

Winter 2026

THE NEBRASKA Surveyor



In this Issue

2026 PSAN Winter Conference Photos10
2026 Minimum Standards Detail Requirements
for ALTA/NSPS Land Title Surveys12
Brave New Coordinates: What NSRS
Modernization Means for Survey and GIS
Practice.....18



Credit: Jerry Penry



SEILER

GEOSPATIAL

R780

GNSS SYSTEM



Freedom to work your way

The **Trimble® R780 GNSS receiver** is a highly accurate GNSS system built to handle the toughest survey environments. Powered by industry-leading Trimble GNSS positioning technologies, the ultra-rugged R780 elevates productivity in one adaptable, scalable system. Enjoy the freedom to choose the configuration and features tailored precisely to meet the needs of your job, and the flexibility to add more functionality as requirements change. Build the receiver you need today. Scale with ease tomorrow.



Your Authorized **Trimble** Distribution Partner

Omaha, Nebraska

6522 South 118th St.
Omaha, NE 68137

SEILER

GEOSPATIAL
SEILERGEO.COM

- 402-896-4478
- surveyomaha@seilerinst.com
- www.seilergeo.com

Request a Demonstration Today!



R12i

GNSS SYSTEM



A new angle of productivity

The **Trimble R12i** delivers unmatched GNSS performance, speed and accuracy to boost your productivity like never before. With improved performance in challenging GNSS conditions and robust IMU-based tilt compensation that lets you forget about leveling the pole, you'll get more done faster than you thought possible.



Sales • Service • Rentals • Training • Support • Repairs • Consulting • Financing

2026 PSAN Officers

Brian Foral, President (2026-2027)
Todd Whitfield, Vice President (2026)
Chris Schulte, Secretary (2026-2027)
Josh Borchers, Treasurer (2025-2026)

Board Members

Jai Andrist (2024-2025)
Dylan Campbell (2025-2026)
Roger Carrell (2026-2027)
Fred Franklin (2026-2027)
John Howell (2025-2026)
Mike McNaney (2025-2026)
Casey Sherlock - State Surveyor

2026 Advertising Rates

Display Ads per Issue

**** Sustaining Membership (\$300 annual dues) includes 1/4 page ad and exhibitors fees at the PSAN annual and summer conventions.**

Professional Business Card Directory

Size of Ad	Sustaining	Reg. Rate
Quarter Page	**	\$50
Half Page	\$50	\$100
Full Page	\$100	\$150
Full Page Inside Cover	\$150	\$200

\$25/4 Issues - members only.

Classified Ads

\$0.25 per word.

Advertising Information

- All ads must be submitted as black & white or color in digital (PDF or JPEG) format or an additional charge will be made for set-up.
- Payment must accompany the advertisement request.
- All ads must be professional in nature.
- PSAN reserves the right to reject any advertisement of whatever nature, without cause.
- Published quarterly - Winter, Spring, Summer, Fall.

Editor: Gwen Bowers at 402-432-3444
or email: PSAN@nebraskasurveyor.com



THE NEBRASKA Surveyor

Winter 2026

Contents

President's Letter	4
Summary of December 6, 2025 PSAN Board Meeting Minutes	5
2026 National Surveyors Week	6
Summary of February 12, 2026 PSAN General Assembly Meeting Minutes	7
Newly Elected PSAN Officers and Board of Directors.....	9
2026 PSAN Winter Conference Photos	10
The 2026 Minimum Standards Detail Requirements for ALTA/NSPS Land Title Surveys	12
NCEES PLSS Exam to Begin Administration	16
Get Kids Into Survey Colouring Page	17
Brave New Coordinates	18

Professional Surveyors Association of Nebraska

The Nebraska Surveyor is the official publication of the Professional Surveyors Association of Nebraska (PSAN). It is published quarterly: Winter, Spring, Summer, and Fall. All issues are published on the PSAN website. Material published is not copyrighted and may be reprinted without written permission as long as credit is given.

Articles and columns appearing in the publication do not necessarily reflect the viewpoint of PSAN, but are published as a service to its members, the general public, and for the betterment of the surveying profession. No responsibility is assumed for errors, misquotes, or deletions as to its contents.

Contact Information:

Gwen Bowers
The Nebraska Surveyor Editor
and PSAN Admin. Secretary
P.O. Box 83206
Lincoln, NE 68501
Phone: 402-432-3444
e-mail: PSAN@nebraskasurveyor.com
website: www.nebraskasurveyor.com

The Nebraska Surveyor
deadlines to submit
content for publication:

Winter: February 15
Spring: May 15
Summer: August 15
Fall: November 15

President's Letter

March 2026

As I write this it's hard to believe it's for the Winter Newsletter. Just came in from the field, 75 degrees, NO wind, and only a few bugs—pretty nice for the first part of March.

Thank you to all who attended our Winter Conference in February. It's always nice to catch up with old friends and make some new ones.

Thank you to all the vendors who take the time out of their busy schedules to show us all the new technology.

Also, thank you to all who donated to the auction. Austin makes that a lot of fun!

I look forward to seeing you at the Summer Seminar, it will be here in no time.

Have a safe spring.

Sincerely,



Brian J. Foral
PSAN President



Summary of December 3, 2025 PSAN Board Meeting Minutes

Subject to approval by the PSAN Board of Directors

The PSAN Board of Directors Meeting on December 3, 2025, was held at the Nebraska State Surveyor's Office in Lincoln, Nebraska and began at 10:02AM CT.

The roll call was as follows:

President, Chad Marsh — Present
President-elect, Brian Foral— Absent
Treasurer, Josh Borchers — Present
Secretary, Jeremy Feusner — Present
Administrative Secretary, Gwen Bowers — Present
Directors

Jai Andrist—Present
Dylan Campbell — Absent
David Forsythe—Present
John Howell — Present
Mike McNaney — Present
Chris Schulte—Present
Casey Sherlock, State Surveyor — Present
Jon Carrell, SENLSA Affiliate — Present

Guests: Jerry Penry and Dan Martinez

Minutes from the September 17, 2025 PSAN Board of Directors meeting were read and approved.

Officer Reports

Treasurer, Josh Borchers: The Treasurer's Report dated November 26, 2025 was approved.

Director Reports

State Surveyor, Casey Sherlock, reported that the Board of Examiners has distributed Certificate of Authorization renewal notifications via email and that the Board of Examiners continues active enforcement of the Land Surveyor Regulation Act.

SENSLA Affiliate, Jon Carrell, reported that the SENSLA Winter Seminar will be held Dec. 13 at the Gretna Legion Hall and will include a two-hour Ethics course.

Standing Committees

Conference

- **2026 Winter Conference:** Flyer distributed and registrations are being received.
- **2026 Summer Seminar:** To be held in Yankton, SD. Tim Gobel will host. Would like to have the seminar centered around the terminus of the 6th PM.

Education: Metro Community College is looking into the potential of creating a survey program.

GIS: Director of the state GIS was let go and the state GIS committee is trying to figure out what they're going to do.

Nominations: Struggling to get members to volunteer to hold PSAN elected offices.

NSPS

An update was provided on recent NSPS and NCEES meetings, including revisions to ALTA Minimum Standards and ongoing licensure discussions. A survey is being developed to gather input for the FS exam. Dan has been nominated for NSPS Secretary, and contingency planning will be needed if he is elected. The organization will consider NSPS affiliate membership and establish a formal process for representative terms and selection. Chris Schulte expressed interest in serving in a representative role.

Membership Applications

One application for Active membership and one application for associate membership were received, both were approved.

Old Business

SCC Discussion: Sept WLT session was productive. New liaison has been good to work with. Still no instructor. Their plan is to have an instructor teach and then have the summer off.

Storage of PSAN Items: Chris Schulte described the types of items that have been received and the plan for will be destroyed and what will be kept.

New Business

A few years ago, when dues were increase for all other levels of PSAN members, Sustaining Member dues were not increased. It was discussed, moved, and approved to increase Sustaining Member annual dues to \$500.00.

The meeting was adjourned at 12:44PM CT.

After the complete December 3, 2025 Board Meeting Minutes are approved by the PSAN Board of directors, they will be published to the PSAN website.

<https://nebraskasurveyor.com/meeting-minutes/>

2026 National Surveyors Week March 15-21

Global Surveyors' Day March 21



Visit the BeASurveyor Resource Hub!

beasurveyor.com

Order outreach materials, such as brochures, small giveaways items, activity materials, even exhibit materials, like banners and table drapes!

