NJGF Geodetic Task Force Kickoff

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Why are we here?

• “To improve the National Spatial Reference System (NSRS), NGS will replace the North American Datum of 1983 (NAD 83) and the North American Vertical Datum of 1988 (NAVD 88) with a new geometric reference frame and geopotential datum in 2022.”

• “The State Plane Coordinate System of 2022 (SPCS2022) is being developed as part of the transition from the North American Datum of 1983 (NAD 83) to the 2022 Terrestrial Reference Frames.”

U.S. National Geodetic Survey website
End Product Goals for this meeting

• Task Force Goals draft
  • Due to NJGF Executive Committee 2020-03-19.

• Recommendation for State Plane system design, or a statement deferring to NGS decision.
  • Due to NJGF Executive Committee 2020-03-19, to NGS 2020-03-31.
A cartoon view of why we care
How do I know where I am, relative to you?
We need to tie our locations to a coordinate system based on a common reference frame / datum
We measure locations of various features on a “spherical” earth.

But for many purposes, we need to put them on a flat map.

Our common coordinate system includes a specified projection to convert to flat.
What’s Changing?

• Achievable accuracy of data tied to new coordinate systems
• State Plane Coordinate systems – YES
  • Coordinate space – YES
  • Units – YES
  • Projection types - NO
  • Projection parameters - YES
• Datums/Reference Frames – YES
  • Geoid model – YES
  • Gravity model – YES
  • Handling of crustal motions – YES
  • Earth center of gravity model – YES
  • Ellipsoid - NO
Which lead to more changes...

• NGS software tools for coordinate conversions
  • CORPSCON is “dead”
• NJ State legislation for State Plane coordinates
• Specifications for deliverables to the State of NJ (and local govt?)
  • Coordinate system, units
  • *Metadata*
• GIS software-supported coordinate systems and conversions
How will all this change affect me?

• Surveyors – a lot
• Engineers, construction, navigation
• GIS
  • software providers – a lot
  • data creators, vendors, customers – a lot
  • data managers – a lot
• GIS end users - some
Gary
Round Robin

• Your name
• Your organization
• Concerns of your organization and/or you