) - Alaska, CONUS (Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana,</b>
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**Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming). Virgin Islands (US).**

*Geographic Bounding Box*

<i>West-bound longitude</i>	167.65
<i>North-bound latitude</i>	74.71
<i>East-bound longitude</i>	-63.88
<i>South-bound latitude</i>	14.92

# ISO Geodetic Registry

<i>Item class</i>	Ellipsoid														
<i>Name</i>	<b>GRS 1980</b>														
<i>Item status</i>	VALID														
<i>Identifier</i>	27														
<i>Alias</i>	Geodetic Reference System 1980														
<i>Alias</i>	GRS1980														
<i>Alias</i>	IAG GRS80														
<i>Alias</i>	International 1979														
<i>Alias</i>	GRS80														
<i>Information source</i>	<table> <tr> <td><i>Title</i></td><td>Geodetic Reference System 1980</td></tr> <tr> <td><i>Author</i></td><td>H. Moritz</td></tr> <tr> <td><i>Publisher</i></td><td>Springer International Publishing</td></tr> <tr> <td><i>Publication date</i></td><td>2003-03</td></tr> <tr> <td><i>Series/Journal name</i></td><td>Journal of Geodesy</td></tr> <tr> <td><i>Issue identification</i></td><td>Volume 74, No. 1</td></tr> <tr> <td><i>Page</i></td><td>128–162</td></tr> </table>	<i>Title</i>	Geodetic Reference System 1980	<i>Author</i>	H. Moritz	<i>Publisher</i>	Springer International Publishing	<i>Publication date</i>	2003-03	<i>Series/Journal name</i>	Journal of Geodesy	<i>Issue identification</i>	Volume 74, No. 1	<i>Page</i>	128–162
<i>Title</i>	Geodetic Reference System 1980														
<i>Author</i>	H. Moritz														
<i>Publisher</i>	Springer International Publishing														
<i>Publication date</i>	2003-03														
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<i>Page</i>	128–162														
<i>Information source</i>	<table> <tr> <td><i>Title</i></td><td>Geodetic Reference System 1980</td></tr> <tr> <td><i>Author</i></td><td>H. Moritz</td></tr> <tr> <td><i>Publisher</i></td><td>International Association of Geodesy</td></tr> <tr> <td><i>Publication date</i></td><td>1984</td></tr> <tr> <td><i>Series/Journal name</i></td><td>Bulletin Geodesique</td></tr> <tr> <td><i>Issue identification</i></td><td>Volume 58, No. 3</td></tr> <tr> <td><i>Page</i></td><td>395-405</td></tr> </table>	<i>Title</i>	Geodetic Reference System 1980	<i>Author</i>	H. Moritz	<i>Publisher</i>	International Association of Geodesy	<i>Publication date</i>	1984	<i>Series/Journal name</i>	Bulletin Geodesique	<i>Issue identification</i>	Volume 58, No. 3	<i>Page</i>	395-405
<i>Title</i>	Geodetic Reference System 1980														
<i>Author</i>	H. Moritz														
<i>Publisher</i>	International Association of Geodesy														
<i>Publication date</i>	1984														
<i>Series/Journal name</i>	Bulletin Geodesique														
<i>Issue identification</i>	Volume 58, No. 3														
<i>Page</i>	395-405														
<i>Data source</i>	ISO Geodetic Registry														
<i>Remarks</i>	Adopted by IUGG 1979 Canberra. Inverse flattening is derived from geocentric gravitational constant $GM = 3986005e8 \text{ m}^3/\text{s}^2$ , dynamic form factor $J_2 = 108263e-8$ and Earth's angular velocity = $7292115e-11 \text{ rad/s}$ .														
<i>Semi-major axis</i>	6378137.0 m														
<i>Inverse flattening</i>	298.257222101 m														

