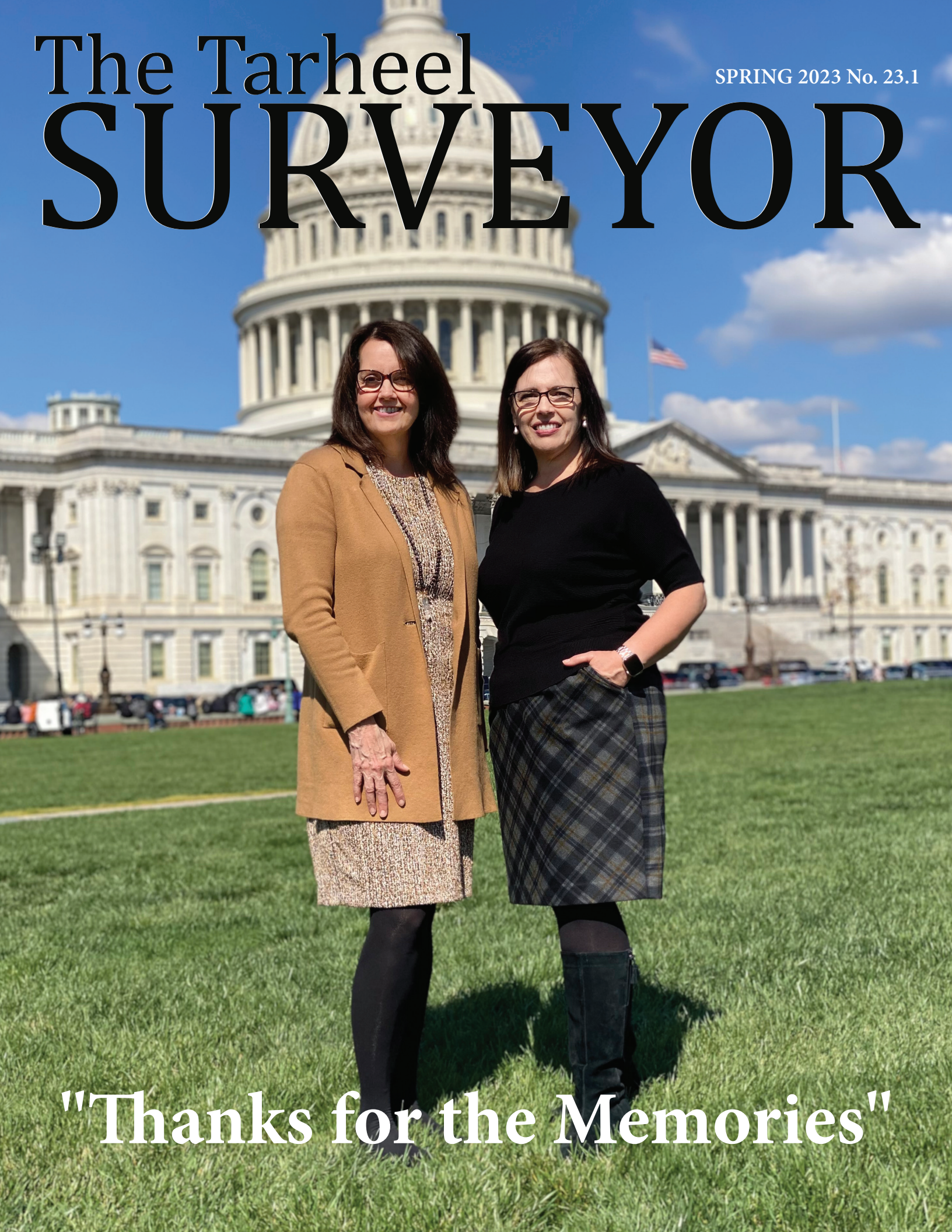


The Tarheel SURVEYOR

SPRING 2023 No. 23.1



"Thanks for the Memories"



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The Tarheel SURVEYOR Spring 2023

IN THIS ISSUE...

