ISO Geodetic Registry

Item class	GeodeticCRS	
Name	**NAD 83 (MARP00) - XYZ**	
Item status	VALID	
Identifier	408	
Information source	Title	Affirmation of Vertical Datum for Surveying and Mapping Activities for the Islands of Rota, Saipan and Tinian of the Commonwealth of the Northern Mariana Islands (CNMI)
	Author	US Government
	Publisher	Office of Federal Register, NARA
	Publication date	2009-01-22
	Edition date	2009-01-22
	Series/Journal name	Federal Register Notice
	Issue identification	Volume 74, No. 13, Document: E9-1180, Citation: 74 FR 3990
	Page	3990-3991
	Other citation details	Mandates use of NMVD03
Information source	Title	NGS No Longer Updates Published CORS Coordinates in the Following Reference Frames
	Author	National Geodetic Survey
	Publisher	National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS)
	Revision date	2017-03-16
	Edition date	2017-03-16
	Series/Journal name	NGS Online listing of transformation parameters
	Other citation details	webpage
Information source	Title	Introducing HTDP 3.1 to transform coordinates across time and spatial reference frames
	Author	C. Pearson, R.A. Snay
	Publisher	Springer-Verlag
	Publication date	2013-01-01
	Edition date	2013-01-01
	Series/Journal name	GPS Solutions
	Issue identification	Volume 17, No. 1
	Page	1-15
	Other citation details	NAD83 (2011), NAD83 (MA11), NAD83 (PA11) transformation from IGb08
Information source	Title	Introducing Two Spatial Reference Frames for Regions of the Pacific Ocean
	Author	R.A. Snay
	Publisher	American Cobgress on Surveying and Mapping
	Publication date	2003-01-01
	Edition date	2003-01-01
	Series/Journal name	Surveying and Land Information Systems
	Issue identification	Volume 63, No. 1
	Page	5-12
	Other citation details	MARP00, PACP00
Data source	ISO Geodetic Registry	
Scope	Spatial referencing	
Datum	North American Datum of 1983 (MARP00)	
Coordinate System	Geocentric 3D right-handed Cartesian CS. Axes: Geocentric X,Y,Z. Orientation: Z to North Pole, [X and Y in the equatorial plane, X at Prime Meridian	X in the equatorial plane at the Prime Meridian]. UoM: m.	

Extent

Description	Guam - onshore and offshore. Northern Mariana Islands - onshore and offshore. Palau - onshore and offshore.	
Geographic Bounding Box	West-bound longitude	129.48
	North-bound latitude	23.9
	East-bound longitude	149.55
	South-bound latitude	1.64

Item class	GeodeticDatum	
Name	**North American Datum of 1983 (MARP00)**	
Item status	VALID	
Identifier	162	
Alias	NAD83 (MARP00)	
Information source	*Title*	Introducing HTDP 3.1 to transform coordinates across time and spatial reference frames
	Author	C. Pearson, R.A. Snay
	Publisher	Springer-Verlag
	Publication date	2013-01-01
	Edition date	2013-01-01
	Series/Journal name	GPS Solutions
	Issue identification	Volume 17, No. 1
	Page	1-15
	Other citation details	NAD83 (2011), NAD83 (MA11), NAD83 (PA11) transformation from IGb08
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	Series/Journal name	Surveying and Land Information Systems
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	Page	5-12
	Other citation details	MARP00, PACP00
Information source	*Title*	NGS No Longer Updates Published CORS Coordinates in the Following Reference Frames
	Author	National Geodetic Survey
	Publisher	National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS)
	Revision date	2017-03-16
	Edition date	2017-03-16
	Series/Journal name	NGS Online listing of transformation parameters
	Other citation details	webpage
Data source	ISO Geodetic Registry	
Remarks	Replaces NAD83 (HARN). Replaced by NAD83(MA11) from 2011-09-06.	
Anchor definition	Realization of the NAD83. The frame is defined by a time-dependent seven parameter transformation of ITRF2000 3D geocentric Cartesian coordinates and velocities at reference epoch 1993.62. The frame is kept aligned to the Mariana plate at other epochs based on an Euler pole calculated from 16 sites located on the North American, Mariana, and Pacific plates. The original web listing erroneously showed values for this frame as being identical to NAD83 (CORS96) Epoch 2002. However, the original HTDP (version 2.7) implementation used the transformation given in the reference.	
Release date	2003	
Coordinate Reference Epoch	1993.6	
Scope	Spatial referencing	
Ellipsoid	GRS 1980	
Prime Meridian	Greenwich	

Extent

Description	Guam - onshore and offshore. Northern Mariana Islands - onshore and offshore. Palau - onshore and offshore.	
Geographic Bounding Box	West-bound longitude	129.48
	North-bound latitude	23.9
	East-bound longitude	149.55
	South-bound latitude	1.64

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Item class	Ellipsoid
Name	**GRS 1980**
Item status	VALID
Identifier	27
Alias	Geodetic Reference System 1980
Alias	GRS1980
Alias	IAG GRS80
Alias	International 1979
Alias	GRS80
Information source	*Title* Geodetic Reference System 1980 *Author* H. Moritz *Publisher* Springer International Publishing *Publication date* 2003-03 *Series/Journal name* Journal of Geodesy *Issue identification* Volume 74, No. 1 *Page* 128–162
Information source	*Title* Geodetic Reference System 1980 *Author* H. Moritz *Publisher* International Association of Geodesy *Publication date* 1984 *Series/Journal name* Bulletin Geodesique *Issue identification* Volume 58, No. 3 *Page* 395-405
Data source	ISO Geodetic Registry
Remarks	Adopted by IUGG 1979 Canberra. Inverse flattening is derived from geocentric gravitational constant GM = 3986005e8 m*m*m/s/s, dynamic form factor J2 = 108263e-8 and Earth's angular velocity = 7292115e-11 rad/s.
Semi-major axis	6378137.0 m
Inverse flattening	298.257222101 m

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

Item class	CartesianCS
Name	**Geocentric 3D right-handed Cartesian CS. Axes: Geocentric X,Y,Z. Orientation: Z to North Pole, [X and Y in the equatorial plane, X at Prime Meridian | X in the equatorial plane at the Prime Meridian]. UoM: m.**
Item status	VALID
Identifier	45
Alias	Earth centred, earth fixed, right-handed 3D coordinate system, consisting of 3 orthogonal axes with X and Y axes in the equatorial plane, positive Z-axis parallel to mean earth rotation axis and pointing towards North Pole. UoM: m.
Alias	ECEF
Information source	Title	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry
Remarks	Used in geocentric coordinate reference systems.

Axes

Item class	CoordinateSystemAxis
Name	**Geocentric X**
Item status	VALID
Identifier	33
Information source	Title	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry
Abbreviation	X
Direction	Geocentre > equator/0°E
Unit	metre

Item class	CoordinateSystemAxis
Name	**Geocentric Y**
Item status	VALID
Identifier	37

Information source	Title	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Abbreviation	Y	
Direction	Geocentre > equator/90°E	
Unit	metre	

Item class	CoordinateSystemAxis	
Name	**Geocentric Z**	
Item status	VALID	
Identifier	39	
Information source	Title	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Abbreviation	Z	
Direction	Geocentre > north pole	
Unit	metre	