Get Kids into Survey



Distribute posters! We have a variety available - just pay the postage. Order yours today at getkidsintosurvey.com

Distribute Brochures and Stickers

For a supply of surveying brochures and stickers, please email info@nsps.us.com



cstnsps.com

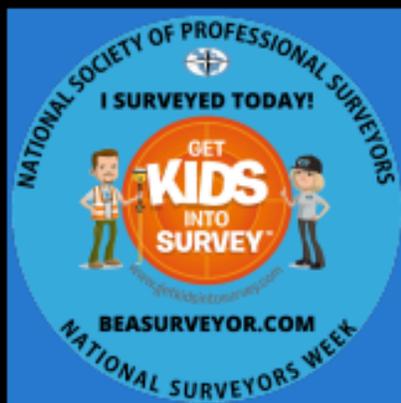
Try This in Your Region

- 1) Have a Survey Day at the Mall
- 2) Sponsor a Trig-Star Test
- 3) Conduct a Boy Scouts Merit Badge event
- 4) Obtain a proclamation from your state or local government
- 5) Organize Geocaching or Benchmark Hunting: <https://geocaching.com/play>
- 6) Try Surveying Mark Recon: <https://oceanservice.noaa.gov/education/dyw-survey-hunting.html>
- 7) Plan GPS Benchmarks: <https://geodesy.noaa.gov/GPSonBM/>



TRIG-STAR

trig-star.com



Talk About Surveying

- Local civic clubs (American Legion, Elks, Grange, Kiwanis, Lions, Rotary, Ruritan, VFW, etc.)
- Professional organizations (realtors, attorneys, bankers, title agents, etc.)
- Teachers and School Counselors



NSPS

Summary of February 12, 2026 PSAN General Assembly Meeting Minutes

Subject to approval by the PSAN Board of Directors

The PSAN General Assembly Annual Meeting on February 12, 2026, was held at the Holiday Inn and Convention Center in Kearney, Nebraska and began at 10:02AM CT.

The roll call was as follows:

President, Chad Marsh — Absent
President-elect, Brian Foral— Present
Treasurer, Josh Borchers — Present
Secretary, Jeremy Feusner — Present
Administrative Secretary, Gwen Bowers — Present
Directors

Jai Andrist—Present
Dylan Campbell — Present
David Forsythe—Present
John Howell — Absent
Mike McNaney — Present
Chris Schulte—Present
Casey Sherlock, State Surveyor — Present
Jon Carrell, SENLSA Affiliate — Present

Minutes from the February 13, 2025 PSAN annual meeting were read and approved.

Officer Reports

Treasurer, Josh Borchers: The Treasurer’s Report dated February 4, 2026 was approved.

Director Reports

Director, Chris Schulte, submitted a written report. Describing the board working toward organizational modernization by digitizing records and placed a strong emphasis on recruitment for the future of the industry workforce.

State Surveyor, Casey Sherlock, submitted a written report that that described enforcement and investigative activities of the Board of Examiners, licensing and renewal information, and certificate of authorization updates.

Standing Committees

Conference

- **2026 Summer Seminar:** To be held in Yankton, SD hosted by Tim Gobel. Tentatively scheduled for June 25 or July 16.
- **2027 Winter Conference:** Will extend contract with the Holiday Inn in Kearney through 2029 and looking into options in Lincoln or Omaha in 2030.

Education:

- Dylan Campbell submitted a written report noting that the committee has continued working with the Boys Scouts at their Merit Badge University as well as hosting FS exam study sessions for SCC students.
- Matt Tinkham submitted a written report regarding Metro Community College creating a two-year Land Surveying program with a rollout planned for Fall 2026.

Historical: Update the County Surveyor board. May 8, 2025 was the Cast Iron Monument Restoration Day, a full day dedicated to working on the site, which had been neglected.

Legislative: Governor-submitted LB1244, mandating sales tax on surveying services, is still accepting comments. Though passage is unlikely, the bill must still be monitored.

GIS: Joe Sather submitted a written report highlighting the transition to NATRF 2022 as an opportunity for industry professionals to collaborate on collecting and maintaining high-quality land record information. The report clarifies that the depreciation of the US Survey Foot was intended to align with the NATRF 2022 roll-out and was never intended to replace the US Survey Foot units for the Nebraska State Plane Coordinate System of 1983 (SPCS 1983) and the use of International Foot units for SPCS 1983 should be avoided.

Nominations: Jeremy Feusner reminded the General Assembly that members interested in serving the organization must indicate their desire to serve on the dues renewal form or reach out to a member of the board or the nomination committee directly, the committee and board cannot contact every member of the associations individually.

NSPS: Dan Martinez submitted a written report.

- Recently elected as NSPS Secretary for 2026-2027
- 2026 Spring Meeting will be held in Arlington, VA, Apr 13-17
- 2026 Fall Meeting will be in Deadwood, SD Oct 19-20
- 2026 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys were approved by the NSPS Board of Directors at the 2025 Fall meeting, effective Feb 23, 2026
- Bring awareness of Young Surveyor Network (YSN) which focuses on recruiting, connecting, developing, and retaining surveyors under the age of 35 or those who earn their degree within the past 10 years.

After the complete February 12, 2026 Annual Meeting Minutes are approved by the PSAN General Assembly, they will be published to the PSAN website.

<https://nebraskasurveyor.com/meeting-minutes/>

Election Results & Installation of New Officers

Vice President: Todd Whitfield (2026)
Secretary: Chris Schulte (2026-2027)
Directors:
 Jai Andrist (2026-2027)
 Roger Carrell (2026-2027)
 Fred Frankin (2026-2027)

New Business

Membership Applications: One application for Associate membership was received and approved.

Review proposed revisions to the by-laws, email sent to all PSAN members on Dec 10, 2025. Motion was made to accept the revisions, seconded. Votes were cast. Motion was approved.

The meeting was adjourned at 9:25AM CT.



**COMPACT DESIGN,
POWERFUL PERFORMANCE**

The compact Leica GS05 GNSS smart antenna is loaded with advanced technology you can trust, including tilt compensation - all without weighing you down.

Everything is Somewhere Podcast

From the rope stretchers of ancient Egypt to ubiquitous satellite precision, geospatial technology has ever been the bedrock of the constructed world and of civilization itself. Your host, land surveyor and infrastructure writer Angus Stocking, engages in regular conversation with today's location experts to determine exactly where, in space and time, we find ourselves today. Location, location, location; it's not just real estate, it's everything and, Everything is Somewhere.



EVERYTHING IS SOMEWHERE
Podcast Series
WITH ANGUS W. STOCKING, LS
BROUGHT TO YOU BY
the American Surveyor