- 2 | Who We Are
Chapter Meetings
- 3 | NCSS Local Chapters
- 4 | Director's Notes
- 5 | New Licensees
- 6 | Letter from the President
Schedule at a Glance
- 8 | NSPS North Carolina Report
- 10 | Education Foundation
- 12 | Exploring NCSS MAPS
- 13 | NC A&T University
- 14 | FEATURE ARTICLE:
"Thanks for the Memories"
- 16 | Tips and Tricks
- 18 | Problem Corner
- 19 | 2023 Conference
- 20 | Professional Licensing: Rigorous for a Reason
- 22 | Time is Running Out
- 26 | The Most Important Angle
- 27 | Member Profile: Dean Exline

ABOUT NCSS:

- Founded January 31, 1939
- Second oldest professional surveying organization in the United States
- Only professional surveying organization in NC
- Affiliated with the National Society of Professional Surveyors and, therefore, all Professional Members are also accounted as members of NSPS as of July 1, 2013

OUR MISSION:

"A society of professional surveyors and their associates dedicated to enhancing professionalism, improving legislative awareness and promoting the profession of surveying."



Cover Image: Christy Davis & Sherri Barron in Washington DC at NSPS Lobby Day.

WHO WE ARE



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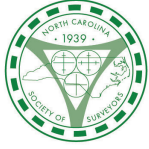
YADKIN VALLEY CHAPTER PRESIDENT

Rusty Douglas
douglassurveying@outlook.com

CHAPTER MEETINGS

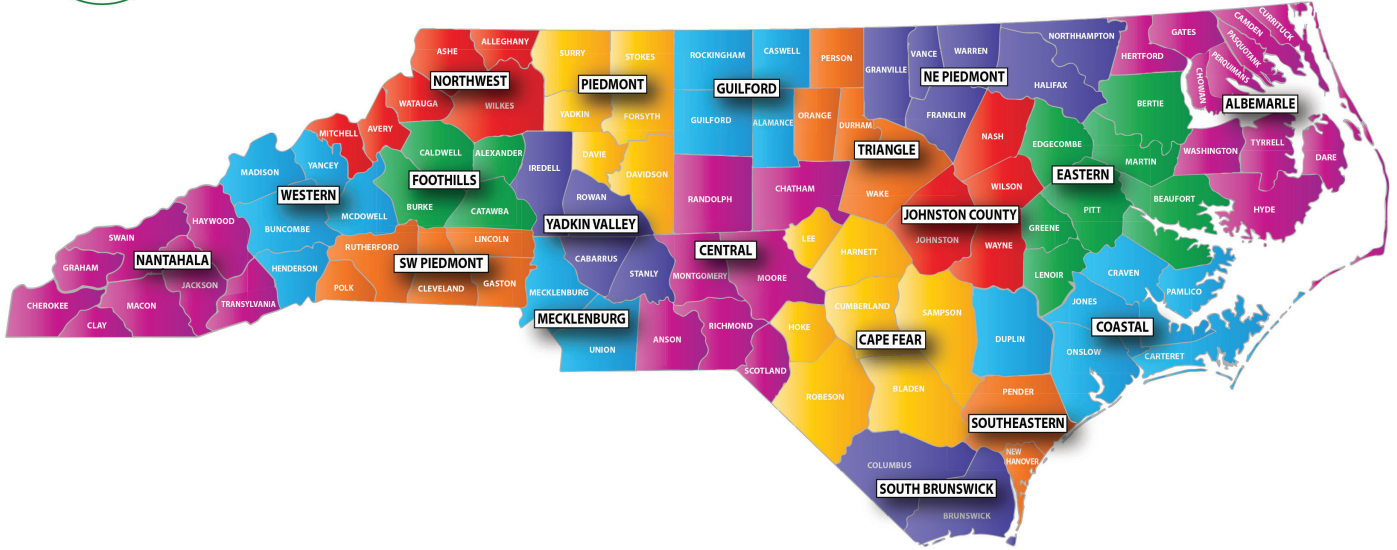
CHAPTER	DATE & TIME	LOCATION
Albemarle	4th Tuesday 6:30 pm	Various Locations, NE Counties
Cape Fear	Last Thursday 6:30 pm	Various Locations, Fayetteville
Central	Last Tuesday 6:00 pm	Blake's B-Que, Candor
Coastal	Last Monday 6:30 pm	Sagebrush Steakhouse, Morehead City
Eastern	2nd Monday 6:30 pm	Parker's BBQ, Greenville
Foothills	2nd Tuesday, 7:00 pm	Timberwoods, Morganton
Guilford	Various Times	Various Locations
Johnston County	2nd Tuesday 6:00 pm *no meeting Jun-Aug	Various Locations, Smithfield
Mecklenburg	1st Tuesday 6:00 pm *no meeting Jul-Aug	Dilworth Grille, Charlotte
Nantahala	3rd Tuesday 6:30 pm *no meeting Jun-Aug	Various Locations, Sylva
NE Piedmont	4th Tuesday 7:00 pm	Johnny Bulls, Louisburg
Northwest	3rd Tuesday 6:00 pm	Various Locations, Boone & Wilkesboro
Piedmont	4th Tuesday 6:00 pm	Foothills Brewpub, Winston-Salem
Southeastern	Last Wednesday 7:00 pm	Various Locations, Wilmington
South Brunswick	Last Friday 12:00pm	Chance's Steak & Seafood, Shallotte
SW Piedmont	2nd Thursday 6:30 pm	Fisherman's Feast, Shelby
Triangle	3rd Tuesday 6:30 pm	Mason Jar Tavern, Fuquay Varina
Western	2nd Tuesday 6:00 pm	Various Locations, Asheville
Yadkin Valley	2nd Wednesday 6:30 pm	Pancho Villa's, Salisbury

