Item class GeodeticCRS

NAD 83 (FBN) - LatLon

Item statusVALIDIdentifier262

Alias North American Datum of 1983 (FBN)

Information source Title Notice to Adopt Standard Method for Horizontal

**Datum Transformation** 

Author US Government

Publisher Office of Federal Register, NARA

Publication date 1990-08-10 Edition date 1990-08-10

Series/Journal name Federal Register Notice

Issue identification Volume 55, No. 155, Document: 00-18809

Page 32681.0

Other citation details Mandates use of NADCON for official

transformations between datums

Information source Title NADCON 5.0: Geometric Transformation Tool for

points in the National Spatial Reference System

Author D. Smith, A. Bilich

Publisher NOAA's National Geodetic Survey

Publication date 2017-03-27 Edition date 2017-03-27

Series/Journal name NGS Technical Report

Other citation details Replaces version 4.2 and all earlier. Provides

gridding algorithm, datum transformations, and

extents of covnversion grids.

Data source ISO Geodetic Registry
Scope Spatial referencing

Datum North American Datum of 1983 (Federal Base Network)

Coordinate System Ellipsoidal 2D CS. Axes: latitude, longitude. Orientations: north, east.

UoM: degree

### Extent

Description	United States and Territories - onshore and		
	offshore: American Samoa. Guam. Northern Mariana Islands. Puerto Rico. United States (USA) - CONUS (California, Connecticut, Florida, Idaho, Maine, Massachusetts, Montana, Nevada, New Hampshire, New Jersey, New York, North Carolina, Oregon, Rhode Island, South Carolina, Tennessee, Vermont,		
	• • • • • • • • • • • • • • • • • • • •		
	Washington, Wisconsin). Virgin Islands (US)		
Geographic Bounding Box	West-bound longitude	144.58	
	North-bound latitude	49.38	
	East-bound longitude	-64.51	
	South-bound latitude	-17.56	

Item class GeodeticDatum

North American Datum of 1983 (Federal Base

**Network)** 

Item status VALID
Identifier 176

Alias NAD83(FBN)

Information source Title Notice to Adopt Standard Method for Horizontal

**Datum Transformation** 

Author US Government

Publisher Office of Federal Register, NARA

Publication date 1990-08-10 Edition date 1990-08-10

Series/Journal name Federal Register Notice

Issue identification Volume 55, No. 155, Document: 00-18809

Page 32681.0

Other citation details Mandates use of NADCON for official

transformations between datums

Information source Title NADCON 5.0: Geometric Transformation Tool for

points in the National Spatial Reference System

Author D. Smith, A. Bilich

Publisher NOAA's National Geodetic Survey

Publication date 2017-03-27 Edition date 2017-03-27

Series/Journal name NGS Technical Report

Other citation details Replaces version 4.2 and all earlier. Provides

gridding algorithm, datum transformations, and

extents of covnversion grids.

Data source ISO Geodetic Registry

Remarks Replaces NAD83 (HARN) in 19 states as wellas outlying territories.

See Geographic extents for list. Adopted at different times in the 18 affected states, but adopted in 2002 for outlying territories. Replaced by

NAD83 (2007).

Anchor definition This a realization of NAD83. This datum is closely intertwined with

NAD83 (HARN). HARN's were realized first as latitude and longitude only realizations in statewide adjustments. A subsequent campaign adjusted newer GPS coordinates to derive updated latitude, longitude and ellipsoid height. If the latitude and longitude values were within 2 cm, the ellipsoid height was added as a third coordinate only. If the latitude or longitude differed by more than 2 cm, then all three coordinates were replaced and the resulting statewide realization was called an FBN. This occurred in 18 states as defined by the geographic extent. A null transformation was used for the remaining state HARN's.

Spatial referencing

Ellipsoid GRS 1980
Prime Meridian Greenwich

#### Extent

Scope

Description United States and Territories - onshore and

offshore: American Samoa. Guam. Northern Mariana Islands. Puerto Rico. United States (USA) - CONUS (California, Connecticut,

Florida, Idaho, Maine, Massachusetts, Montana,

	Nevada, New Hampshire, New Jersey, New York, North Carolina, Oregon, Rhode Island, South Carolina, Tennessee, Vermont, Washington, Wisconsin). Virgin Islands (US).	
Geographic Bounding Box	West-bound longitude North-bound latitude East-bound longitude	144.58 49.38 -64.51
	South-bound latitude	-17.56

Item class Ellipsoid

Name GRS 1980

Item statusVALIDIdentifier27

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

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 EllipsoidalCS

Name Ellipsoidal 2D CS. Axes: latitude, longitude.

Orientations: north, east. UoM: degree

Item status VALID

Identifier 43

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 geographic 2D coordinate reference systems. 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 by the supplier of data.

#### Axes

Item class CoordinateSystemAxis

Name Geodetic latitude

Item status VALID
Identifier 38

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 geographic 2D and geographic 3D coordinate reference

systems.

Abbreviation Lat
Direction north

Unit degree (supplier to define representation)

Item class CoordinateSystemAxis

Name Geodetic longitude

Item status VALID
Identifier 34

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 geographic 2D and geographic 3D coordinate reference

systems.

Abbreviation Lon
Direction east

Unit degree (supplier to define representation)