

NJGF Geodetic Task Force Kickoff

March 11, 2020

Edith Konopka, Task Force Chair

Gary Veenstra, NJGF EC Land Surveyor Rep, Task Force Liason

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

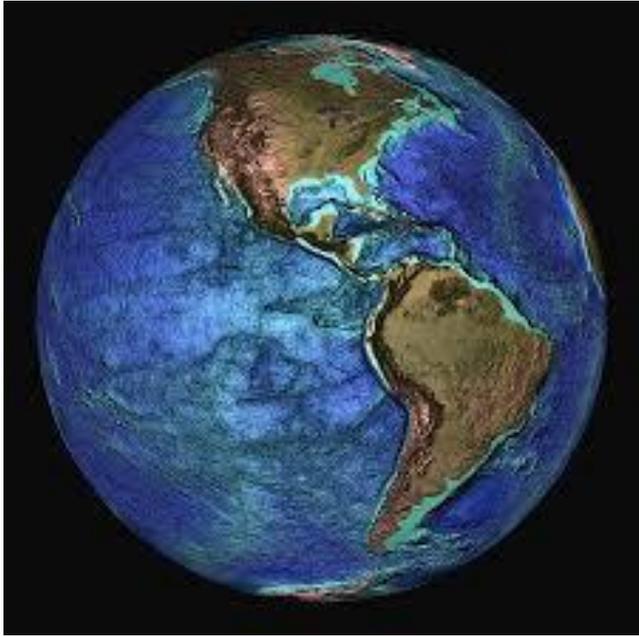
End Product Goals for this meeting

- 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