Please contact chapter president to confirm meeting details before attending.



NCSS CHAPTER AREAS

There are 19 local chapters of NCSS located throughout the state of North Carolina that meet regularly. These meetings are a great way to stay up to date on the latest issues affecting surveyors in the state. If you are not currently attending your local chapter meeting, we would like to encourage you to get involved.



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 Anna L. Culiati
 aculiati@ncsurveyors.com

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 Alison Olwell
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DIRECTOR'S NOTES



Leadership is an essential component of any successful organization. Effective leadership sets the tone for the organization, inspires its members, and drives growth and success. Christy's efforts in promoting the importance of land surveying and advocating for the interests of the members have been indispensable to the North Carolina Society of Surveyors. She has established valuable relationships, systems, and processes that should be maintained. As her replacement, I am excited to take on the role of Executive Director and build on the great work that she has done.

Your membership is the lifeblood of this organization. Without you, we cease to exist. As most of you know, I have been the Director of Marketing and Membership Development for NCSS for nearly eight years. When I joined the Society in August 2015, we had 740 members. The first goal I set for myself was to reach 1000 members. We realized that goal in 2017. Overall, the membership growth is a testament to the profession's importance and the value that the organization provides to its members. By offering quality professional development opportunities, government affairs advocacy, engaging with young professionals, and leveraging technology, NCSS is ensuring that the land surveying industry in North Carolina remains robust and relevant in the years to come.

As Executive Director, I plan to continue the trajectory we are on, but I also want to focus some of my time engaging with students and young professionals to encourage them to pursue careers in land surveying. The organization has established a great partnership with NC A&T State University. I want to grow our relationships with North Carolina's community colleges, promoting the profession and providing educational resources to students. By reaching out to the next generation of surveyors, NCSS ensures that land surveying will continue to thrive.

Today we have 1,276 members. We are quickly approaching my current membership goal of 1,300 members. There are over 2,100 licensed surveyors and innumerable associates in North Carolina. You might see where I'm headed with this. My long-term goal is for every land surveying professional to know the value of belonging to NCSS. When an organization has a strong and growing membership base, it not only increases its visibility and influence but it also expands its capacity to accomplish its mission. More members mean more resources, skills, and perspectives members can utilize to affect change. Additionally, as membership grows, the better the organization can advocate for its cause and amplify its message, which can lead to broader public support and ultimately result in significant policy changes.

I look forward to working closely with the NCSS Board of Directors and members to achieve our goals and objectives. I am always available to hear your thoughts on potential strategies for improving our overall visibility and influence. Together, we will continue to ensure land surveying is recognized for the vital role it plays in North Carolina.

Sincerely,

A handwritten signature in cursive script that reads "Sherri L. Barron".

