Summer 2025

THE NEBRASKA Surveyor

PROFESSIONAL SURVEYORS ASSOCIATION OF NEBRASKA
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In this Issue

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Casey Sherlock - State Surveyor

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**** 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.

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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

Summer 2025

Contents

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.

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The Nebraska Surveyor deadlines to submit content for publication:

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

President's Letter

September 10, 2025

Cool mornings are in the air which means another summer is coming to an end. Hope everyone had a prosperous and safe summer. As we move into fall, we are focusing on the 2026 Winter Conference. The planning committee seems to have everything lined up and we are looking forward to another great conference. I hope you are all able to attend.

Casey Sherlock hosted a meeting on September 3rd to discuss the NATRF 2022 transition. Various topics were discussed about what the transition will look like, currently there is no clear transition but with any luck we will have an update by the 2026 Winter Conference.

I hope everyone has a great fall and I look forward to seeing you all at the winter conference.

Sincerely,

Chad W. Marsh

Chad Marsh
PSAN President

PSAN Board Meeting Schedule

March 12, 2025
June 11, 2025
September 17, 2025
December 3, 2025

All meetings are held at the
Nebraska State Surveyor's Office
Lincoln, Nebraska

2026 Winter Conference

February 12-13, 2026
Holiday Inn & Convention Center
Kearney, Nebraska

Summary of June 11, 2025 PSAN Board Meeting Minutes

Subject to approval by the PSAN Board of Directors

The PSAN Board of Directors Meeting on June 11, 2025, was held at the Nebraska State Surveyor's Office in Lincoln, Nebraska and began at 12:04PM CT.

The roll call was as follows:

President, Chad Marsh — Present
President-elect, Brian Foral— Present
Treasurer, Josh Borchers — Present
Secretary, Jeremy Feusner — Absent
Administrative Secretary, Gwen Bowers — Present
Directors
Jai Andrist—Present
Dylan Campbell — Present
David Forsythe—Absent
John Howell — Present
Mike McNaney — Present
Chris Schulte—Present
Casey Sherlock, State Surveyor — Present
Jon Carrell, SENLSA Affiliate — Present

Guests: Matt Tinkham, David Forsythe, and Jerry Penry

Minutes from the March 12, 2025 PSAN Board of Directors meeting were read and approved.

Officer Reports

Treasurer, Josh Borchers: The Treasurer's Report dated June 3, 2025 was approved.

Director Reports

Chris Schulte: Great turnout at the Cast Iron Monument restoration event.

Casey Sherlock: Attended the NCEES meeting in Albuquerque, NM. There are big changes coming.

Jon Carrell: SENSLA Summer Seminar is scheduled for June 21 at the Lincoln Firefighters Hall.

Standing Committees

Education: Working with the BSA on obtaining their Surveying Merit Badges on July 25. Another event is planned for Columbus.

GIS Committee: Scott Peters was nominated to be on the GIS Counsel to replace Matt Tinkham.

Old Business

Donation to SCC to purchase a drone: SCC has purchased a drone, no donation from PSAN is necessary.

Discussion on SCC support going forward: PSAN still wants to support the program at SCC, it's the only accredited Surveying program in the state, but it's very challenging when the college doesn't want to engage with PSAN, not other industry professional to make things better.

