NOAA's Vertical Datum Transformation (VDatum) Tool

Integrating America's Elevation Data

VDatum

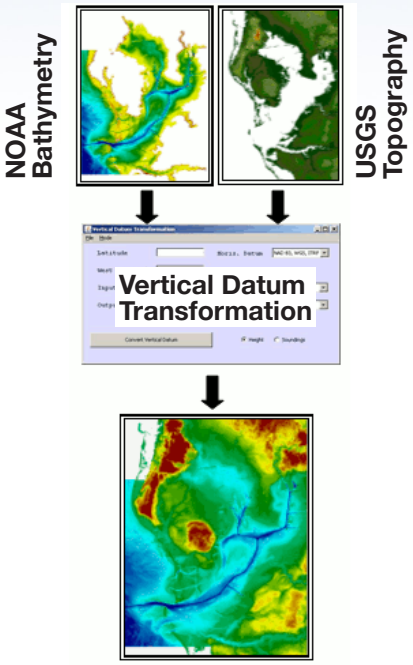
The Vertical Datum Transformation (VDatum) tool developed by NOAA

is designed to vertically transform geospatial data among a variety of datums. This transformation **allows users to convert their data from different vertical references into a common system**, thereby enabling the fusion of diverse geospatial data, particularly in coastal regions. Merging data sets with inconsistent vertical datums can cause discontinuities that become problematic when producing maps, assimilating data and advanced model results, or performing simulations at the accuracy needed for **informed, intelligent coastal zone management decision-making**.

VDatum currently supports vertical datum transformations for placement into three categories:

- **Ellipsoidal:** realized through space-borne systems, such as GPS.
- **Orthometric:** defined relative to a geopotential surface, and realized concurrently through geodetic bench marks.
- **Tidal:** a standard elevation defined from water level observations during a specific phase of the tide.

The VDatum software tool is currently available for select areas of the United States and is **designed to support many diverse applications**. The VDatum tool allows transformation of a single depth/height, file/files of points, and specific GIS formats from one vertical datum to another. Uncertainties associated with VDatum are available to inform users and assist in transforming heights among the various supported vertical datums.



VDatum Enables:

- **Fusing** diverse geospatial datasets into one common vertical datum.
- **Extracting** consistent, non-interpreted tidal datum-based shoreline from Light Detection and Ranging (LiDAR).
- **Vertically referencing** hydrographic surveys collected relative to the ellipsoid, eliminating time-consuming water level corrections.

For more information, contact NOAA:

- **On the Web**
  http://vdatum.noaa.gov
- **By Email**
  vdatum.info@noaa.gov