NEWLY ELECTED

CONGRATULATIONS

PSAN OFFICERS AND
BOARD OF DIRECTORS



President
Brian Foral



Vice President
Todd Whitfield



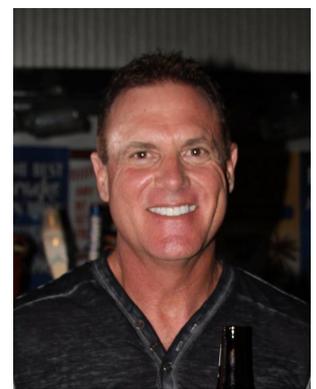
Secretary
Chris Schulte



Board Member
Jai Andrist

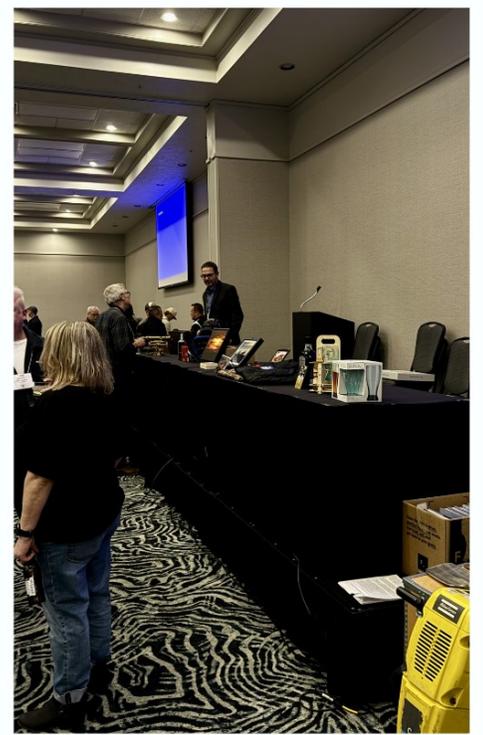


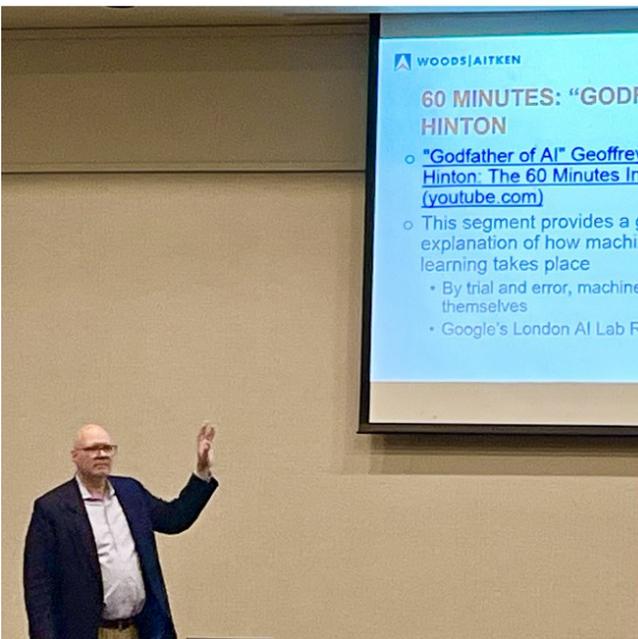
Board Member
Roger Carrell



Board Member
Fred Franklin

2026 PSAN Winter Conference





The 2026 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys

WHAT'S CHANGED?

[Gary Kent, PS](#) // 02.01.2026

[amerisurv.com](#)

After over three years of work by the Joint ALTA/NSPS Work Group, the 2026 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys were adopted by the American Land Title Association and the National Society of Professional Surveyors in October 2025 with an effective date of February 23, 2026.

The joint Work Group, now chaired by Todd D'Amico, PS of Oklahoma, is comprised of roughly equal numbers of professional surveyors and title professionals. It met semi-annually — sometimes in person, sometimes virtually — over the course of developing the new standards. This article will outline the primary changes from the 2021 Standards.

Before continuing, it is important to point out that the final 2026 Standards differ from a version that was circulating as recently as October. The final version— and a red-lined version showing the changes from 2021—can be found at [NSPS.us.com](#) under the Resources tab (they may temporarily be found under the 2021 ALTA/NSPS Standards tab).

The Work Group collects

comments and suggestions over the course of the revision process. Each and every one of those is reviewed and considered for inclusion. Some make the cut, others do not—perhaps most frequently because Work Group members feel some suggestions actually involve business practices, not standards.

Section 3.A. addresses the effective date of the new standards. The transition would seem to be an easy one, but the ubiquitous “update” and otherwise change-resistant clients can raise questions.

If a contract to perform a Land Title Survey is executed on or after February 23, 2026, the survey must be performed pursuant to the 2026 Standards with a couple of possible exceptions. During the transition period, surveyors may

2026), but the survey is not anticipated to be completed until after February 23, 2026.

In such cases, surveyors might want to protect themselves by discussing this with their clients, title insurers, and lenders, and including appropriate clauses in their contracts, for example, “This survey will be prepared using the 2021 Minimum Standard Detail Requirements for Land Title Surveys as established by ALTA and NSPS since said standards are still in effect as of the date of this contract. It is understood and accepted by all parties involved that said standards may no longer be current upon completion of the survey, but will still be used for the purpose of this survey.”

When it comes to “updates” and other similar requests of the surveyor, the answer may be more nuanced. As an aside, and notwithstanding the innocuous-sounding word “update,” there is actually no such thing as an “update.” An “update” is a new survey because the surveyor is certifying that the survey reflects the current conditions on the property and that it was performed pursuant to all of the requirements in the current standards.

“Surveyors should provide benefit to their clients, not just deliver a survey and walk away.”

encounter situations in which they have entered into a contract to perform an ALTA/NSPS Land Title Survey prior to the effective date of the 2026 Standards (February 23,

The only difference with an “update” is that the surveyor happens to have surveyed the property previously, so the client might realize a reduced fee or quicker turnaround depending on a variety of factors.

It is this writer’s opinion that if a contract to perform an “update” is executed after February 23, 2026, that work must be performed pursuant to the 2026 Standards. However, if that “update” is simply the continuation of a survey related to a conveyance that had been anticipated to close before February 23rd, but was unexpectedly delayed for a relatively short time (and until after February 23rd), the surveyor could arguably conduct that “update” pursuant to the 2021 Standards. This premise would not extend to “updates” unrelated to the initial conveyance or “updates” that take place substantially after February 23rd.

The 2026 ALTA/NSPS Standards have reworded and simplified the definition of Relative Positional Precision (RPP), and the way in which RPP is addressed has been restated. These changes were developed with input from several experts on the topic together with related resource material.

The new definition (“the length of the semi-major axis, expressed in meters or feet, of the error ellipse of the line connecting the monuments or witnesses marking adjacent boundary corners of the surveyed property at the 95 percent confidence level.”) describes what is essentially a two-dimensional standard deviation (2.448 SD at 95%) that can be estimated using a least squares adjustment.

The standards continue to suggest an alternative way to estimate RPP by computing the full covariance matrix of the coordinate inverse between any given pair of points (still at the 95% confidence level). This method implies a one-dimensional standard deviation (1.96 SD at 95%), although testing has shown that the difference from the 2.448 factor is

likely not significant in most cases.

The 2026 ALTA-NSPS Standards have eliminated the requirement that the title insurer provide copies of the deeds of adjoining properties. This change was precipitated in part by the fact that in most suburban and urban areas, title companies typically do not provide those deeds anyway. More to the point, in virtually every state that has

necessary to complete a proper survey. If, by virtue of the ALTA/NSPS Standards or otherwise, surveyors can convince another party (e.g., the client or title insurer) to provide the research, good for them, but if not, they have to do it themselves.

In some states, surveyors, either by law or normal standard of care, may need to conduct their own easement research. This situation is

“In recognition of the rapidly changing technical environment the 2026 Standards have been reworded to avoid trying to specify which procedures and tools are acceptable and which are not.”

survey standards, including Indiana, the surveyor is charged with determining the relationship of the surveyed properties with its adjoining properties, so surveyors must obtain those deeds anyway.

Otherwise, one change resulting from the reformatting is—given the purpose of an ALTA/NSPS Land Title Survey—to make it clear that the surveyor must be provided a copy of the most recent title commitment or other title evidence satisfactory to the insurer. This requirement is invoked by the wording of the last paragraph in Section 4.

Surveyors may also encounter rare situations in which the title company is unable or unwilling to provide the research otherwise required pursuant to Sections 4.B. and 4.C. Or perhaps the surveyor requires other research in order to properly complete the survey (the standards give the examples of highway and railroad plans which are typically not in the public records).

Some may argue that this is an additional burden on surveyors, but nothing in the ALTA/NSPS Standards or otherwise can relieve surveyors of conducting whatever research is

addressed by Sections 3.B. and 3.C. of the 2026 ALTA/NSPS Standards. No matter what title evidence is relied upon, surveyors should note what evidence was provided on the face of their plat of survey or in their Surveyors Report.

The introduction to Section 5 says the work must be performed using “practices generally accepted by the surveying profession for purposes of an ALTA/NSPS Land Title Survey.”

In recognition of the rapidly changing technical environment (e.g., applications, software, drones, AI, LiDAR), the 2026 Standards have been reworded in several places (introduction to Sections 5 and 6) to avoid trying to specify which procedures and tools are acceptable and which are not. Trying to dictate that would obviously result in conflicts and confusion as new procedures and tools are developed. The new phrasing allows the profession to collectively determine through the always shifting normal standard of care what is acceptable, rather than by dictates in the ALTA/NSPS Standards.

Section 5.B.iii. was the only place left in the ALTA/NSPS

Standards that placed a higher burden on surveyors with the phrase “visible evidence” rather than everywhere else in the standards where the burden is “evidence observed in the process of conducting the fieldwork.” For 2026, the former has been replaced with the latter thus eliminating that higher requirement. Also, for better clarity, this section now specifies what was always the intent: “vehicular access” is to be included.