New Business

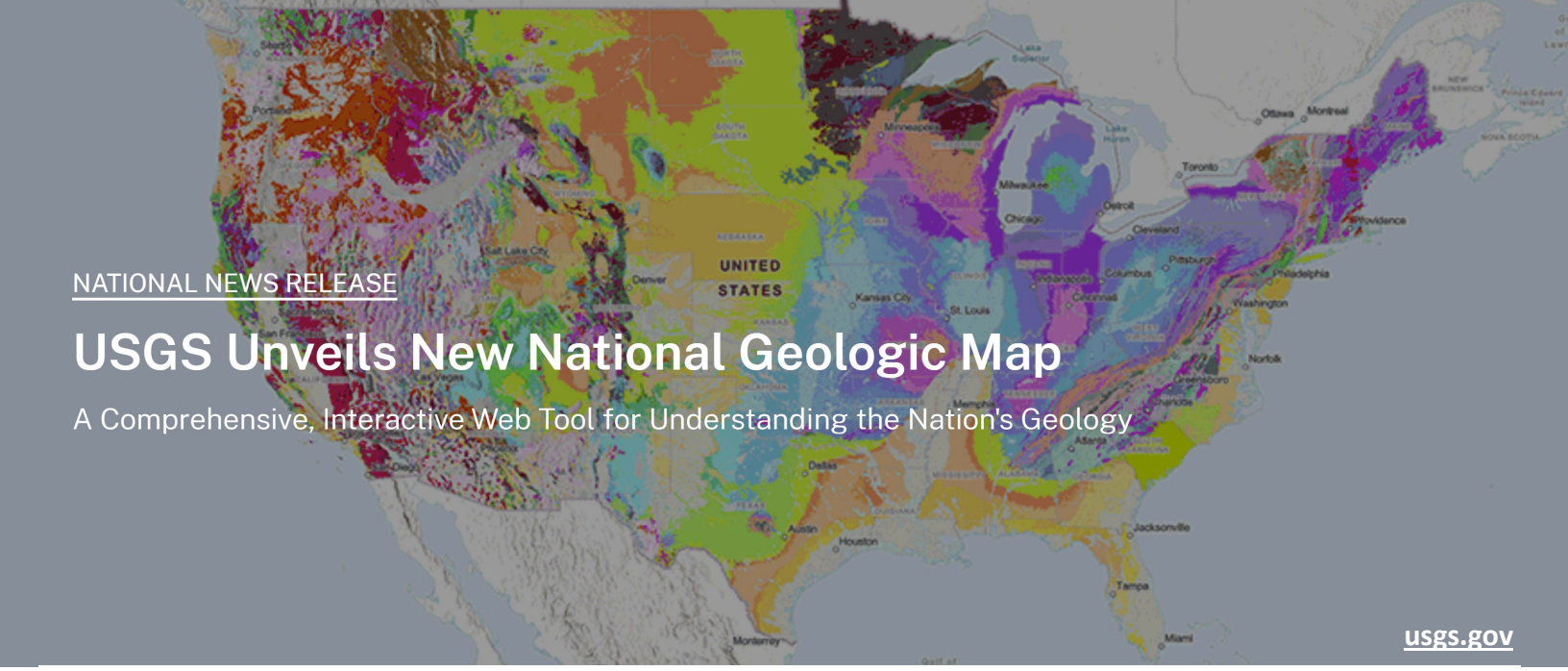
Two applications for Associate Membership were submitted and approved.

Storage Unit for PSAN Items: Chris Schulte will reach out to see what/how much is out there and needed for storage.

Sustaining Members at Summer Seminar: Want to continue to allow sustaining members to have a presence at the summer seminar, but we need to determine how to charge for them to attend; current membership fees for Sustaining Members covers winter conference attendance.

The meeting was adjourned at 1:22PM CT.

After the complete June 11, 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/



NATIONAL NEWS RELEASE

USGS Unveils New National Geologic Map

A Comprehensive, Interactive Web Tool for Understanding the Nation's Geology

By Communications and Publishing August 28, 2025

In a significant advancement for geoscience, the U.S. Geological Survey has released the most detailed national-scale geologic map of the country to date, offering a unique regional view of geology at and beneath the Earth's surface.

"Geologic maps have many uses, such as helping experts look for energy, mineral and water resources," said Christopher Swezey, USGS National Cooperative Geologic Mapping Program coordinator. "They can also be used to assess earthquake risks and inform decisions about land use, infrastructure and community planning, and real estate and insurance."

Geologic maps use different colors to show various types of rocks and sediments beneath the surface. These are organized into geologic map units, which range in composition from loose sand and gravel to very old bedrock. Each unit has its own unique characteristics, such as age and composition.

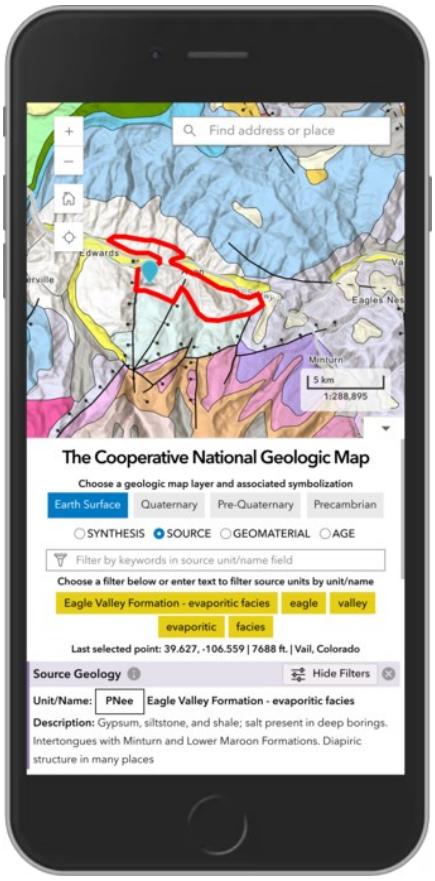
The new USGS map, called The Cooperative National Geologic Map, was created using more than 100 preexisting geologic maps from various sources and is the first nationwide map to provide users with access to multiple layers of geologic data for one location. This feature allows users to access the multiple data sources included in the map to look at or beneath the surface to understand the ancient history of the nation recorded in rocks.

