

VDatum – A Utility to Perform Integrated Transformations between Classical Leveling, Tidal and Geometric Vertical Datums

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SUMMARY

The importance of accurate height information for the diverse array of coastal, hydrographic and bathymetric surveying and charting applications is well understood. Access to improved surveying and positioning technologies, such as the Global Positioning System have enhanced the ability of those involved in these disciplines to collect highly accurate geospatial information. Unfortunately, the various height data are often in different datums, such as local geodetic systems, tidal datums and globally referenced ellipsoidal systems. Integrating height information from various sources related to different datums can be time consuming and is error prone for those without specialized skills in geodesy and hydrography. In an effort to provide for a more accurate and consistent transformation process, the National Oceanic and Atmospheric Administration's, National Ocean Service, has developed the VDatum transformation tool. This utility combines various existing coordinate conversion and datum transformation algorithms for 30 different tidal datums, contemporary and historic geodetic vertical datums, and geometric datums into a single, user-friendly application.

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