



NOAA's Vertical Datum Transformation (VDatum) Tool

Integrating America's Elevation Data

The Vertical Datum Transformation (VDatum) tool being jointly developed by **NOAA's National Geodetic Survey, Office of Coast Survey, and Center for Operational Oceanographic Products and Services**, 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, enabling the fusion of diverse geospatial data, particularly in coastal regions.

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: based on a mean water surface arranged over time.

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 or file/files of points, from one vertical datum to another. Uncertainties associated with VDatum are currently being made available to inform users and assist in transforming heights among the various supported vertical datums.



VDatum Enables:

- 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.
- Fusing diverse geospatial datasets into one common vertical datum.

For more information, contact NGS:

- **On the Web**
<http://vdatum.noaa.gov>
- **By Email**
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VDatum