These layers can offer new insights into the geology of the nation, enabling more efficient analysis of natural hazards and geologic resources, such as potential focus areas for critical minerals vital to national security and economic development. Currently, the map covers the lower 48 States, but plans are underway to add content for Alaska, Hawaii, and the U.S. territories.

The new interactive web tool was designed to be as user friendly as possible, making it accessible to both geologists and the public. Users can search for specific properties of geologic units or click on the map for additional geologic information and links to more detailed maps of local areas.

"This map provides complete, analysis-ready geologic data for the nation, in a format that is easy to

(Continued on page 7)



Sources/Usage: Public Domain. View Media Details

The new USGS Cooperative National Geologic Map web tool was designed to also be mobile friendly, allowing users to explore geologic data from smartphones and tablets, in addition to larger devices. USGS image.

expand going forward" said Joseph Colgan, a USGS research geologist and leader of the team that created the map. "By providing this map online, we aim to enhance educational engagement and foster a greater public appreciation of geology."

In addition to public use, it is anticipated that primary users of the map will include federal agencies, private industries, and educational institutions. A recent cost-benefit study highlighted the usefulness of geologic maps with its findings that the value of geologic maps is up to 10 times greater than the cost of their production.

A key breakthrough in this mapping project was the development of a faster, mostly automated solution that efficiently combines geologic maps from State Geological Surveys and the USGS.

Utilizing this new method, USGS experts successfully generated The Cooperative National Geologic Map and an interactive web interface after only three years of development, a fraction of the time needed to create a map of this scale using traditional methods.

"Ongoing mapping efforts continually make new discoveries, but past national maps took decades to create while our new method allows us to update our national map faster than ever possible before," said Sam Johnstone, a USGS research geologist and lead developer for the mapping project.

The success of this project is rooted in long-standing collaboration with state geological surveys, according to Dave Soller, senior program scientist for the USGS National Geologic Map Database. He noted that these partnerships have been instrumental in building stronger alliances and advancing more efficient methods for geologic mapping and data dissemination across the nation.

To access the map, visit The Cooperative National Geologic Map website and explore the geological features of the nation. Development of this Website and integration of this new product into the national archive was led by the National Geologic Map Database. The geologic data layers, and links to the accompanying report and geospatial services, are found at the National Geologic Map Database landing page for this new publication. ■

*** To be awarded at the Winter Conference Awards Banquet & Benefit Auction***

Award Nomination Instructions

PSAN is seeking nominations for the following awards

Head Chainman Award

The Head Chainman Award was created in 1989 by PSAN to recognize individuals who have served the profession and/or enhanced its image. If you know someone who personifies the following statement, please consider nominating them for this award:

> ***"The HEAD CHAINMAN shall take the front of chain and lead the party. He shall clear the way and mark the line of progress. He shall always be mindful of his relationship to the rear chainman so that he does not go too far ahead; to the instrumentman so that he does not stray too far from the true line; and to the ground so that he is able to make a true and accurate measurement. He is charged with responsibility to set the pace so that the task at hand will be accomplished with the greatest speed while maintaining the integrity of the results."***

Honorary Life Membership

Pursuant to Article III, Section 1b of the Constitution, an Honorary Life Member is defined as follows:

> A person of acknowledged eminence in Surveying, who has rendered outstanding service to the Land Surveying or Engineering Profession and who has been an Active Member of the Professional Surveyors Association of Nebraska, may be elected as a Life Member of the Association by a two-thirds vote of the Official Board. Honorary Life Membership does include full membership voting rights.

In order to highlight the accomplishments of our members, please share specific characteristics about the person or examples of their leadership in the nomination letter. The nomination letter/email could be read as an introduction to the award recipient at the Winter Conference banquet. A letter stating, "I would like to nominate Joe Best Surveyor…" will not be considered without supporting information. I know we have great members who do great things in the field of land surveying, so let's take the opportunity to showcase these accomplishments amongst our surveying peers!

NOMINATIONS MUST BE RECEIVED BY *NOVEMBER 15, 2025!*

If you know a member of PSAN who meets the requirements for one of these awards, please send an email to PSAN@nebraskasurveyor.com, with the subject line "Awards".

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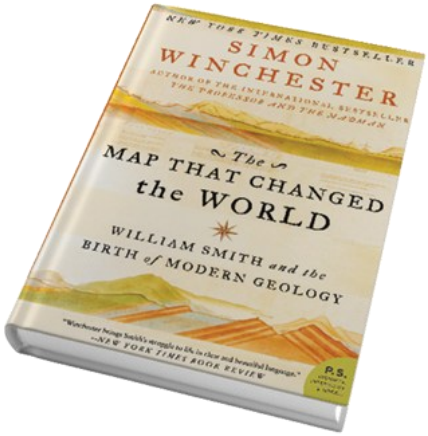
CHAD & LINDA ERICKSON

THE Practical SURVEYOR

and the Map That Changed the World



In March of this year, Doug Burgum, the newly appointed head of the US Dept. of Interior, invited all, in order to understand the coming events of that department, to read the book "The Map that Changed the World", by Simon Winchester.