Sherri L. Barron
NCSS Incoming Executive Director

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Jonathan Crowe
Jacob Elliott
Craig Emrick
Jerod Foor
Jason E. Fowler
Thomas L. Frazier, Jr.
Joey D. Fuller
Benjamin R. Gardner
Grant L. Giauque

Lyndon Higdon
Joshua E. Holmes
Daniel Patrick Hymiller
Michael L. John
Ramah Payne Jr.
Jeffrey B. Koonce
Ivan Lineberry
Nicholas J. Lutzweiler
Sean R. McBryan
Justin M. McKenna
William McLamb
Timothy A. Mersinger
David J. Mills
Jeffrey R. Morgan
Michael C. Murray

T. Eugene Mustin
Adam Naylor
Eric M. Orndorff
Lee Reumann
Brian Rismiller
Garrison Rule
Daniel R. Sacks
Samuel Stewart Sgroi
Jeremiah Slaymaker
Matthew C. Smith
R. Cory Spence
J. Tyler Utle
Martin W. Webb
J. Dantzler Withers

LETTER FROM THE PRESIDENT



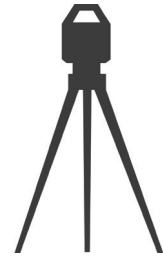
I hope that this article finds everyone well and busy. I am very excited, humbled, and honored to serve everyone as the new President. I am encouraged to continue the work that Dr. Jerry Nave started, and I would like to thank him for his service to the North Carolina Society of Surveyors (NCSS) as our Past President. I believe we will have great success this year, and I look forward to representing NCSS and you in my role as President.

February’s Conference and Trade Show was the largest ever attended by our society. Harrah’s Casino, the membership, staff, vendors, and volunteers really came together to make it a success. The event featured speakers whose topics ranged from the de-escalation of conflict to how the Eastern Band of the Cherokee Indian Nation is growing and thriving as a people. Congratulations to all the winners of the door prizes and Cary Watts of Charlotte for being the winner of the grand prize UTV. The Education Foundation had great success with the reverse raffle and the shotgun raffle. These two raffles will help fund more scholarships for future surveyors.

Thank everyone for allowing me to share my story about how Amyotrophic Lateral Sclerosis (ALS) affected my family. Many of you followed up in conversation with me during the conference on how ALS has affected your own families. Gerald Talley was present from the ALS Association North Carolina Chapter to accept donations. This money goes toward families helping them purchase equipment needed to support the ALS patient and the caregiver. At present, \$1,400.00 has been given to this association by our membership. The Eastern Chapter of NCSS also registered a team for the ALS fundraising walk in honor of one of their members who lost their spouse to ALS. I am genuinely amazed at the outpouring of support from our association. Your generosity will help ALS families in North Carolina care for their loved ones.

Our conference theme this year was “Gaining the Edge.” This theme reflects what we hope to accomplish at the legislative level during the long session of the General Assembly. The proposed Right of Entry bill is an essential piece of legislation that will help us perform our jobs while protecting the welfare of the citizens of North Carolina. The North Carolina Department of Transportation has introduced a piece of legislation that addresses the recordation of right-of-way and control plan sheets at the Registry of Deeds after the project completion. These two issues are important to our profession because they will allow accuracy and efficiency in the finished product from all sides of a boundary survey.

North Carolina currently has over 2,100 licensed surveyors. Our society has a membership of 1275. Nine hundred twenty of those are licensed surveyors. There is strength in numbers, especially when we are talking to legislators and their associates. I



Schedule at a GLANCE

MAY 12, 2023

SW Piedmont Chapter Partnership
8:00am-4:30pm
7.4 PDHs
Shelby, NC

MAY 12, 2023

NCSS Spring Golf Tournament
10:00am
Troy, NC

MAY 20, 2023

NCSS Spring Board Meeting
8:00am
Wake Forest, NC

OCTOBER 4-6, 2023

Otis A. Jones Educational Institute
The McKimmons Center
Raleigh, NC

OCTOBER 4-6, 2023

FS & PS Exam Reviews
The McKimmons Center
Raleigh, NC

OCTOBER 13, 2023

NCSS MAPS Golf Tournament
Pinewood Country Club
Asheboro, NC

encourage you to invite other surveyors to your chapter meetings. Consider serving on our board or a committee. Allow your voice to be heard. I write this during National Surveyor Week. Please take this opportunity to meet and talk with other professionals in our field. Motivate them to participate in chapter meetings or other surveying events.