# ISO Geodetic Registry

<i>Item class</i>	PrimeMeridian	
<i>Name</i>	<b>Greenwich</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	25	
<i>Alias</i>	Zero meridian	
<i>Information source</i>	<i>Title</i>	Why the Greenwich meridian moved
	<i>Author</i>	S. Malys, J.H. Seago, N.K. Pavlis, P.K. Seidelmann, G.H. Kaplan
	<i>Publisher</i>	Springer International Publishing
	<i>Publication date</i>	2015-12
	<i>Series/Journal name</i>	Journal of Geodesy
	<i>Issue identification</i>	Volume 89, No. 12
	<i>Page</i>	1263–1272
<i>Information source</i>	<i>Title</i>	IERS Conventions (2010)
	<i>Author</i>	G. Petit, B.J. Luzum (eds)
	<i>Publisher</i>	Verlag des Bundesamts für Kartographie und Geodäsie
	<i>Publication date</i>	2010
	<i>Edition date</i>	
	<i>Series/Journal name</i>	IERS Technical Notes
	<i>Issue identification</i>	36.0
<i>Data source</i>	<i>Other citation details</i>	ISSN: 1019-4568
	ISO Geodetic Registry	
<i>Greenwich longitude</i>	0.0 °	

# ISO Geodetic Registry

<i>Item class</i>	EllipsoidalCS	
<i>Name</i>	<b>Ellipsoidal 3D CS. Axes: latitude, longitude, ellipsoidal height. Orientations: north, east, up. UoM: degree, degree, metre.</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	46	
<i>Information source</i>	<i>Title</i>	ISO 19111 Geographical information - Spatial referencing by coordinates
	<i>Author</i>	International Organization for Standardization (ISO)
	<i>Publisher</i>	International Organization for Standardization (ISO)
	<i>Publication date</i>	2007-07-01
	<i>Edition</i>	Second Edition
	<i>Series/Journal name</i>	International Standard
	<i>Issue identification</i>	ISO 19111:2007
<i>Data source</i>	ISO Geodetic Registry	
<i>Remarks</i>	Used in geographic 3D coordinate reference systems. Horizontal coordinates referenced to this CS are in degrees. Any degree representation (e.g. DMSH, decimal, etc.) may be used but that used must be declared for the user.	

## Axes

<i>Item class</i>	CoordinateSystemAxis	
<i>Name</i>	<b>Geodetic latitude</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	38	
<i>Information source</i>	<i>Title</i>	ISO 19111 Geographical information - Spatial referencing by coordinates
	<i>Author</i>	International Organization for Standardization (ISO)
	<i>Publisher</i>	International Organization for Standardization (ISO)
	<i>Publication date</i>	2007-07-01
	<i>Edition</i>	Second Edition
	<i>Series/Journal name</i>	International Standard
	<i>Issue identification</i>	ISO 19111:2007
<i>Data source</i>	ISO Geodetic Registry	
<i>Remarks</i>	Used in geographic 2D and geographic 3D coordinate reference systems.	
<i>Abbreviation</i>	Lat	
<i>Direction</i>	north	
<i>Unit</i>	degree (supplier to define representation)	

  

<i>Item class</i>	CoordinateSystemAxis	
<i>Name</i>	<b>Geodetic longitude</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	34	
<i>Information source</i>	<i>Title</i>	ISO 19111 Geographical information - Spatial referencing by coordinates
	<i>Author</i>	International Organization for Standardization (ISO)

	<i>Publisher</i>	International Organization for Standardization (ISO)
	<i>Publication date</i>	2007-07-01
	<i>Edition</i>	Second Edition
	<i>Series/Journal name</i>	International Standard
	<i>Issue identification</i>	ISO 19111:2007
<i>Data source</i>	ISO Geodetic Registry	
<i>Remarks</i>	Used in geographic 2D and geographic 3D coordinate reference systems.	
<i>Abbreviation</i>	Lon	
<i>Direction</i>	east	
<i>Unit</i>	degree (supplier to define representation)	

  

<i>Item class</i>	CoordinateSystemAxis	
<i>Name</i>	<b>Ellipsoidal height</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	36	
<i>Information source</i>	<i>Title</i>	ISO 19111 Geographical information - Spatial referencing by coordinates
	<i>Author</i>	International Organization for Standardization (ISO)
	<i>Publisher</i>	International Organization for Standardization (ISO)
	<i>Publication date</i>	2007-07-01
	<i>Edition</i>	Second Edition
	<i>Series/Journal name</i>	International Standard
	<i>Issue identification</i>	ISO 19111:2007
<i>Data source</i>	ISO Geodetic Registry	
<i>Remarks</i>	Used only as part of an ellipsoidal 3D coordinate system in a geographic 3D coordinate reference system, never on its own.	
<i>Abbreviation</i>	h	
<i>Direction</i>	up	
<i>Unit</i>	metre	