Do you know something that no one else knows? From your hard work in practical application of your science have you discovered a revolutionary principle? You want to tell but no one will listen? Have you struggled to publish but have met with great resistance, even ridicule and harassment? Have you been attacked and your ideas ridiculed and then stolen by plagiarism, maybe even stolen by the very society that you are advancing? If your answer is "Yes", then this book is for you.

William Smith (1769-1839), Practical Surveyor (yes that was his title), overcame jealousy, interest, and ignorance among the learned and "gentle". His story is an inspiration and encouragement for all us practitioners smothered by dilettantes and officious fools. Think Mathematicians smothering Theoretical Physicists or Engineers jealously dominating Surveyors. Just so, William Smith's discoveries in Geology were smothered, hindered, and then jealously plagiarized by the Geological Society of London, resulting in Smith's financial collapse and imprisonment in a debtor's prison and Smith's eventual justification and recognition in old age.

William Smith was first and foremost a Practical Land Surveyor whose exposure to geological strata and fossils in route surveying and mine surveys gifted him with an original epiphany: he could perfectly differentiate, identify, date, and predict land strata by the fossils contained therein. Smith called this "Faunal Succession", which is foundational to the later Theory of Evolution.

Faunal Succession led to the realization that the older the strata the less the fossils conformed to contemporary flora and fauna; think "extinctions". Extinction was a then revolutionary, even heretical, thought. Smith used this insight to postulate coal and lead prospects, select strata that would seal navigation canals, and drain bogs into porous strata. Smith designed, drafted, and innovated the world's first Geological map. Others would later use Smith's insights to advance the Evolution Theory, challenge church dogma and, in an absolute parallel, prospect for oil. The latter being the purpose of Secretary Burgum's advocacy of The Map That Changed the World.

William Smith (1769-1839) schooled himself with a book by Daniel Fenning[1], The Young Measurer's Complete

(Continued on page 11)

Early day theodolite

William Smith—Geologist by Hugues Fourau (1803-1873)

Guide, 1772. An epiphany comes on page A2 of that book, where the then common term "Practical Surveyor" is equated to our term "Land Surveyor". The term "Practical Surveyor", as used in the past, has been confusing for contemporary Americans. For instance, the UK 1725 book, "The Practical Surveyor" by Samuel Wyld", was reviewed in a 2008 survey article but the article failed to clarify this point.

Even now, in England the term "Land Surveyor" equates with a Land Appraiser, just as Marine Surveyor still equates with "boat appraiser". Land Surveyors there were Practical Surveyors. Thus, when old U.S. texts refer to George Washington, Abraham Lincoln, Thomas Jefferson, and others as "Practical Surveyors", we can understand them to be the equivalent of modern U.S. "Land Surveyors". So, let it be clear from the outset that William Smith, the subject of The Map that Changed the World, was a Land Surveyor in the modern sense. Though William Smith was also involved in engineering of canals, the inventor of Faunal Succession and Innovator of Geological Maps, he was first and foremost, a Land Surveyor.

The other subject to be clarified before reading "The Map that Changed the World" is the meaning of "Theodolite". Our first four years of surveying was made with chain and transit, but the then new and much more precise instruments in use were called "Theodolites", which were basically glorified transits with enclosed standards. This is confusing because before transits there were many generations of rudimentary survey instruments also called "theodolites". The "theodolite" used by William Smith was likely a 3rd generation theodolite smiler to the one shown to the left, above.

William Smith's first entrance into land surveying was as a teenager laying out "homesteads" in England. Though these were called "Enclosures", they amounted to the same thing as American Homesteads, both being examples of a congress disposing of "common" land to private ownership.

That being said, The Map that Changed the World is an appropriate and timely read for us latter-day Land Surveyors. Some of us will be involved in the discovery and mapping of new Natural Resources. If we were young, in our 20's or 30's, we might now be moving to Greenland, as we did to Alaska in the 1970's. In Burgum's words from the New York Times, "Map, baby map". ■

[1] https://archive.org/details/bim_eighteenth-century_the-young-measurers-com_fenning-daniel_1779

The Ericksons *spent years in Scotland, followed the Surveying Profession to Alaska where they remained for 12 years, and have now returned to the mountains of Idaho. Chad has been licensed since 1984 as a surveyor in Alaska, Idaho and Arizona.*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The serious issue of fraudulent use of engineering and surveying seals

BOB HERBERT | ALABAMA STATE BOARD OF LICENSURE FOR PROFESSIONAL ENGINEERS AND SURVEYORS INVESTIGATOR

NCEES August 2025 Licensure Exchange

The unauthorized use or forgery of seals is a critical concern within various professional services, particularly in the engineering and surveying fields. This includes the misuse or counterfeiting of a professional engineer or professional surveyor's seal and signature on documents such as project plans, surveys, and reports.

