

Issue 37 October 2024

# NSRS Modernization News

For all issues of **NSRS Modernization News**, visit:  
[geodesy.noaa.gov/datums/newdatums/TrackOurProgress.shtml](https://geodesy.noaa.gov/datums/newdatums/TrackOurProgress.shtml)

## Federal Register Notice on Updated Timeline and Process for Rolling Out Modernized NSRS

On October 9, NOAA's National Geodetic Survey (NGS) published a [Federal Register Notice](#) to inform the public on the updated timeline and process for rolling out the modernized National Spatial Reference System (NSRS).

NGS will roll out components of the modernized NSRS over time (2024–2026) at [beta.ngs.noaa.gov](https://beta.ngs.noaa.gov), where it can be publicly tested and users can provide feedback to NGS. The testing will continue for at least 6 months after the final components are released on the Beta website. In 2026, barring any unforeseen issues, the current NSRS will be replaced with the modernized NSRS within a few months of Federal Geodetic Control Subcommittee (FGCS) approval. Learn more by watching [this webinar](#).

## Progress in Ongoing Projects

There are currently **22 ongoing projects** related to NSRS modernization around NGS. Here is an update from two related projects:

### LASER (Project Manager: Dr. Dru Smith)

On September 28, 2024, the contract with Polaris Geospatial Services (PGS) came to an end. This three-year collaborative effort yielded a new software suite called LASER, (Least-squares

Adjustments: Statistics, Estimates and Residuals). LASER will replace all of the disparate least-squares adjustment (LSA) programs in current use around NGS. It is currently capable of adjusting geometric networks (GPS + angles/distances), leveling networks, gravity networks, vertical gravity gradient surveys and calibration baselines. The LASER suite (currently version 3.0.0) will be the main engine behind the estimation of reference epoch coordinates (RECs), survey epoch coordinates (SECs) and in OPUS-Projects. LASER is for use within NGS, and is not scheduled for general public release.

### RINEX 3 (Project Manager: Sarah Conway)

The RINEX 3 team has created a project roadmap and initial system architecture. They are working toward enhancing and replacing the current RINEX 3 ingest system and creating a dashboard for RINEX 3 system monitoring. They are currently evaluating existing code and designing UI/UX system storyboards.

### MMT (Project Manager: Matt Starr)

The NCN Metadata Management Tool (MMT) team has settled on a final architectural design for the application. The team has created a project road map and are working towards deployment. They are currently making headway into deploying a version to the Dev environment for evaluation targeting mid-October.