“Regardless of proximity to perimeter boundary lines” has been added to Section 5.C.i.. Previously there was confusion that, pursuant to Section 5.C.ii., evidence of possession or occupation needed to be shown only if it was within 5 feet of the perimeter boundary. That is not what the standards intended, and this new wording clears up any confusion.

Some may claim that the undefined distance increases surveyor liability. But others may recall reading about the court case in which Curtis Brown served as an expert witness in which a surveyor was held liable for not providing detail on a line of occupation that was 230 feet from the perimeter boundary.

Title companies, lenders, and clients need to know about potential claims against the property regardless of how far they are located from the perimeter of the property. There could, of course, be situations where a line of possession or occupation is so far from the perimeter boundary or, for example, hidden from view in thick woods, that the surveyor misses it. The defense in such cases might well be the normal standard of care: Would the competent surveyor, surveying in that same area and under similar circumstances, have observed that line or not?

New headings were developed for the subsections in Section 5.E. because the joint Work Group felt it would be helpful to all involved if the intent of each item in this section was more clearly expressed.

Section 5.E.iv. was changed in 2016 and 2021 and has been again

“The Work Group collects comments and suggestions over the course of the revision process. Each and every one of those is reviewed and considered for inclusion.”

with the 2026 Standards. The 2016 change was made to address a conundrum. Prior to the 2016 Standards, if a client did not request Table A item 11(a) or 11(b), the surveyor had no responsibility to locate and show evidence of utilities. But if that utility evidence could be considered evidence of an easement, the surveyor did need to locate and show it pursuant to Sections 5.E.i. through iv.

The joint Work Group felt that most evidence of utilities could also be considered evidence of easements, so to eliminate future problems and questions in that regard, locating and showing observed evidence of utilities was made mandatory starting in 2016.

Starting with the 2021 ALTA/NSPS Standards, utility locate markings (typically paint or wire flags) must be located and shown. The joint Work Group felt that utility locate markings should be treated as evidence of utilities and easements just like valves and manholes. In response to a question often posed: No, this item does not require a utility locate request.

In the 2021 Standards, the wording of Section 5.E.iv. regarding how far from the boundary line evidence of utilities needed to be located was confusing. Was it 5 feet or 10 feet? This has now been clarified that the 10-foot requirement applies only to utility poles.

As with the introduction to Section 5, the introduction to Section 6 also uses the phrase “practices generally accepted by the surveying profession” for the same reasons as explained above.

Offsite easements that benefit

the surveyed property are now properly identified in the 2026 ALTA/NSPS Standards as appurtenant easements. Such easements may be included as part of the survey—treating them as a fee parcel rather than simply graphically showing them—pursuant to optional Table A item 18. But surveyors should be wary of, for example, cross parking and access easements that may cover large areas, and discuss those with the client.

Section 6.C.viii. clarifies how surveyors are to address easements identified by the surveyor that are not listed in the title commitment. The 2021 Standards outlined what to do if the title insurer could not provide evidence that the easement had been released; the 2026 Standards recognize that easements can be terminated or extinguished in a number of ways, not just by release.

A new subsection of Section 7 has been added to address one of the most common requests of surveyors which is for them to certify to “ATIMA” and/or “ISAOA.” These are acronyms that mean “as their interests may appear” and “its successors and/or assigns.” The lender’s title policy defines “insured” in a way that should eliminate the need for such wording, but if the lender demands that the title company put it in their policy, the title company may want to surveyor to certify to the same.

Surveyors should seek advice from their attorneys on to whom they should be certifying, but they should likely avoid certifying to successors and assigns of the client/buyer. Successors and assigns of the lender are probably not an issue.

The introductory paragraph to Table A has been revised. This paragraph was modified in 2021 to make its original intent (from the 1988 Standards) clear: not only is the very selection of a Table A item negotiable, but the exact wording of the item is also negotiable as is, of course, the fee. It is permissible for the surveyor and client/lender to negotiate a modification to the wording of any item.

Any such modification, however, must be explained in a note placed on the face of the plat/map pursuant to Section 6.D.ii.(g). Of course, surveyors need to decide for themselves what fee to attach to any given Table A item.

For 2026, the joint Work Group felt that it was worth reminding all parties involved that the law must be followed. For example, in a number of states monumenting the boundary is mandatory, therefore Table A item 1 is not optional in those states. The same could apply to some other Table A items.

Table A item 15 has been modified to revert back to its original intent which was to provide a means by which imagery, rather than ground surveying, could be the basis for showing some features on an ALTA/NSPS Land Title Survey.

The limitations (the boundary and features in close proximity to a boundary or other title or relevant setback line are not included) and the requirements (written agreement with the client, lender and title insurer and appropriate notes on the face of the plat/map) should be carefully reviewed before agreeing to this item. The Work Group recognized two

“The final version—and a red-lined version showing the changes from 2021—can be found at NSPS.com.”

important trends that needed to be addressed in the 2026 Standards.

One is that those reviewing surveys are, more often than not, not well-versed in doing so. They could use assistance in their review. Second is that across the country, a table summarizing potential title problems shown on the survey is widely provided by surveyors, especially those routinely involved in large, geographically broad transactions.

Given those trends and the fact that the joint Work Group (comprised, as noted above, of both surveyors and title attorneys) agreed that surveyors should provide benefit to their clients, not just deliver a survey and walk away, Table A item 20 was developed.

The bulleted items required to be included in the table are lifted directly from Sections 5 and 6 of the Standards. In other words, these items are already required to be located and shown on a Land Title Survey. Table A item 20 merely has the surveyor tabulating that information.

Importantly, (1) this new item includes multiple qualifications and limitations, and (2) as an optional item, its exact usage can and should be negotiated. Due to the limitations and qualifications included as part of this item, the liability on the surveyor would appear to lie in not locating or showing the condition in the first

place, not in failing to list the condition in the table.

Summary

Surveyors are encouraged to study the new 2026 Standards themselves, both the “clean” version and the “red-lined” version showing the changes from 2021. Additionally, a new set of Frequently Asked Questions is, or will very shortly, be available on the NSPS Website to replace the FAQs addressing the 2021 Standards. Finally, there are many programs on the 2026 Standards already scheduled at state surveying society conferences around the country and virtually; seek one out if you want more information! ■

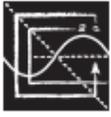
Gary Kent chaired the joint ALTA/NSPS Work Group from 1995 to 2025 and he continues to be very actively involved in the joint Work Group. Over the years, he has presented programs on the ALTA/NSPS Standards in all 50 states, and he is currently scheduled to present numerous such programs virtually and in 15 states.

**MASTER THE
FEDERAL LANDS**



**INTENSIVE ONLINE TRAINING
PROGRAM NOW AVAILABLE**





NCEES

advancing licensure for
engineers and surveyors

200 Verdae Boulevard Greenville, SC 29607 T: 800-250-3196 F: 864-654-6033 NCEES.ORG

NEWS RELEASE

October 29, 2025

Contact: Lehmon Dekle, P.E.

NCEES Chief Officer of Examinations

ldekle@ncees.org

Public Land Survey System (PLSS) exam to begin administration

The Public Land Survey System (PLSS) exam will begin administration in October 2027.

The PLSS exam will test an examinee's ability to practice the PLSS method competently. The exam is still in development, but detailed specifications can be found [here](#). More information about state-specific exam registration details and requirements will be forthcoming as the exam's first administration approaches.

Registration for the PLSS exam will open one year before the exam's first administration date. When registration is available, you will be able to create an account or log in to MyNCEES to register for the exam and download your free copy of the *PLSS Reference Handbook*.

ABOUT NCEES

The National Council of Examiners for Engineering and Surveying is a nonprofit organization made up of engineering and surveying licensing boards from all U.S. states, the District of Columbia, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands. Since its founding in 1920, NCEES has been committed to advancing licensure for engineers and surveyors in order to safeguard the health, safety, and welfare of the U.S. public.