Christy Davis has been the face of our organization for the past twelve years. She has been an amazing asset to our society as well as a mentor to upcoming officers and board members. Christy has worked hard for our profession while always showing compassion and professionalism to every person she has encountered. We wish her the very best in her much-deserved retirement. While Christy will be leaving us, we are excited to have Sherri Barron in her new role as our Executive Director. Sherri has been such an important part of the staff for the Society. We are excited to see her grow and develop in this new role. Congratulations to both Christy and Sherri.

I look forward to serving as President this year. We have a great group of people serving on our committees, and with all your help, we can achieve great things.



J. David Lee
NCSS President



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NSPS North Carolina Report

by Jim Craddock, PLS



Since my last report: I attended the January 2023 meeting via Zoom, and the March meeting of the NSPS Workforce Development Committee

in Washington D. C. We discussed getting contact information from each state for their Executive Director and Workforce Development Committee Chair if there is one. The committee wants to liaise with each state to learn what types of activities each state has instituted for workforce development and to share resources the NSPS Workforce Development Committee has developed. There is a power point presentation prepared by the NSPS Committee which is available for all members to use for presentations at high schools, job fairs, etc. There is also a narrated version of this power point. The presentation can be altered (by you) to fit your society or company’s needs. The committee will continue to meet and add new resources for members’ use.

I attended the February meeting (via Zoom) and the March meetings of the Certified Floodplain Surveyor Committee. We plan to expand the CFS Program nationally. The NSPS Leadership has established a Certified Floodplain Surveyors Board assigned this task.

I attended the NSPS Lobby Day in Washington DC with Christy Davis and Sherri Barron. We had meetings with the staff of Senator Thom Tillis, Senator Ted Budd, Representative Dan Bishop, Representative Deborah Ross, Representative Valerie Foushee, and left information with the staff of Representative Alma Adams as they cancelled at the last minute. Our requests were:

1. Support for the NFIP/IMAGES Act, which enhances coordination between FEMA and USGS on 3DEP/Lidar Data and ensures Quality Based Selection will be used for surveying and mapping services.
2. Support for the addition of the Broadband Asset Surety Enhancement Mapping Act to the Farm Bill. This calls for using the surveying profession

to improve Broadband Mapping and enhance the deployment of the related telecom infrastructure.
 3. Support for a “Sense of Congress Resolution” that highlights the important role licensing of surveyors and other design professionals play in protecting the public’s health, safety, and welfare.

We had good meetings with all the people that we met and look forward to accomplishing at least some of our goals.

I attended the NCSS Yadkin Valley Chapter meeting in February. I also attended the NCSS Winter Board meeting in Cherokee.

You can keep up to date with NSPS News by receiving the NSPS Newsletter (NEWS and VIEWS) or by listening to the Surveyor Says Podcast.

Respectfully Submitted,
 Jim Craddock, PLS
 NSPS Delegate



Jim Craddock began his surveying career in 1974. He became President of Concord Engineering and Surveying in 2018. He was elected to serve as the NSPS NC Director in 2021. As a member of NSPS, he serves as a member of the Unmanned Aerial Systems Committee, the Certified Floodplain Surveyor Committee, and the Workforce Development Committee.



Jeff Todd
President

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Education Foundation

by Michael J. Adams, PLS
Education Foundation President



Wow, what a great conference! I think this was our largest attendance yet.

It's absolutely wonderful to see so many surveyors participating and benefiting from the work of the North Carolina Society of Surveyors (NCSS). This typically translates into parallel success for the Education Foundation. This year was our most profitable raffles to date, and it's all thanks to the many supporting members of our society who pitch in and purchase tickets, whether it be a cash raffle ticket or a shotgun raffle ticket. A huge THANK YOU to all of you. We completely sold out of both types of tickets. Congratulations to our winners!

