



**NATIONAL
GEODETIC
SURVEY**

NC 2022 Datums Working Group

Wednesday, June 25·1:00-3:00

NSRS Modernization

- Beta Rollout – mid to late summer
- Begins six-month public review and comment
- NATRF2022, NAPGD2022 and SPCS2022 will be official
- 6-month OPUS Projects Alert – just weeks away

Modernization Progress

- North American-Pacific Geopotential Datum of 2022 (NAPGD2022)
 - — **BETA PUBLIC FEEDBACK PERIOD COMPLETE.**
- North America Terrestrial Reference Frame of 2022 (NATRF2022)
 - — **BETA PUBLIC FEEDBACK PERIOD COMPLETE.**
- State Plane Coordinate System of 2022 (SPCS2022)
 - — **BETA PUBLIC FEEDBACK PERIOD COMPLETE.**
- NGS Coordinate Conversion & Transformation Tool (NCAT) *Beta 1 Release
 - — **INITIAL VERSION RELEASED TO BETA** — Will be updated through multiple versions, currently now with state plane coordinates only; no datum transformation.
- NGS Coordinate Conversion & Transformation Tool (NCAT) *Beta 2 Release
 - — **PENDING FOR BETA RELEASE** — Later adding support for various geopotential calculations including ellipsoid/orthometric height conversion as well as NADCON (geometric) and VERTCON (orthometric) transformations from the current NSRS to the modernized NSRS.

Modernization Progress

- 8. OPUS products

- — **PENDING FOR BETA RELEASE** — OPUS-Static will function similarly to today's tool, but it will operate with the modernized NSRS, including the support of multi-GNSS data. Additionally, the popular function of “sharing” your solution with others (colloquially called “OPUS-Share”) will be retained, but with appropriate caveats that the shared solution should not be used as geodetic control. These shared solutions will be available through the geodetic mark pages of the Data Delivery System (DDS).
- **OPUS-Rapid Static** (OPUS-RS) will not be included in the modernized NSRS. Instead, the modernized version of OPUS-Static, noted above, will be capable of processing multi-GNSS static data files that are shorter in duration (i.e., less than 2 hours).

OPUS Summary

- OPUS is a tool to access the National Spatial Reference System (NSRS)
- NGS has 3 development phases for OPUS underway to support the Modernized NSRS
 - **OPUS-S 5.2:** Multi-GNSS with similar functionality as current OPUS-S
 - **OPUS 6.0:** Rewrite of code base in cloud-native application; single/multiple occupations on a single mark; enhanced sharing functionality
 - **OPUS 6.1:** Extension of OPUS 6.0 for multiple marks in a network; replace OPUS-Projects functionality
- Sharing OPUS Solutions will continue to be supported



Deadline for submitting OPUS Projects

- OP will continue to be available to the public until the formal release of the Modernized NSRS
- However, at some point before the end of this calendar year, 2026, NGS cannot guarantee projects will be accepted. We will provide a 6-month advanced notice (coming soon!). All projects accepted by NGS will receive 2022 (2020.0) coordinates.
- Stay informed: [subscribe to NGS News](https://geodesy.noaa.gov/INFO/subscribe.shtml)
<https://geodesy.noaa.gov/INFO/subscribe.shtml>
- . If you have questions, please email me or NGS.Feedback@noaa.gov.

ArcGIS Blog, 04/23/2026

- **Prepare your data for the National Spatial Reference System modernization of 2022 in the U.S.**
- <https://www.esri.com/arcgis-blog/products/arcgis-pro/data-management/prepare-your-data-for-the-nsrs-2022>

National Tidal Datum Epoch

- NOAA currently utilizes the 1983-2001 National Tidal Datum Epoch.
- This epoch is now undergoing revision and will be replaced by the fifth iteration of the NTDE.
- Measurements for the update will be based on water level data spanning the years 2002-2020.
- Once all data has been collected, NOAA will review, analyze, and generate revised datums.
- The current proposed release date for new NTDE products is in 2029.
- If you have general questions about the National Tidal Datum Epoch or the 2020 update, please email tide.predictions@noaa.gov.