NCEES helps its member licensing boards carry out their duties to regulate the professions of engineering and surveying. It develops best-practice models for state licensure laws and regulations and promotes uniformity among the states. It develops and administers the exams used for engineering and surveying licensure throughout the country. It also provides services to help licensed engineers and surveyors practice their professions in other U.S. states and territories. For more information, please visit ncees.org.



www.getkidsintosurvey.com

classofyourown



RIEGL

BRAVE NEW COORDINATES

What NSRS Modernization Means for Survey and GIS Practice

Geoid undulation in GEOID2022 across the North American-Pacific region, the gravity-based foundation of NAPGD2022.
Credit: NOAA/National Geodetic Survey

NAD 83, NAVD 88 AND “SPCS ’83” ARE FINALLY GIVING WAY TO A MODERN, GNSS- AND GRAVITY-BASED NATIONAL SPATIAL REFERENCE SYSTEM. THE TECHNICAL PIECES ARE ARRIVING NOW. FOR SURVEYORS AND GIS PROFESSIONALS, THE HARD WORK WILL BE MANAGING THE TRANSITION WHILE KEEPING PROJECTS ON TRACK.

For more than a decade, NOAA’s National Geodetic Survey (NGS) has been warning that the National Spatial Reference System (NSRS) would move on from NAD 83 and NAVD 88. That change is no longer theoretical. The new terrestrial reference frames, the replacement vertical datum and the State Plane Coordinate System of 2022 (SPCS2022) are now emerging on NGS’s beta platforms, with a phased rollout running through 2026 and a formal Federal Geodetic Control Subcommittee (FGCS) decision expected once testing is complete. On its “New Datums” page, NGS describes the NSRS as “a consistent coordinate system that defines latitude, longitude, height, scale, gravity, and orientation throughout the United States and its territories,” and explicitly states that NAD 83 and NAVD 88 will be replaced as part of this modernization.

For survey and GIS professionals, this is not just a new datum. It is a shift in how coordinates are defined, maintained and documented for the next generation of work, across cadastral survey, infrastructure, floodplain mapping, reality capture and Scan-to-BIM. The technology stack (GNSS, lidar,

SLAM, scanners, GIS) is already there; the question is whether our standards, workflows and contracts are ready to live in a dynamic, plate-based, gravity-aware world.

WHAT’S ACTUALLY CHANGING

Today’s NSRS is built on NAD 83 for horizontal position and NAVD 88 for heights. Both have known, quantified issues. NGS estimates that NAD 83 is misaligned with the Earth’s center of mass by about 2.2 meters, and that NAVD 88 is both biased by about 0.5 meters and tilted by about 1 meter coast-to-coast relative to modern global geoid models. NGS summarizes these shortcomings as “NAD83 non-geocentric by ~2.2 m” and “NAVD88 biased (~0.5 m) and tilted (~1.0 m coast to coast) relative to current global geoid models.”

The modernized NSRS addresses those issues with three big changes:

1. NEW TERRESTRIAL REFERENCE FRAMES (TRFS)

NAD 83’s three frames will be replaced by four plate-fixed terrestrial reference frames that are explicitly tied to ITRF2020:

- NATRF2022 – North American plate
- PATRF2022 – Pacific plate
- CATRF2022 – Caribbean plate
- MATRF2022 – Mariana plate

These frames are defined relative to ITRF2020 and accessed via GNSS, so geodetic latitude, longitude and ellipsoid height will be naturally aligned with GNSS orbits, rather than retrofitted onto a pre-GNSS terrestrial network. NGS’s “Track Our Progress” page notes that these four 2022 frames “will serve as the future reference for all measurements of latitude, longitude, and ellipsoid height in the United States” and are defined by transformation from international models using Euler pole parameters for each plate.

2. A NEW GEOPOTENTIAL DATUM: NAPGD2022

The North American-Pacific Geopotential Datum of 2022 (NAPGD2022) becomes the gravity-based vertical backbone of the NSRS. NAPGD2022 is defined by NGS as the geopotential basis for the vertical and gravity components of the NSRS, providing mutually consistent orthometric heights, geoid undulations, gravity

anomalies, deflections of the vertical and other gravity-field quantities across the U.S. and its territories. The NAPGD2022 beta home explains that it “will serve as the future geopotential datum within the National Spatial Reference System (NSRS)” and will cover the North American–Pacific region, Guam and CNMI, and American Samoa.

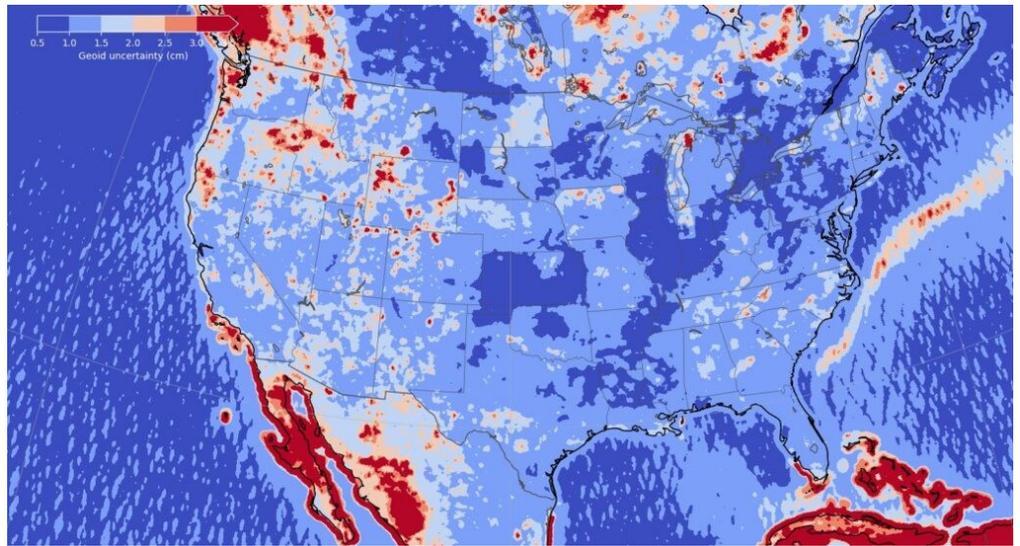
In plain language: NAVD 88 leveling and aging bench-mark networks give way to GNSS heights plus a high-resolution gravimetric geoid (the culmination of GRAV-D). Height access will rely primarily on CORS and geoid models, with passive marks still useful locally but no longer the defining fabric of the vertical datum. NGS’s “New Datums” one-pager frames this as replacing “NAVD 88 benchmarks” with a modern, gravity-based system and encourages users to pay attention to GPS-on-benchmarks and metadata in preparation.

3. SPCS2022: THE THIRD-GENERATION STATE PLANE SYSTEM

SPCS2022 is the third generation of State Plane, following SPCS 27 and SPCS 83. It is referenced to the new 2022 TRFs and provides statewide and regional projected systems for all 50 states and six territories. NGS’s zone-design maps show that each state and territory will have a statewide zone and, in many cases, multiple additional zone layers, yielding on the order of 900–1,000 SPCS2022 zones nationwide. The State Plane Coordinate System of 2022 Policy formally designates SPCS2022 and describes it as the official projected coordinate reference system associated with the 2022 terrestrial reference frames, with policy-level technical characteristics and unit conventions.

Many states have worked with NGS to define low-distortion zones tuned to their survey practice; others have opted for simpler, fewer zones. Either way, SPCS2022 is not just a re-labeling of SPCS 83, it is a substantial redesign aimed at improving distortion characteristics at the topographic surface.

Correcting NAD 83’s origin and NAVD 88’s tilt means that every coordinate in the official NSRS—latitudes, longitudes, ellipsoid heights and orthometric heights—will change, in some areas by up to several decimeters or more.



Estimated GEIOD2022 uncertainty (1-sigma) over the contiguous U.S., highlighting where NAPGD2022 vertical accuracy is strongest and where uncertainty increases.
Credit: NOAA/National Geodetic Survey

NGS and several state geodetic offices have highlighted that users should expect coordinate shifts of this order when transforming from NAD83(2011)/NAVD 88 to NATRF2022/NAPGD2022.

WHY THIS MATTERS IN THE NEXT 3–5 YEARS

NSRS modernization will show up in three very practical ways:

NEW NUMBERS FOR FAMILIAR PLACES.

Control points, project baselines and flood elevations you’ve known for years will change on paper, even though nothing moved on the ground. You’ll have to explain that to clients, regulators and internal stakeholders, and document it.

MORE CHOICES ON EVERY JOB.

Frame, epoch, SPCS2022 zone, geoid model—each becomes an explicit choice, not a hidden default. If you don’t choose deliberately, software will choose for you. That is where subtle, hard-to-diagnose inconsistencies creep in.