Cash Raffle Winners

1st Place: Geoff & Kelly Messenheimer
2nd Place: Nantahala Chapter
3rd Place: Sid Autry
Winning Ticket Seller: Chris Witherspoon

Shotgun Raffle Winner: Lajuanda Pritchard

Thanks to each of you for your support. It's heartwarming to see winners from supporters who are faithful year in and year out. Each of these winners has been supporting this cash raffle ever since I've been involved. Thanks to the Nantahala Chapter for donating their winnings back to the Foundation. Equal thanks goes to Chris Witherspoon who faithfully sells many tickets each year.

Soon the Foundation will be able to support our scholarships through the raffles alone. It's amazing to see how far we have come in such a short time.

Our board welcomes two new members: Jeff Allen and Robin Lee. Thanks for jumping in and being resourceful and helpful during the conference.

We challenge everyone this year to purchase a license plate. If you are a chapter president and would like some handout information for the specialty plates, please contact any of the Foundation Board Members and we will be glad to help. Our license plates are holding steady at around 650 participants. This includes individuals and companies that have multiple plates so there is plenty of room for added participation. The process is very simple.

1. Order using the form found at <http://www.ncsseducationfoundation.com/images/LicensePlate/ApplicationMVR-27PPA.pdf>
2. Order when renewing online: <https://www.ncdot.gov/dmv/title-registration/license-plates/pages/specialty-plates.aspx>

The Foundation receives \$15 annually for each plate, which helps support scholarships to geomatics students across the state. Our next goal is to completely fund a full scholarship for a future surveyor for a full year. We know we can achieve it based on the support of our fellow members. Let's fill the parking lot at next year's conference with surveyor specialty license plates.

We will be awarding our annual scholarships at our next quarterly meeting. I will report on those deserving students in the next edition.

Finally, I would like to take just a moment to heartfully thank each and every one of our Foundation board members. As with any committee, it requires sacrifice, both personally and professionally. I can't think of a better group of individuals to serve alongside. Each and every one is willing to volunteer at the Math Conference, the Guidance Counselor Conference, quarterly meetings and especially at the NCSS Annual Conference.

It's humbling to be handed the wheel of this gorgeous massive cruiser. As I told the other members, I'll try and steer clear of icebergs.

If you ever have questions, would like to donate, or know of a future surveying student that we can assist, please don't hesitate to contact any of us.

Our committee members are Mike Adams, Jeff Allen, David Lee, Robin Lee, John Odom, Jared Ownbey, Clay Pate, Gary Thompson, and Jamie Watkins.

Thanks for your time and support!!
Mike Adams



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Exploring NCSS MAPS

by David Alley, PLS



Greetings membership, my name is David Alley, PLS, current President of NCSS MAPS. I want to introduce you to the NCSS MAPS members and tell you about our mission and projects.

Current members of NC MAPS are Chris Witherspoon, PLS; Kristian Forslin, GISP, PLS; Michael Barr, PLS (Secretary/Treasurer); Robin Lee, PLS; Jerry Callicutt, PLS; and me. Our small group is passionate about preserving our history and as part of this endeavor we have several projects that are ongoing.

Mission

MAPS stands for Museum of Archives & Preservation of Surveying. NCSS MAPS is a 501 (c)(3) non-profit organization tied to NCSS with a mission to provide an avenue to preserve the past of surveying and invest in the future.

NCSS Financials

We currently have \$27,401 on hand. We are spending between \$5,000 to \$7,000 annually on scanning. If you would like to see a more detailed report, please let us know.

NCSS MAPS Scanning Initiative 2023

We are currently scanning maps donated by surveyors to NCSS MAPS. These maps create a database of information for members of NCSS. The MAPS Database was introduced in 2011 as a way to record and preserve the maps of retired and deceased North

Carolina surveyors. These maps, part of an ever-growing compilation, are housed here as a resource for members of NCSS. We currently have 26,312 maps stored in the database. The 2023 initiative is a push to acquire more maps to include in the database. We have reached out to GIS Departments of counties across the state to ask for copies of unrecorded maps they have on file. Several counties have shared maps with us to scan for our member's use. We're trying to spread the word to acquire more maps. We have an intern who is currently scanning maps to include in the database. Having access to this digital archive is one great benefit of NCSS membership. If you know anyone who would like to donate or share their maps for this endeavor, please contact your local NCSS chapter.