KEY ISSUES AND IMPLICATIONS

1. What constitutes the fraudulent use of seals?
   - Unauthorized application. Copying or scanning professional stamps/signatures and applying them to documents without the professional engineer or professional surveyor's approval or review
   - Counterfeit seals: Using fake seals on engineering or surveying documents
   - Unauthorized signing: Signing or sealing documents without the professional engineer or professional surveyor's authorization
   - Altered documents: Submitting or sealing documents that were not originally prepared, reviewed, or approved by the professional engineer or professional surveyor

2. Effects on the profession
   - Public safety: P.E./P.S. seals signify professional expertise and adherence to safety and quality standards. Fraudulent use compromises public safety by allowing potentially unsafe designs to be implemented, which may only be discovered during catastrophic events
   - Legal consequences: The use of counterfeit or unauthorized P.E./P.S. stamps is illegal and can result in severe penalties, including fines, loss of licensure, and criminal charges
   - Professional reputation: Misuse or forgery of a P.E./P.S. seal can damage the targeted professional's reputation and erode trust from clients, peers, and the public as a whole
   - Integrity of the profession: Such fraudulent activities undermine public trust in the engineering and surveying professions, making it difficult to restore confidence

3. Examples of fraudulent use
   - Unauthorized projects: Scanning or photoshopping existing P.E./P.S. seals and applying them to projects without the engineer's or surveyor's knowledge or permission
   - Forgery: Fabricating or forging a professional engineer or professional surveyor's signature and seal on design documents

THE GROWING TREND OF ONLINE FRAUD

In recent years, there has been an increase in fraudulent activities by unknown actors who defraud clients online by offering purported professional services. These actors often misuse professional engineers' and professionals surveyors' seals on platforms like Fiverr, Upwork, and other similar sites. Despite clients' diligence in researching professionals, they may not realize that legitimate professionals typically do not operate through

(Continued on page 14)

these websites. Issues often arise when clients submit plans for permitting, only to discover significant design flaws and fraudulent use of seals.

REGULATORY AND LEGAL RESPONSES

Regulatory boards face challenges in protecting the public due to limited tools to combat this growing trend. Boards could consider launching awareness campaigns to educate the public and permitting authorities about the risks of hiring professionals through unverified online platforms. Involving the state attorney general or reporting to the Consumer Fraud Protection Bureau via the Federal Trade Commission (reportfraud.fts.com) are potential steps

MOVING FORWARD

Regulators are actively seeking solutions to address this issue. The topic was discussed at the 2024 NCEES Law Enforcement Forum and will be revisited at the 2025 Law Enforcement Forum to provide updates. Members are encouraged to participate, discuss, and brainstorm strategies to tackle this problem effectively. ■

2025 Law Enforcement Program

Fraudulent use of engineering and surveying seals will be discussed at the law Enforcement Forum during the 20025 annual meeting. For more information on the Law Enforcement Program, which includes the forum and workshop, visit the Board Resources section of MyNCEES and see "Annual meeting."

Bob Herbert is chair of the 2024-25 Committee on Law Enforcement.

THE SURVEYOR AND THE "GEODESY CRISIS"

BY TIM BURCH

xyht.com
April 23, 2025

To the average professional surveyor, the term "geodesy" does not exist in their everyday conversations about the business. While the use of state plane coordinates has expanded greatly with the development of GPS/GNSS receivers and RTK/RTN connectivity, the mathematics and "black magic" of geodesy remains an enigma to most of the profession.

However, the ongoing progression of technology within surveying instruments has expanded the need for understanding how geodesy works. Our practitioners are faced with expanding their knowledge and expertise of geodesy and thus have put a new challenge on them to find teachers and/or mentors to provide training on the datums and techniques.

Crisis? What crisis?

Recently, I was invited to attend a geospatial workforce conference in which various government agencies, university leadership, and members of private industry gathered to discuss the future of geodesy. While the overall theme of the gathering was focused on the future of geospatial datums and how the various parties must work together, a large portion of the conversations highlighted the "geodesy crisis" we are facing throughout the surveying profession. Here are some of the points from the conference to highlight the challenges ahead:

Three levels of geodetic understanding are needed, with different but complementary approaches for each:

