GEORGIA FLOOD MAP

Modernization Program

Datum Shifts NGVD 29 to NAVD 88

In an effort to lessen the impact of flooding, Congress created the National Flood Insurance Program (NFIP) in 1968. In partnership with the NFIP, the Georgia Flood Map Modernization Program was created to update the Flood Insurance Rate Maps (FIRMs) for the entire state in digital format (resulting in Digital FIRMs, or DFIRMs). One of the main goals of this effort is to more accurately identify the boundaries of flood hazard areas. The limits of these flood hazard areas are determined by comparing flood elevations with digital elevation data. To ensure that all the elevations used are based on a common reference system, a DFIRM must reference a single vertical datum.

What is a Vertical Datum?

A vertical datum is a set of constants that defines a system for comparison of elevations. A vertical datum is important because all elevations need to be referenced to the same system. Otherwise, surveys using different datums would have different elevations for the same point. Historically, the FIRMs have referenced the National Geodetic Vertical Datum of 1929 (NGVD 29). With most DFIRM updates, a more accurate vertical datum will be used — the North American Vertical Datum of 1988 (NAVD 88).

Why is the Vertical Datum Changing?

A datum needs to be updated periodically because geologic changes to the surface of the earth occur; these changes are due to subsidence and uplift or gradual changes in sea level. In addition, the older vertical datum (NGVD 29) was flawed because of erroneous assumptions that mean sea level at different tidal stations represented the same elevation (zero). With the outdated vertical datum, points at 0.0' NGVD 29 have, in fact, different elevations for a variety of reasons. We can now more accurately measure these elevation differences with an expanded geodetic network, further warranting the use of the new vertical datum. The statewide mapping effort provides an opportunity to produce new maps using NAVD 88 and expedite the State's use of the newer vertical datum.

When is the Vertical Datum Changing?

Elevations in NAVD 88 should be used for floodplain management and flood insurance purposes (e.g., elevation certificates) the day a new DFIRM using the datum becomes effective for a county.

Who Will be Impacted by the Vertical Datum Change?

This change should be noted by anyone who uses a FIRM in Georgia, particularly when comparing elevation data on the new DFIRM with data from an old FIRM that was produced in NGVD 29. The vertical datum change impacts those who work with elevation data, such as engineers and surveyors, as well as community floodplain administrators across the State.

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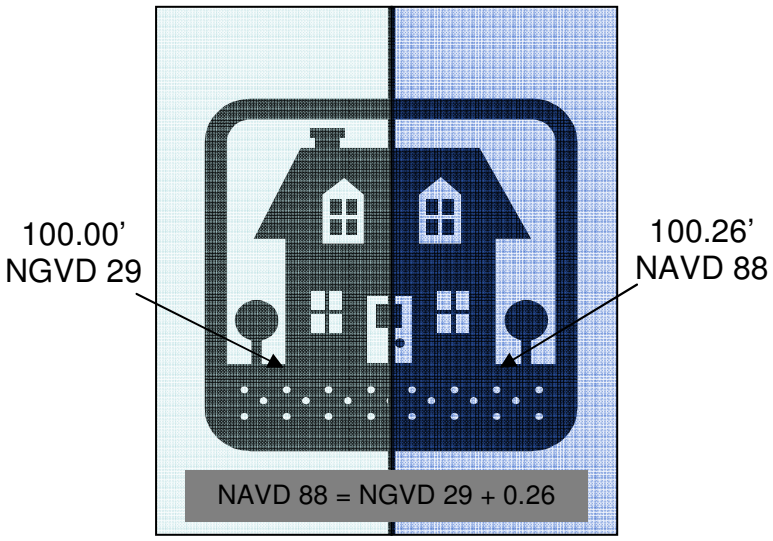
How are the Unrevised NGVD Flood Elevations Converted to NAVD 88?

The difference between the two datums varies from location to location. The exact conversion used will be listed in your Flood Insurance Study text. A datum conversion example is shown below. The offset will be applied to the NGVD 29 elevations that are not revised during the creation of a new DFIRM. Where a county boundary and a flooding source with unrevised NGVD 29 flood elevations coincide, an individual offset will be calculated and applied during the creation of a DFIRM. The Flood Insurance Study Report that supports the new DFIRM will contain information on the conversion of elevations between NAVD 88 and NGVD 29.



*Example: Datum Change

Where Can I Get Further Information?

If you have any questions regarding vertical datum changes or the NFIP in general, please contact the FEMA Map Assistance Center toll free at 1-877-FEMA MAP (1-877-336-2627). Additional information about the NFIP is available by contacting Collis Brown, State Floodplain Management Coordinator, Georgia Floodplain Management Office, 7 Martin Luther King, Jr. Drive, Suite 440, Atlanta, GA 30334, (404) 656-6382 or by visiting www.fema.gov/nfip. To obtain current elevation, description, or location information for bench marks in Georgia, please visit the National Geodetic Survey's website at www.ngs.noaa.gov.