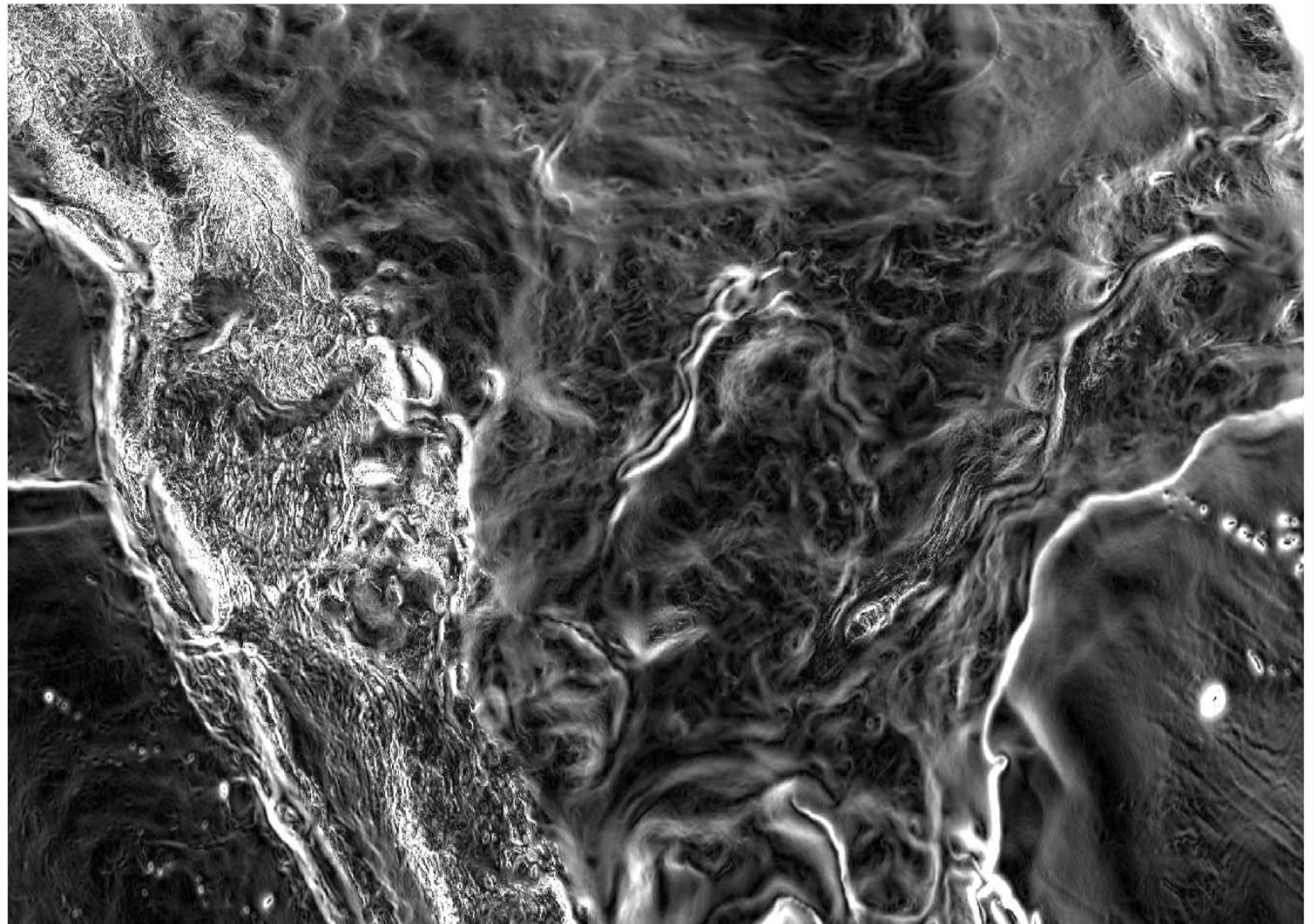
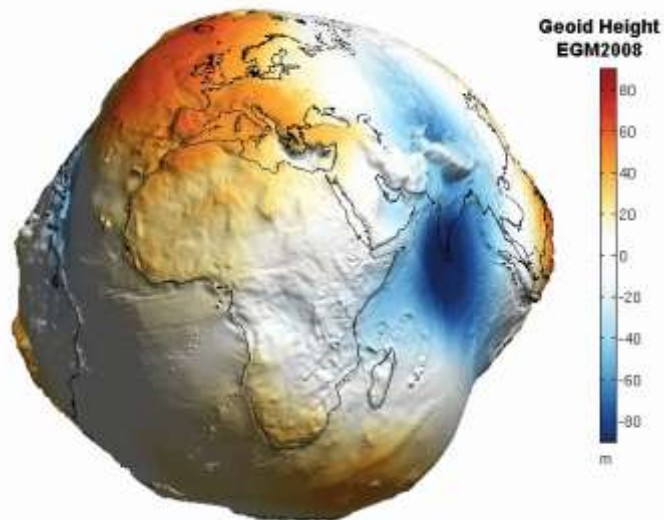
Random Notes

- Corbin has a new employee, Shawn Roy – GNSS antenna calibrations
- NGS has no planned activities to report within the state



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Magnitude of the Deflection of the Vertical



Questions?

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