- **Geodesy experts (geodesists) –** While the overall numbers needed may be fewer than expected, we have seen a significant downturn in these experts due to attrition and lack of replacement from higher educational interest. This group includes experts who design, build, and operate our National Spatial Reference Framework (NSRS). It also includes those who utilize this framework to design and provide the multitude of tools and utilities we use every day (phone and service apps).
- **Geodesy knowledgeable (professional surveyors) –** This group of geodesy users is responsible for the data being utilized by the profession and follows a normal standard of care for its intended application. Professional surveyors are tasked with assuring clients and the public that the information is correct, so understanding how the tools they use work is a critical requirement. We need additional practitioners who understand the functional use of geodesy in surveying, and we need experts but are having a similar issue with attrition and recruiting.
- **Geodesy cognizant (managers & technicians) –** This is the area of greatest need. Our profession must have personnel who are technically capable of understanding the basics of geodesy and how it applies to the tasks within surveying. This sector, however, has the lowest cost of investment through education and training, but will continue to struggle with the same workforce recruitment faced throughout the profession.

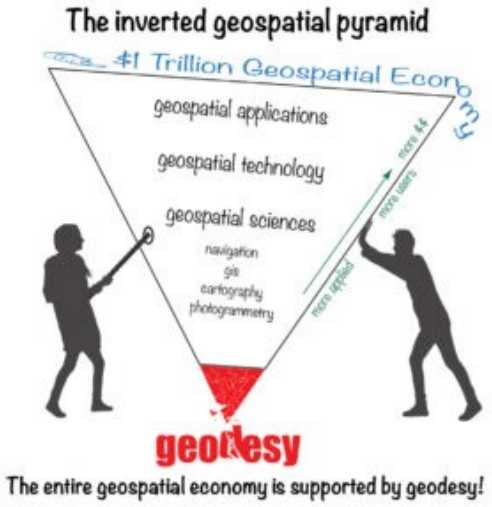
If these employment

(Continued on page 16)

challenges were not enough, the geospatial communities also face another potential obstacle: the upcoming modernization of the National Spatial Reference Framework (NSRS) by our colleagues at the National Geodetic Survey (NGS). Here is a brief explanation from the NGS website regarding why this modernization is a critical upgrade:

The North American Datum of 1983 (NAD 83) and North American Vertical Datum of 1988 (NAVD 88), although still the official horizontal and vertical datums of the NSRS, have been identified as having shortcomings that are best addressed through defining new horizontal and vertical datums. Specifically,

- NAD 83 is misaligned to the earth's center by about 2.2 meters, and
- NAVD 88 is both biased (by about one-half meter) and tilted (about one meter coast to coast) relative to the best global geoid models available today.



The entire geospatial economy is supported by geodesy! Credit: Dana Caccamise, NGS

Correcting these two issues will mean that every existing latitude, longitude, ellipsoid height, and orthometric height in the United States (as reported in the current NSRS) will change by as much as four meters (as reported in the modernized NSRS). Adopting the modernized NSRS is critical, as it finally aligns the NSRS with both international standards, as well as aligning with all Global Navigation Satellite Systems (GNSS), which naturally orbit about, and provide positions relative to the center of the Earth.

There is more information about the specifics regarding the modernized NSRS on www.geodesy.noaa.gov.

As a surveyor/technician/student, what does this mean to me?

While there is an ongoing effort to address the shortage of workers in almost every profession and occupation, the "geodesy crisis," coupled with the need for modernizing our geodetic reference frames, will take a large, profession-wide effort to tackle these challenges. Here are some of the concepts for addressing these challenges from the geodesy conference and conversations throughout the profession:

Utilize our existing resources

- Invest in our profession through education and training.
- Advocate the geodesy needs to our federal legislators (through private companies and professional organizations).
- Draw attention to upcoming advances in technology and georeference frames that an investment in geodetic infrastructure will bring us back to the forefront of mapping.

Outreach and marketing

- Expand outreach to raise public awareness of geodesy through applicable channels.
- Use examples of everyday technology and location services to highlight the importance of geodesy and its continued educational opportunities to the public.
- Create real-world examples of how geodesy impacts infrastructure, mapping, design, and informational databases of the world around us.

Collaborative efforts

- Partner government agency efforts with professional organizations to demonstrate how public/private data collection and maintenance can benefit our environment.
- Enhance relationships between government agencies, professional societies, and software providers to update critical programming to encourage use of new datums within the NSRS modernization.

Advancing educational opportunities

- Promote expansion of college programs and advanced degrees.
- Create minor degrees in geodesy or geospatial engineering to promote further studies.
- Recruit students from complementary studies, including physics, engineering, and advanced mathematics.
- Create expanded training programs and opportunities.
- Collaboration between agencies and professional societies to create specific training and certifications for geodetic practitioners.
- Encourage more "on-the-job" training opportunities within private and public employers.

