

Issue 5, October 2016

# NSRS Modernization News

For all issues of **NSRS Modernization News**, visit:

[geodesy.noaa.gov/datums/newdatums/TrackOurProgress.shtml](http://geodesy.noaa.gov/datums/newdatums/TrackOurProgress.shtml)

## Legislation

The National Society of Professional Surveyors (NSPS), the American Association for Geodetic Surveying (AAGS), and the NGS Advisory Committee on National Spatial Reference System Legislation recently briefed the NSPS Executive Committee (ExComm). Following the meeting, the NSPS took possession of the template legislation for 2022, and the committee was then disbanded.

## Major Projects

**A variety of NGS projects now underway are contributing to the modernization of the NSRS. Significant milestones are highlighted below.**

### Geometric Transformation Consistency

**Lead: Dr. Dru Smith:** The final builds of all grids are nearly complete, and NADCON5 functionality is being coded into NGS' internal test website (DEV) in October. If all goes well, a new toolkit containing NADCON5 will be released on the beta website for public testing by December.

### Geoid Slope Validation Survey 2017

**Lead: Dr. Derek Van Westrum:** NGS surveyors have completed the setting of 220 bench marks in southern Colorado. Data acquisition (leveling, GPS, gravity, and deflection of vertical) will begin as soon as weather permits in the spring of 2017 and is expected to continue through the summer.

### GPS Campaign for Transformations

**Lead: Galen Scott:** Data density requirements for the horizontal component of the transformation tool are being investigated using CORS data. Preliminary results indicate the datum shift pattern is regular enough that little supplementary data will be needed

for the horizontal transformation. Requirements for vertical data density are also being investigated. Analysis of existing GPS on Bench Mark data is also being evaluated, and a gap analysis will be performed to determine where new data is needed. Rates of vertical land motion will also be considered to help determine the timing of future data collections.

### OPUS-Projects into the IDB

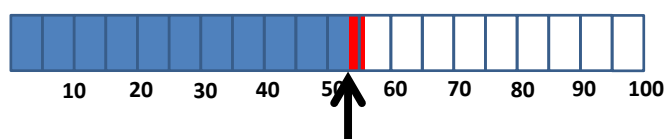
**Lead: Dr. Mark Schenewerk:** The report documenting the analysis of OPUS Projects is going through internal review and should be available later this year. Development of the next generation of OPUS Projects has begun. NGS continues to expect its first "bluebooked through OPUS Projects" submission to enter the NGS IDB by the end of the calendar year. As the development nears completion, several public webinars will be held describing this work and the changes to OPUS Projects, but no dates have yet been set. Check the NGS webpage for announcements.

### xGEOIDS

**Lead: Dr. Yan Wang:** This year's annual experimental gravimetric geoid model, incorporating all available GRAV-D data, has been released for beta testing. Known as xGEOID16B, the model can be found here: <http://beta.ngs.noaa.gov/GEOID/xGEOID16/>

**GRAV-D progress last quarter: up 2.4% to 55.4%**  
Ahead of Schedule!

Recently: Alaska, Minnesota, Oregon, Texas



Schedule: 53%