MIXED-DATUM PROJECTS BECOME THE NORM FOR A WHILE.

For years, you’ll be reconciling NAD 83/NAVD 88 work with NATRF2022/NAPGD2022 and SPCS2022. That is where most of the risk and confusion lives, and where clear workflows and metadata will pay off.

TIMELINE: WHERE WE REALLY ARE IN 2026

The modernization schedule has slipped more than once, but NGS’s current guidance is reasonably clear:

- NGS will roll out components of the modernized NSRS for public testing over 2024–2026 on its beta site (beta.ngs.noaa.gov). Each component—GEOID2022, GRAV2022, the 2022 TRFs, NAPGD2022, SPCS2022, and updated tools like NCAT—will be available there for at least six months of evaluation and feedback.
- During that period, NAD 83 and NAVD 88 remain the official NSRS datums, with ITRF2020 and related products used as a bridge.
- Once all components have completed beta testing, NGS plans to ask FGCS to vote on making the modernized NSRS the official system, a decision NGS and the Federal Register now describe as “scheduled to occur in 2025 or 2026.” If approved, the current NSRS will be replaced with the modernized NSRS within a few months of that decision.

These line up with NGS’s “NSRS Modernization Timeline” page, which implements the October 2024 Federal Register notice: NGS will “roll out components of the modernized NSRS over time (2024–2026)” on beta.ngs.noaa.gov, keep the current NSRS as the sole official system while testing,

and then ask FGCS to vote on the new datums “likely in early to mid 2026,” after which the modernized NSRS will be moved from the beta site to geodesy.noaa.gov.

The practical takeaway: 2025–2026 is the live testing and preparation window. The official switch-over will follow FGCS approval, but practitioners have this interim period to validate tools, workflows and data handling on real projects.

HORIZONTAL: PLATE-FIXED FRAMES, EPOCHS AND VELOCITIES

From a survey/GIS perspective, the horizontal change is less about new labels and more about explicitly embracing time.

- The 2022 TRFs are plate-fixed, not locked forever. Coordinates are defined at a reference epoch (for example, 2020.00), and velocities are part of the model.
- NGS has been clear that users will need to track both reference frame and epoch when reporting coordinates, especially in tectonically active regions where motion is non-trivial over the life of a project.

NGS’s technical report *Blueprint for the Modernized NSRS, Part 3: Working in the Modernized NSRS* states that NGS “will embrace time-dependency” in the new system, distinguishing Survey Epoch Coordinates (SECs), which estimate a mark’s location on the dates it was surveyed, from Active Coordinates (ACs) that estimate positions continuously (for example at a CORS).

For control networks, RTN operators and high-accuracy GIS, this means:

- You cannot treat “NATRF2022” as a static replacement for “NAD 83.” You will need frame + epoch + velocity (explicitly, or implicitly via NGS tools).
- Long-lived assets—pipelines, transportation corridors, utilities—will see position changes over time. The NSRS will support re-computation of coordinates at future epochs; your database and metadata need to be ready for that.

NGS is updating NCAT and other transformation tools to handle conversions between NAD 83, the new TRFs and multiple epochs; those tools will be critical in managing legacy-to-modern transformations. The New Datums FAQ notes that, at rollout, “NCAT will be updated and users will be able to transform between any NGS-defined historic datum and the new datums.”

VERTICAL: A GEOID-FIRST WORLD

NAPGD2022 is the other half of the story. Instead of an adjustment frozen to a 20th-century leveling network, heights will be defined by GNSS + a gravimetric geoid derived from GRAV-D and auxiliary data. NGS’s Track Our Progress page lists NAPGD2022 as the new geopotential datum, with GEOID2022, DEFLEC2022, GRAV2022 and GM2022 as key products supporting orthometric

heights and gravity-field modeling. For field practice, that implies:

- Passive marks remain important, but they are no longer the primary defining infrastructure for the vertical datum. The authoritative definition of height resides in the geoid model and its relationship to the terrestrial reference frames.
- GNSS workflows—RTK, RTN, PPP—become the standard way to access both horizontal and vertical datums, provided your software is using the correct geoid and frame.

VDatum and other vertical transformation tools are being updated to support NAPGD2022 and to move between legacy and modern heights, as described in NGS webinars and modernization materials that outline planned updates to the Data Delivery System and transformation services along with NCAT.

From a QA standpoint, this increases the importance of:

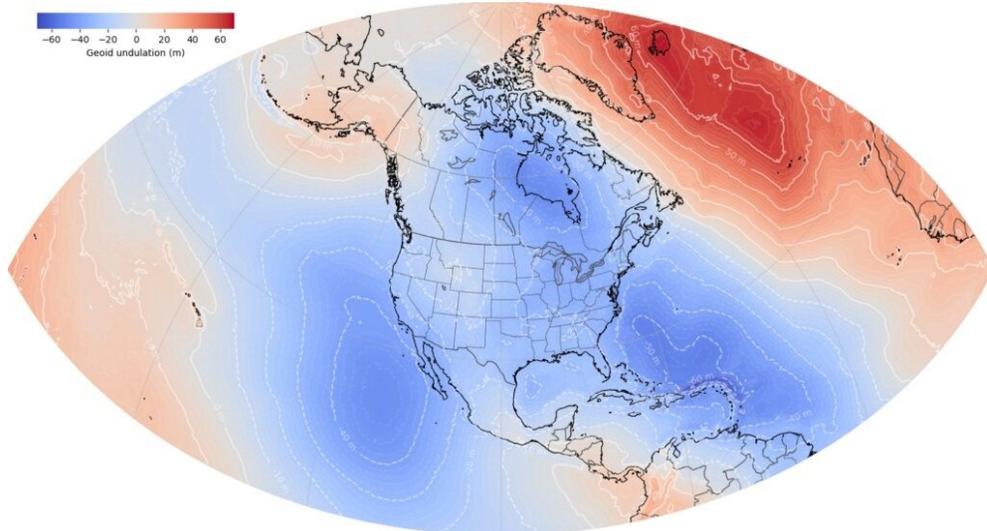
- Documenting which geoid model and version were used.
- Understanding how vertical uncertainty propagates when you transform legacy NAVD 88 heights into NAPGD2022.
- Communicating to clients that apparent “jumps” in elevation are systematic, not errors.

SPCS2022: WHERE POLICY, ENGINEERING AND PRACTICE COLLIDE

SPCS2022 is where standards language, software configuration and field procedures all meet.

NGS’s SPCS2022 policy and subsequent technical work have produced a system with:

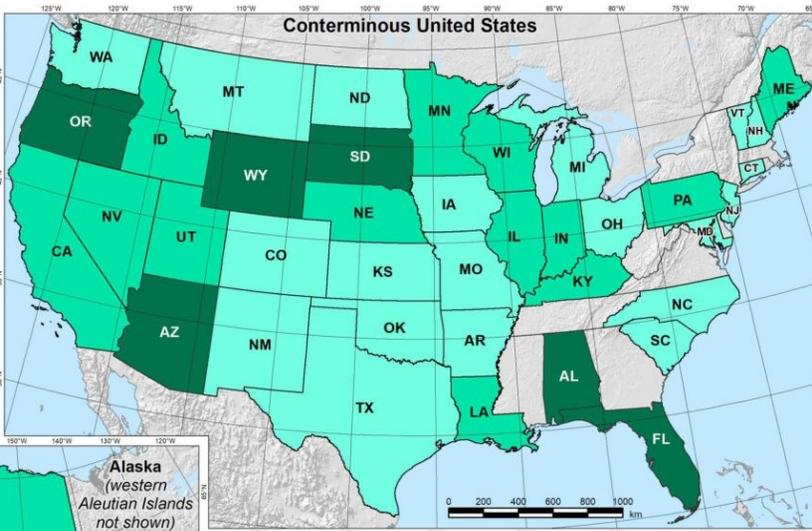
- Up to three zone layers in each state (statewide, full-coverage multizone, and partial multizone) plus multistate “special use” zones.
- A significantly larger number of zones overall, on the order of 900–1,000, with designs tailored to reduce linear distortion at ground elevations.
- A richer mix of projections, including variants of Lambert Conformal Conic and Hotine Oblique Mercator tuned to local geometries.
- Explicit ties to the 2022 TRFs and to NAPGD2022 for orthometric



Geoid undulation in GEOID2022 across the North American–Pacific region, the gravity-based foundation of NAPGD2022. Credit: NOAA/National Geodetic Survey

