

# GEODETTIC DATUMS

## Classical

HORIZONTAL – 2 D (Latitude and Longitude) (e.g. NAD 27, NAD 83 (1986))

VERTICAL – 1 D (Orthometric Height) (e.g. NGVD 29, NAVD 88, IGLD 85)

## Contemporary

PRACTICAL – 3 D (Latitude, Longitude and Ellipsoid Height)  
Fixed and Stable – Coordinates seldom change (e.g. NAD 83 (1992))

SCIENTIFIC – 4 D (Latitude, Longitude, Ellipsoid Height, Velocity) – Coordinates change with time (e.g. ITRF00, ITRF05)

# VERTICAL DATUMS

A set of fundamental elevations to which other elevations are referred.

## Datum Types

**Tidal** – Defined by observation of tidal variations over a specified epoch of time

**Geodetic** – Typically based on Mean Sea Level at one or more tidal stations for a specified epoch of time

# U.S. VERTICAL DATUMS

**NAVD 88 Conterminous US**

**Tied to primary CHS BM (60-78) at Father's Point – Quebec, CD**

**NAVD 88 Alaska**

**GPS Ellipsoid Height + Geoid06**

**Puerto Rico Vertical Datum 2002 (PRVD 02)**

**Defined by MSL (83-01) at 975 5371 A**

**American Samoa Vertical Datum of 2002**

**Defined by MSL (83-01) at 177 0000 S**

**Guam Vertical Datum of 2003**

**Defined by MSL (83-01) at 163 0000 TIDAL 4**

**Marianas Vertical Datum of 2003**

**Defined by MSL (83-01) at 163 3227 UH-2C**

**Hawaii Vertical Datums**

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