The future of surveying is geospatially driven

The surveying world is simultaneously growing and shrinking due to the expanding technology and by new advances in geodetic positioning and mapping. Throughout the history of surveying, the practitioner has been tasked with measuring relative distances between fixed works and monuments. With the

(Continued on page 17)

creation of GPS/GNSS technology (and other remote sensing technics), the surveyor has adapted to this revolution and is now tasked with the collection of locations instead of distances.

Almost all this data collection will benefit from being on a common coordinate system that aligns with the rest of the world. Geodesy is the root of this reference system, so the surveying community must make themselves more in tune with the times.

We are beginning a new chapter of not just our profession, but for mapping our world overall, and surveyors need to be at the heart of this operation. It is our duty to keep reading, learning, and progressing, so don't close the book and dismiss the surveyor's role in the future of geodesy. Keep reading and learning, as the road ahead will be worth it. ■

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.

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Thoughts on Professional Practice and Education

Article 14: Philosophy of Educating Students Beyond Course Content

by Knud E. Hermansen †
P.L.S., P.E., Ph.D., Esq.

This is the fourteenth article I have prepared. In this article I will offer thoughts regarding my approach to teaching students beyond the course topic and perhaps reveal one of many character flaws I possess – at least according to some students. I might point out for the sake of the reader, that I share these flaws with many employers in these modern times.

As a faculty member, I stand in the crossroads where many individuals leave pampered or sheltered home lives and must soon work in a profession where the employer expects to make a profit from the graduate's endeavors and the client expects to receive quality service for a reasonable fee. I have been challenged many times attempting to adjust student attitudes. I am often disliked by students for my efforts. I believe my efforts are appreciated by employers. The reader may judge for themselves after reading this article.

I will begin by crediting three sources for my belief that attitude adjustment is part of any learning process. First, I will credit my father who had a strong belief that his three boys must earn their keep on his dairy farm. Second, two weeks after graduation from high school, I left the farm to become a U.S. Marine. The Marines are well known for attitude adjustment. The third source is the court system. I challenge anyone to appear before a judge with an attitude contrary to what the judge expects.

For the thirty plus years I have taught at college, I have attempted to introduce students not only to surveying knowledge but also to expose the student to the realities they will face when employed in surveying practice. Better the students understand life's foibles and harsh realities sooner rather than later. I would prefer they frustrate me rather than frustrate employers and dismay clients. My attempts at attitude adjustment have not always been well received by students nor have I always been successful in restructuring attitude.

The following are my goals for attitude adjustment among students.

Education or employment is not to be treated as an inconvenience in personal priorities. Mark Twain said, "*To change your life, you need to change your priorities.*" Many students find it difficult to change their priorities from themselves to clients and employers. Some students want to socialize, party, do on-line gaming, and so on. Some students consider this a sacred right. A full-time employee owes the employer and client 40 plus hours of satisfactory work a week without personal distractions affecting their efforts. This means that social sites should remain unused during working hours. I expect students to put in the necessary hours of class, study, and effort without distraction with personal pursuits.

When planning board meetings and property closings are routinely rescheduled to accommodate a survey employee's personal life, I will reconsider this policy.

> Examples: "*I'm in intramural volleyball. We have a game during the test time. Can I take the exam next week? … Can I take the exam early so I can start my break earlier? I already have my tickets to fly home. … I was given a one-week cruise in the Caribbean for my birthday. Can I hand in my homework when I return?*"

Standards are established by the instructor or employer, not the individual. I suppose it is to be expected when growing up in a society where everyone gets a trophy that students expect to be accommodated when they believe they have made a good faith attempt even though they failed to achieve anything notable with the attempt. I often have to remind students that in practice, there may be twenty proposals submitted to a prospective client but only one proposal is accepted. All other proposals fail. No matter how hard a surveyor tries, unless services are delivered fully to the client per the contract, the surveyor is not paid in full.

When employers are compensated for unsuccessful proposals or fully compensated for unfinished services, I will reconsider this policy.

> Examples of Conflict: "*I spent a lot of time on this assignment, I should get more points … I really studied hard. How can you fail me? I was only an hour late with my homework submission, you should grade it! … This is my last semester. You can't fail me now.*"

Bad events for a student (employee) will be confined to the individual and not affect the class (business). Many students think that a problem they believe they are not responsible for is sufficient justification for special accommodations for the class. I acknowledge that bad things happen to good people; yet, real life cannot stop or even allow for adjustments for the student at the expense of the class. Therefore, in my class, if a student has an emergency, class tests are not rescheduled, homework dates are not adjusted, and expectations not relaxed. Life must go on.

I will change my policy when an employee can have additional vacation days because bad things happen after they have used all their vacation time for that year already.

> Examples of Conflict: "*Evenings for me are not a good time for testing, can you move tests to another night. I don't think I should have to look at examples to determine what I did wrong. You should provide individual feedback.*"

Lack of planning on the student's (employee's) part will not become an emergency on my (the employer's) part. Some students believe that their lack of planning requires me to compensate as a result. Some individuals seem unable to plan and are very offended that I will not alleviate the situation caused by their poor planning.