State Plane Coordinate System of 2022 (CONUS, Alaska, and Hawaii)

No forms from four island territories:
Puerto Rico
U.S. Virgin Islands
American Samoa
Guam
Commonwealth of the Northern Mariana Islands



Number of forms per state
Total = 67 from 41 states
(36 requests, 31 proposals)

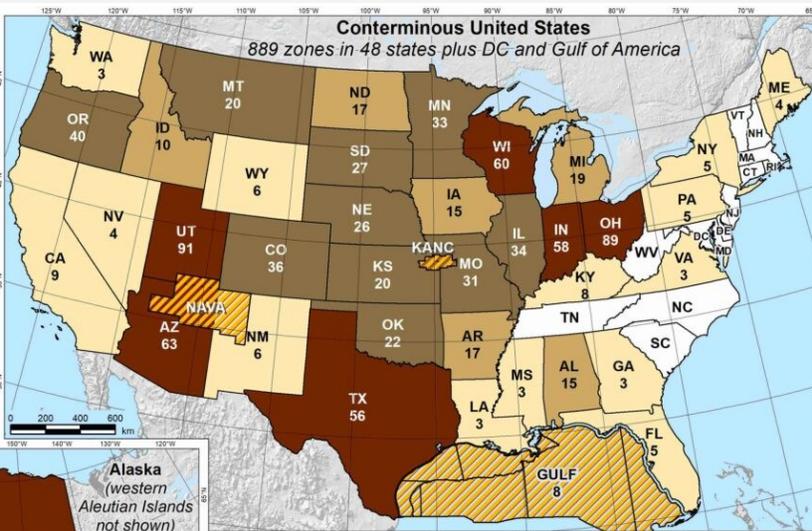
- 1 (21 states)
- 2 (14 states)
- 3 (6 states)



Stakeholder engagement in SPCS2022 design: 67 forms from 41 states (requests and proposals) reviewed by NGS. Credit: NOAA/National Geodetic Survey

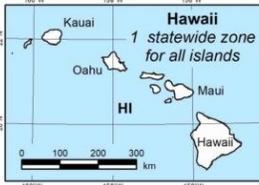
State Plane Coordinate System of 2022 (CONUS, Alaska, and Hawaii)

Three island territories not shown:
Puerto Rico and U.S. Virgin Islands
American Samoa
Guam and Commonwealth of the Northern Mariana Islands



Total 953 zones

- 1 zone (19 states)
- 3 - 9 zones (14 states)
- 10 - 19 zones (6 states)
- 20 - 40 zones (10 states)
- 56 - 91 zones (7 states)
- Special use (10 zones)



SPCS2022 zones by state: 953 total zones in the 48 contiguous states plus Alaska, Hawaii, and Gulf special use zone. Credit: NOAA/National Geodetic Survey

heights.

The SPCS2022 Policy specifies the system’s “official name, authority of NGS, scope, uniqueness with respect to previous versions of SPCS, coordination with other federal agencies, and documentation,” and describes

fundamental technical attributes and requirements that can only be changed with NGS executive approval.

For survey and GIS professionals, the implications include:

- Contract language that currently hard-codes “SPCS 83” will need to be revisited; you may need to specify

SPCS2022 zone names, reference frames and epochs explicitly.

- Firms operating across multiple states will have to manage more CRS definitions and EPSG codes, both in survey software and in GIS databases.
- Many “low distortion projection” practices that grew up on top of SPCS 83 are now being formalized inside SPCS2022, which is good for consistency, but it means you must re-learn some of your defaults.

THREE LENSES ON THE TRANSITION

We can think about NSRS modernization through three lenses that practitioners will recognize: policy/standards, engineering, and practice—plus a fourth, Scan-to-BIM.

1. Policy and Standards: Defensibility and “Fit for Purpose”

Standards bodies such as ASPRS and FGDC have spent years talking about positional accuracy classes, metadata and “fit-for-purpose” accuracy. NSRS modernization makes those discussions concrete.

- Accuracy specifications written in NAD 83/NAVD 88 terms will need to be updated.
- RFPs that say “State Plane 83, NAVD 88” without more detail may become ambiguous in a few years.
- Practitioners will need to demonstrate that they not only hit numeric tolerances but also used the correct frame, epoch, and transformation path.

The risk is not so much a technical failure as a governance gap, projects delivered with beautiful numbers that turn out to be defined in the “wrong” coordinate system for regulatory or legal purposes.

2. Engineering: Managing Mixed Datums and Repeatability

From an engineering perspective, the hard problems are:

- Mixed legacy and modern datasets: How do you maintain a project database where some features are still in NAD 83 / NAVD 88, others in NATRF2022 / NAPGD2022, and some have uncertain provenance?
- Repeatability and QA: How do you

prove that a survey performed before and after the NSRS transition is “the same,” even though coordinates differ by decimeters or meters?

The answers will live in:

- Documented, repeatable transformation workflows (for example, using NCAT/VDatum or vendor-implemented equivalents).
- Strong metadata: CRS name, frame, epoch, geoid model, tool version.
- QA procedures that check in both the “old” and “new” systems during the transition period.

3. Practice: Field Workflows, Reality Capture and Daily Production

On the front lines, in RTK rovers, lidar rigs, mobile scanners and SLAM backpacks, the modernization will feel like a series of incremental changes:

- RTN operators re-publishing mountpoints in NATRF2022 and NAPGD2022.
- Vendors pushing firmware updates with new TRFs and geoid models.
- Project setup screens gaining more options: “NATRF2022(2020.00) / SPCS2022 zone X” instead of “NAD83(2011) / SPCS 83.”

Reality-capture workflows are especially sensitive because they often combine long acquisition times, multiple sensors and downstream uses (design, digital twin, asset management) that depend on precise alignment. Teams will need to:

- Decide when to “flip” project baselines to the new NSRS.
- Establish internal conventions for naming and storing coordinate systems.
- Train staff to recognize when they are mixing datums or epochs unintentionally.

4. Scan-to-BIM and AEC: Coordinating Across Sites and Systems

For Scan-to-BIM providers and AEC owners, NSRS modernization shows up as a multi-site consistency problem:

- Campus or portfolio-scale digital twins often tie dozens of buildings, utilities and civil features into a single coordinate framework.
- When the official framework moves, you need a plan to migrate not only raw survey data but also BIM models, CAD drawings and asset databases.

That raises practical questions:

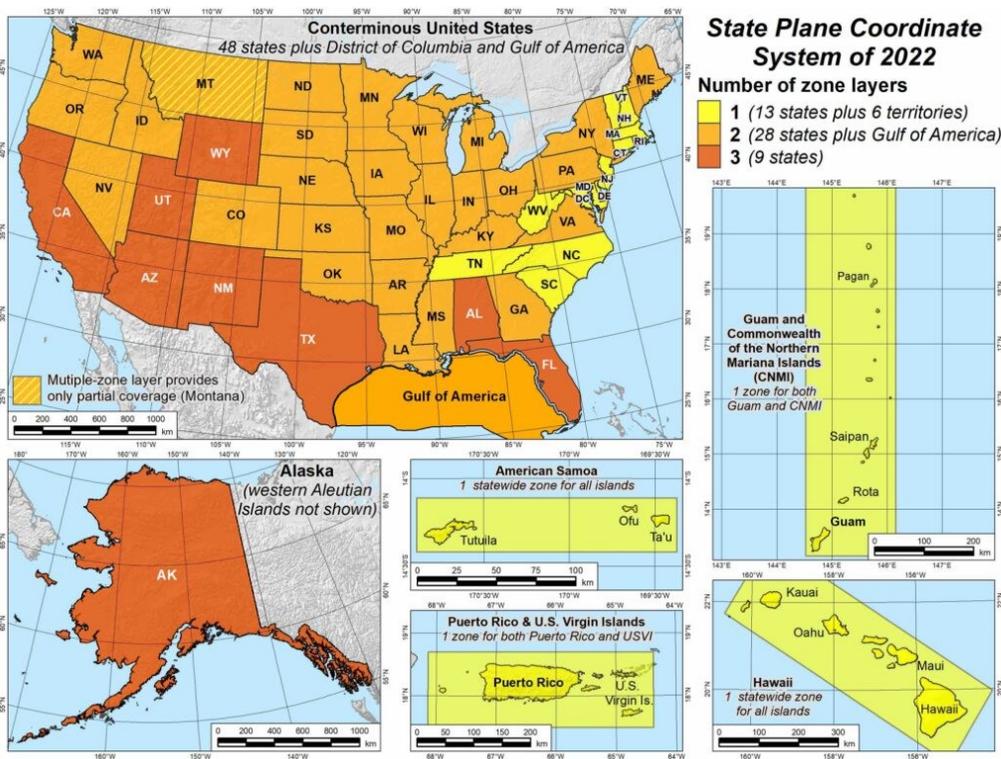
- Do you freeze existing BIM deliverables in NAD 83/NAVD 88 and reference new work in NATRF2022/NAPGD2022?
- Or do you perform a controlled migration of legacy models, with documented transformations and QA, so that the entire portfolio lives in the modern NSRS?

