

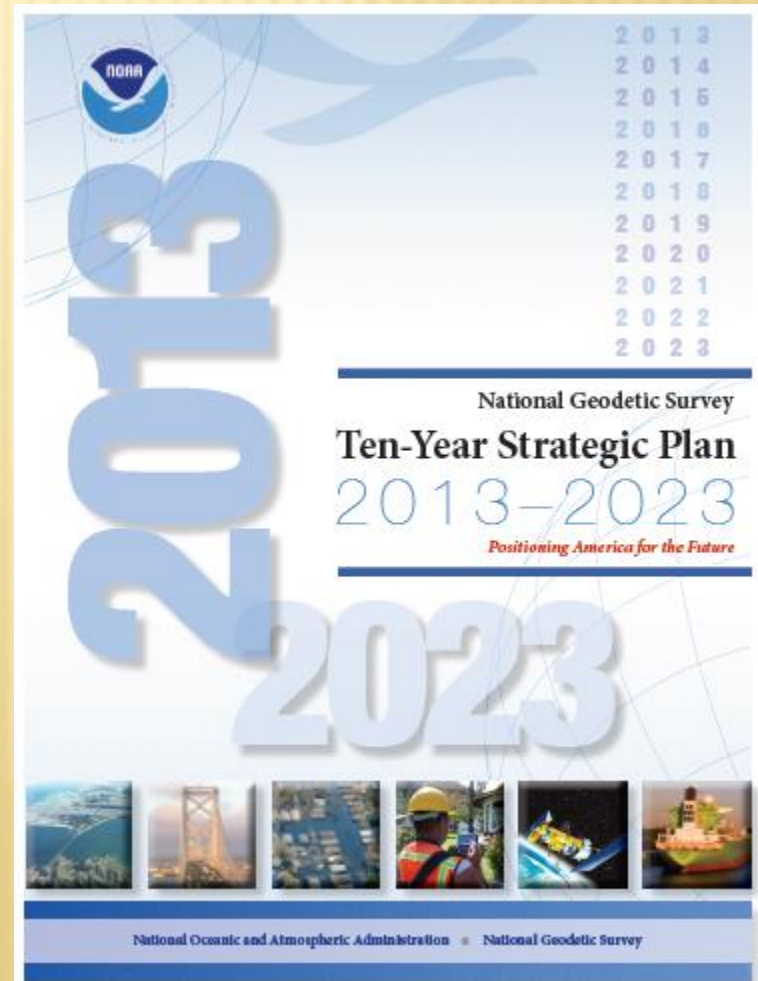
The National Geodetic Survey 10 year plan

Mission, Vision and Strategy

2013 – 2023

http://www.ngs.noaa.gov/web/news/Ten_Year_Plan_2013-2023.pdf

- Official NGS policy as of Jan 31, 2013
 - Updates 2008 plan
 - Modernized and Improve NSRS
 - Attention to accuracy
 - Attention to time-changes
 - Improved products and services
 - Fully vetted by NSPS/AAGS
- 2022 Targets:
 - Replace NAD 83 and NAVD 88
 - Cm-accuracy access to all coordinates



Problems with NAD 83 and NAVD 88

NAD 83 is not as geocentric as it could be (approx. 1.5 m for CONUS).

Surveyors don't see this – Yet

NAD 83 is not well defined with positional velocities

NAVD 88 is realized by passive control (bench marks) most of which have
Not been relevelled in 30-40 years

NAVD 88 does not easily account for local vertical velocities (subsidence / uplift)

- ❖ Post glacial isostatic readjustment (Forebulge collapse)
- ❖ Subsurface fluid/hydrocarbon extraction
- ❖ Sediment loading - Compaction
- ❖ Sea level rise

Predicated Positional Changes in 2022 in West Virginia

CHARLESTON

HORIZONTAL = 1.14 m (3.7 ft)

ELLIPSOID HEIGHT = - 1.27 m (- 4.2 ft)

ORTHOMETRIC HEIGHT = - 0.49 m (- 1.6 ft)

FLATWOODS

HORIZONTAL = 1.15 m (3.8 ft)

ELLIPSOID HEIGHT = - 1.27 m (- 4.2 ft)

ORTHOMETRIC HEIGHT = - 0.48 m (- 1.6 ft)

MORGANTOWN

HORIZONTAL = 1.17 m (3.8 ft)

ELLIPSOID HEIGHT = - 1.24 m (- 4.1 ft)

ORTHOMETRIC HEIGHT = - 0.46 m (- 1.5 ft)

WELCH

HORIZONTAL = 1.12 m (3.7 ft)

ELLIPSOID HEIGHT = - 1.29 m (- 4.2 ft)

ORTHOMETRIC HEIGHT = - 0.51 m (- 1.7 ft)

WHEELING

HORIZONTAL = 1.18 m (3.9 ft)

ELLIPSOID HEIGHT = - 1.22 m (- 4.0 ft)

ORTHOMETRIC HEIGHT = - 0.48 m (- 1.6 ft)

What can WV surveyors do to get ready for 2022??

Understand the impact of changing positions and heights for your community, company or agency

Watch for upcoming NGS status reports/webinars
http://www.geodesy.noaa.gov/web/science_edu/webinar_series

**Consider legislative changes to
West Virginia Code 1-1-5**

**NGS plans to publish State Plane Coordinates using the same
geometric parameters as NAD 83**

Communicate your issues directly to NGS

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