My policy will change when employers allow employees to set their own work schedule and production outputs.

> Examples of Conflict: *"My ex just dropped off my children for me to watch. I will have to take the test tomorrow. … I forgot to set my alarm so I missed the exam. I will need to take a makeup."*

An instructor (the employer is) not your mother. Students often come to college ill prepared to handle stress and crisis. The student expects faculty and employers to show the same empathy, support, and consolation for any and all stress and personal crises that they once received from their mother. I am not the student's mother. Some students have taken great umbrage with me because I don't react in the same empathetic manner their mother did by immediately changing my life and course requirements to best suit their emotional needs.

When survey firms hire emotional support counselors, I'll rethink this policy.

> Examples of Conflict: "*I just broke up with a girl I've been dating for four years, since I was in 9th grade. I can't study or handle an exam right now. … I can't believe*

(Continued on page 19)

(Continued from page 18)

that Trump won the election. I need some time off from class to deal with my distress."

Murphy's Law can strike more than once or bad luck often accompanies habitual faulters. I am not surprised that some students encounter more than their fair share of unfortunate happenstances. These students are often the marginally motivated or the habitually ill-prepared students.

Employers don't usually keep these individuals as long-term employees. The employees I am referring to tend to get sick only on Fridays or Mondays and have alarm clocks that never seem to work or ring loud enough.

When employers promote underachieving employees, I will change my policy.

Example of Conflict: "*My internet went down with the storm. I couldn't take the test. I know you said in the syllabus that you will drop the lowest test score. However, I had to miss a test already because my car had a flat tire on my way home from work. My spare was flat as well."*

A student should not fertilize and water problems they have at the instructor's (the employer's) expense. Individuals often exasperate their problems by demanding more accommodations than practical or required by law. We can all admire someone that achieves great success with disabilities. Increasingly, there are people experiencing difficulties that they believe should be treated as protected disabilities. They demand accommodations without demonstrating an effort to overcome their 'disability'.

I will relax this policy when employers allow employees to stay in the survey vehicle rather than leave the vehicle and go into the field because the bugs are particularly bad or they saw a snake while unloading the survey equipment.

Example of Conflict: "*I can't handle cold temperatures. I won't be able to do lab this week unless we move inside where the temperature is warmer."*

When your bucket is full, you can't fill the instructor's (employer's). Individuals often exasperate their problems by taking on more than they should handle. Rather than step back, regroup, and try again, they demand accommodations and blame me for pointing out a solution that doesn't require I bend over backwards and provide accommodations.

I will change my policy when employers routinely loan their employees money because the employee runs short of funds between paychecks.

Example of Conflict: "*I'm taking care of my mother and trying to complete my coursework from last semester. I need to delay taking the first exam. … What do you mean I can't? You are not being considerate in helping me deal with this problem. … No, I won't drop the course until my personal crisis is resolved. I don't want to wait until next year to take this class."*

I should point out these remonstrations I have presented should not be a surprise to students. I make these rules known to students before the course begins using a document available to them. The document is titled: 'Rules for the Course.' It is available for viewing on my publication web site. This document is given to every student at the start of the course and cause some students to immediately complain about rigid rules and heavy-handed ways. Apparently, similar rules were not applied in high school or other college courses.

I am encouraged in my attitude adjustment attempts by feedback from employers. I had one employer explain to me about interviews he has with seniors that apply for employment with his firm. The employer will ask the senior what the senior thought of me as their instructor. If the senior complained I was unfair or had similar negative sentiments toward me, the firm did not hire that person. The firm believed if the senior found it difficult to work within my rules, they would not work well within the constraints of the employment rules set by the surveying firm.

I suppose fairness allows that disgruntled students have a say about me. I am far from perfect. Perhaps the reader of this article may wish to give me some nasty criticism that arose from reading this article. Maybe the reader is a former student and has kept their angst bottled up since the time they were a student in my class. Fortunately, some enterprising fellows set up a web site called RateMyProfessors.com where strangers, students, and a great many short-time-students can voice their opinions about faculty anywhere, at any time, including criticizing me (or complimenting me).

This is an unofficial web site. Official university evaluations can only be completed by real students that have actually taken a college course and finished the course. The unofficial web site I just mentioned will allow anyone to comment about an instructor regardless if the individual was in the course, dropped the course, or even took the instructor's course. (I have never taught some of the courses cited on this website that students claim I taught.) Consider adding your own opinion. Having taught over 5000 students and close to that many licensed surveyors in seminars during my career, this web site is a chance to vent or make your thoughts known. ■

† Other books and articles by Knud can be found at https://umaine.edu/svt/faculty/hermansen-articles/

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