Either way, early capture decisions—control strategy, target coordinate system, metadata discipline—will determine how painful that migration is.

A PRACTICAL PREPARATION CHECKLIST

- **Inventory your datums and CRSs.** Know which datums, epochs, SPCS zones and geoids your current projects and archives use.
- **Engage your RTN and vendor ecosystem.** Ask your CORS/RTN providers and software vendors about their NATRF2022 / NAPGD2022 / SPCS2022 roadmaps and test builds.
- **Standardize on metadata.** Decide how you will encode frame, epoch, zone and geoid model in your job files, GIS schemas and deliverables.
- **Pilot transformations now.** Use NGS beta tools (and vendor equivalents) to transform a few representative projects from NAD 83/NAVD 88 into the modernized NSRS and back. Document surprises.
- **Update your contracts and specs.** Replace vague phrases like “State Plane” or “NAD 83” with explicit references to SPCS2022 zones, TRFs, epochs and vertical datums, while you still have time to educate clients.
- **Train your teams.** Treat NSRS modernization as continuing-education material for field crews, CAD/GIS staff and project managers, not just the resident geodesist.

NGS’s “Get Prepared” guidance for New Datums explicitly identifies three transition methods—“Resurvey,” “Readjust,” and “Transform”—and recommends running existing data through NCAT now to check whether



State Plane Coordinate System of 2022 (SPCS2022): number of zone layers per state, reflecting local design choices and low-distortion requirements. Credit: NOAA/National Geodetic Survey

your metadata are sufficient to support later transformations to the modernized NSRS.

IF YOU'RE...

Here's what NSRS modernization means in different seats around the table.

A SMALL SURVEY OR GEOMATICS FIRM

- Pick a house standard (default frame, epoch, SPCS2022 zones, geoids) and stick to it unless a contract says otherwise.
- Make sure your field software, RTK/RTN subscriptions and office packages all support that standard; avoid having one lingering package trapped in NAD83(2011)/NAVD 88 with no clear path forward.
- Build a simple “client explainer” one-pager on why their coordinates will change and how you handle it. You will use it often.

A PUBLIC-AGENCY GIS OR DOT MANAGER

- Map out which enterprise systems (asset management, permitting, CAD, GIS) reference NSRS and in what form. Those are your dependencies.
- Work with IT to plan a phased migration: which layers and systems move to NATRF2022 / NAPGD2022 first, which stay in legacy datums for a while, and where you'll maintain dual representations.
- Require explicit CRS and datum metadata in every new dataset you ingest or procure—no more “just State Plane.”

A SCAN-TO-BIM / REALITY-CAPTURE LEAD

- Decide at the capture-planning stage which datums and SPCS2022 zones will govern multi-site or portfolio projects. Don't improvise per building.
- Ensure registration, QC and BIM modeling teams all understand the chosen frame/epoch and vertical reference; misalignment here will haunt you later.
- For existing campuses, start testing controlled transformations of a few representative models to NATRF2022 / NAPGD2022 so you know what issues to expect before doing it at scale.

NGS likes to say that the modernized NSRS will make coordinates more accurate, accessible and sustainable. That may be true in the long run. In the near term, success for survey and GIS professionals will depend less on the math, NGS has done that, and more on how deliberately you manage the transition in standards, workflows and client communication. Much of the official thinking on that transition is already captured in NOAA Technical Report NOS NGS 67 *Blueprint for the Modernized NSRS, Part 3: Working in the Modernized NSRS*.

KEY NGS RESOURCES ON NSRS MODERNIZATION

NOAA/NOS/National Geodetic Survey – “New Datums” (NSRS Modernization Hub)

High-level overview of why NAD 83 and NAVD 88 are being replaced, what the modernized NSRS will include, and how it affects users.

NGS Datums & Reference Frames → New Datums

<https://geodesy.noaa.gov/datums/newdatums/>

NSRS Modernization Timeline / Federal Register Notice

Official rollout plan for modernized NSRS components (2024–2026), FGCS vote, and transition from beta.ngs.noaa.gov to geodesy.noaa.gov.

NSRS Modernization Timeline

<https://geodesy.noaa.gov/datums/newdatums/NSRSModernizationTimeline.shtml>

Track Our Progress: NSRS Modernization Components

Status page for the core pieces of the modernized NSRS—2022 terrestrial reference frames, NAPGD2022, GEOID2022, SPCS2022, tools (NCAT, OPUS, DDS), and related products.

Track Our Progress

<https://geodesy.noaa.gov/datums/newdatums/TrackOurProgress.shtml>

NAPGD2022 Home (Beta)

Defines the North American–Pacific Geopotential Datum of 2022 and its gravity-field products (GEOID2022, DEFLEC2022, GRAV2022, GM2022), with links to beta data and documentation.

NAPGD2022 Home

<https://beta.ngs.noaa.gov/NAPGD2022/>

NATRF2022, PATRF2022, CATRF2022, MATRF2022 (Beta)

Technical summaries of the four 2022 terrestrial reference frames that will replace NAD 83, including relationship to ITRF2020 and plate-fixed behavior.

2022 Terrestrial Reference Frames

<https://beta.ngs.noaa.gov/datums/2022/>

State Plane Coordinate System of 2022 (SPCS2022) – Policy and Technical Info

Formal NGS policy establishing SPCS2022 as the official projected CRS for the 2022 frames, with unit conventions, constraints on zone design, and links to preliminary parameters and distortion maps.

SPCS2022 Policy & Info

https://geodesy.noaa.gov/library/pdfs/SPCS2022_Policy.pdf

<https://beta.ngs.noaa.gov/SPCS/>

“Get Prepared” for New Datums – User Guidance

Practical NGS guidance for agencies and practitioners on preparing for NSRS modernization, including the “Resurvey, Readjust, Transform” transition methods and recommended use of NCAT and metadata checks.

Get Prepared

<https://geodesy.noaa.gov/datums/newdatums/GetPrepared.shtml>

Blueprint for the Modernized NSRS, Part 3: Working in the Modernized NSRS (NOAA Tech. Rep. NOS NGS 67)

D. R. Smith (2021). Core conceptual document on how geospatial professionals will work in the time-dependent NSRS, including Survey Epoch Coordinates (SECs), Active Coordinates (ACs), and CORS-based realization.

NOAA Institutional Repository

<https://repository.library.noaa.gov/view/noaa/50910> ■



CHECK OUT THE
PSAN WEBSITE
FOR
ADVERTISED
POSITIONS



2027 Winter Conference
Feb 11-12, 2027
Holiday Inn
Kearney, NE

Support PSAN Sustaining Members

Leica Geosystems

555 North Point Center East, Ste 700
Alpharetta, GA 30022
Representative: Charlie Ramsbottom
Phone: 816-649-8555
Email: charles.ramsbottom@hexagon.com

Seiler Instrument

6522 So. 118th Street
Omaha, NE 68137
Representative: Kevin Hall
Phone: 402-651-9735
Website: www.seilerinst.com
Email: solutions@seilerinst.com

Transit Works

6000 S. 58th Street, Ste. A
Lincoln, NE 68516
Representative: Dave Hoffart
Phone: 402-421-6100
Email: transitworks@windstream.net



**Earn your degree from
the only land surveying
program in Nebraska!**



Become a ...

- Land Surveyor
- Civil Drafter
- CAD Technician
- Field Technician
- Survey Technician

**Average starting salary of 2022 SCC graduates:
\$44,408**

Go to southeast.edu, then Academics, All Programs
or contact Jason Adams at jadams@southeast.edu

Winter 2026

THE NEBRASKA Surveyor

Serving the Surveying Profession Since 1964

