

NAVD88 planning study

Feedback sought on upgrading vertical datum for accuracy and compatibility

FAST FACTS

Vertical datum is used to determine land elevations.

Whereas NGVD29 is based on an average of 26 points, NAVD88 is based on a single point in Quebec.

The St. Johns River Water Management District is seeking input from local governments on upgrading the way it estimates vertical elevation, a decision that would impact mapping districtwide.

Agencies across the state and country are switching their vertical datum from the National Geodetic Vertical Datum of 1929 (NGVD29) to the North American Vertical Datum of 1988 (NAVD88). By making this change, the District and local governments within the District's service area would benefit from more accurate and consistent data, and improved communication with other agencies.

With enough local support, the District will begin planning the conversion to NAVD88. The initial study is expected to cost less than \$100,000, and will provide a roadmap to the conversion process.

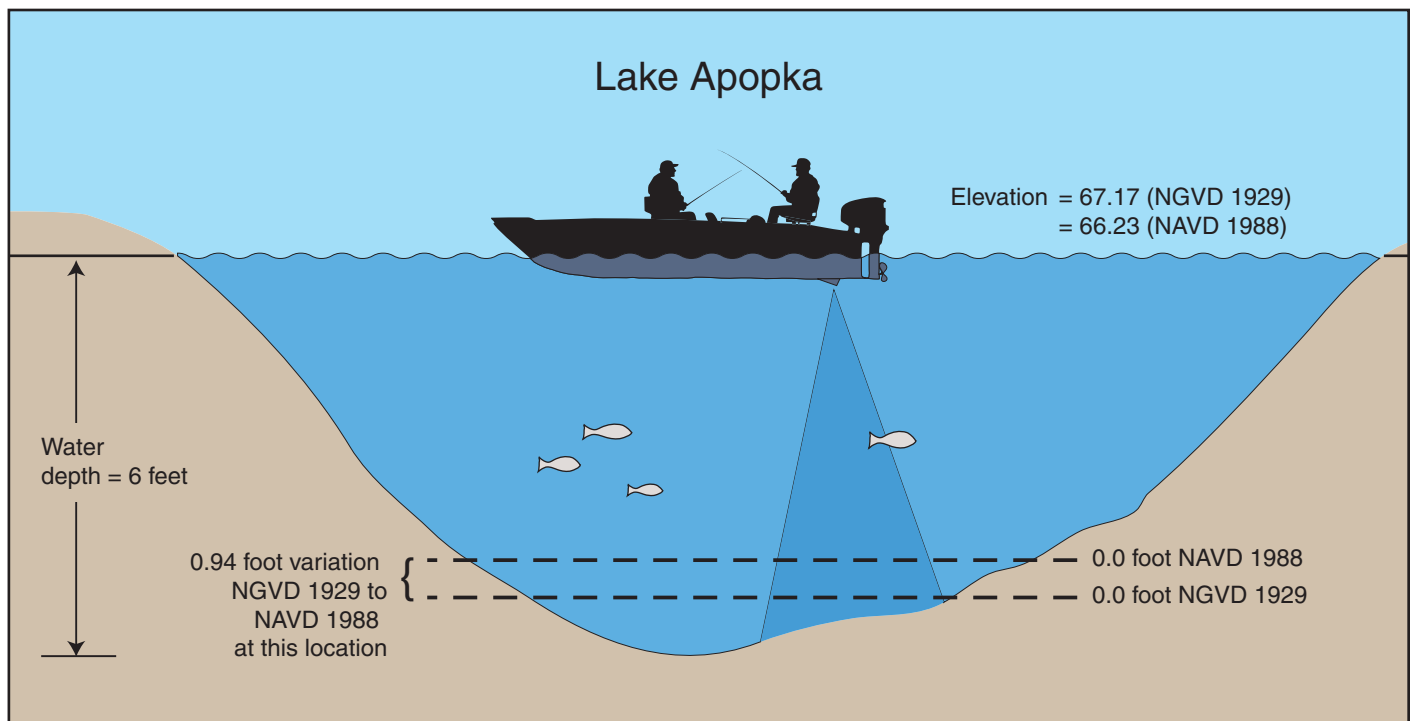
Background

A vertical datum defines a system for elevation comparisons. It is used in floodplain management, waterway navigation management, roadway design, agricultural management and surveying in general.

NGVD29 was established as the standard in 1929. Sea levels naturally changed in decades since, but the designation itself was based on certain faulty assumptions.

NAVD88 was established in 1988. It is more accurate because it references a single point. NGVD29 and NAVD88 measurements differ as much as three feet in some areas. In St. Augustine alone, the difference is 12.6 inches.

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Surface level variation vs. constant water depth



Benefits of NAVD88

Benefits from conversion to the new vertical datum include:

- More accurate floodplain modeling leads to increased public safety, enhanced flood insurance data and improved erosion modeling.
- Navigation management is improved by precisely positioning dredges and dredge materials, determining the real rate of sea level rise and improving aircraft navigational aids.
- Surveying for resource management, construction, agriculture, permitting and tax assessment is made less expensive and more accurate.
- Building roads and public works is made easier with enhanced accuracy of vertical data for roadway design, improved ability to delineate drainage basins and better determination of slope gradients.

Who uses NAVD88?

Governments in the United States, Mexico and Canada began adopting NAVD88 in 1988. Different agencies using different data necessitates a conversion process that takes time and can lead to errors. Agencies currently using NAVD88 include:

- The Federal Emergency Management Agency, which publishes all new mapping materials in NAVD88
- The U.S. Army Corps of Engineers
- The National Geodetic Survey, which currently has no plans to maintain NGVD29 beyond 2008
- Hillsborough County

The South Florida Water Management District will soon use NAVD88.

To provide feedback

Governments and agencies interested in a planning study for conversion to NAVD88 should contact John Wester, assistant director of the District's Division of Hydrologic Data Services. Call him at (386) 329-4457 or e-mail jwester@sjrwmd.com.