Books are Still Available

We currently have in stock approximately 270 copies of *Following in Their Footsteps - Land Surveying in North Carolina*. This year we would like to sell these copies to raise funds for NCSS MAPS. If you would like to have a copy of this exceptional history book, please contact the NCSS Office. The price of the book is \$25 for one or two for \$40.

Bodie Island Geodetic Baseline

The Bodie Island Geodetic Baseline was established in 1848. We had several surveyors along with Christy Davis work on the trail since we have started in November 2019. We work with the National Park Service to preserve this trail. This is a biennial event that you can participate in by watching our website for the details. Please keep this in mind as a way to celebrate surveying history on North Carolina's coast. Our next planned event will be in 2024.

Fundraisers

To help fund the projects above, we have October's annual golf tournament in the mid-state area. NCSS MAPS is here to serve the members of NCSS and to preserve our history. Any donations you can give in either time or funds are greatly appreciated and help all members of NCSS. If you have questions, comments, thoughts, or ideas or would like to donate, please contact me at dalley@allied-engsurv.com.

NC A&T University

by Dr. Jerry W. Nave

Since the last report, we have been very busy in the Geomatics program. Enrollment figures remain steady in the mid-fifties, and we have the prospect of picking up 15 to 20 new students for the Fall 2023. Enrollment is cyclic in that we lose a few who withdraw and then return one or two semesters later. This is usually due to home and work environments as most of our students are non-traditional holding full or part-time jobs. Our students are continuing to pursue and pass the NCEES exams. We have had several graduates become fully licensed in the past six months and several are in the final stages of preparing for the state exam. I personally enjoy getting emails or texts from our students stating that they passed their exams.

In the last report, I mentioned our need for faculty to help teach. We were lucky in that two individuals stepped up to help this semester. We would like to thank Peter Brennan, PLS from the City of Wilmington and Keith Johnson from the NCDOT Photogrammetry Department for helping teach several courses. I am happy to report that we have been given permission to

hire one tenure- track faculty and one teaching faculty member for the fall. We are currently negotiating with an individual for the tenured track position and are in the final stages of interviewing for the teaching faculty position. I hope to introduce both individuals to you in the next edition.

In other good news, Dr. Leila Hashemi-Beni was awarded a \$1.5 million dollar grant from NASA to research harnessing data science for flood monitoring and management. Dr. Hashemi-Beni has continued to build the research arm of the Geomatics program and we look forward to seeing the results of her hard work.

In closing, if you have employees or know someone who may be interested in pursuing a degree in Geomatics, please have them reach out to us.



Dr. Jerry Nave is an assistant professor of Geomatics at NC A&T State University. He earned his BS and MS in Surveying and Mapping and his doctorate in Educational Leadership and Policy Analysis at East Tennessee State University. He received his PLS in 1993 and has over 21 years of experience in the private and public sectors.



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MARK YOUR CALENDAR

Thanks for the Memories



Most of you have heard that I am retiring on April 30th. Surveyors will be in good hands with Sherri Barron taking the helm. I hope to enjoy traveling with my husband, playing

with my grandchildren, and volunteering in my church. I hesitantly leave because I know that I will never have another opportunity like this. You are simply the best to work for and to work with. When I joined NCSS, I had been a stay-at-home mother and part-time English teacher for 25 years. Sara Kusan, Executive Director from 2008-2013, allowed me to re-enter the workforce. I will always be grateful to her. In the fall of 2013, when Sara returned home to take care of her new twins (who will be teenagers next January), President Josh White and the Executive Committee gave me the opportunity to lead the organization administratively. I have enjoyed every year! Let's review some of our accomplishments.

The North Carolina Society of Surveyors (NCSS) had 840 members in 2013. This total included 59 Associate members and 34 Sustaining members. Today, membership totals 1277, including 280 Associates and 58 Sustaining members! This number represents a 34% increase! Membership remains the single biggest budget line item

to help accomplish our goals.

Education is another category where we have seen increased participation and revenue. Our initiation of Chapter Partnerships continues to succeed based on the idea that chapters and NCSS each offer specific strengths to licensees. For example, chapter members know what topics and instructors may be of interest, while NCSS has the resources to support chapters administratively. The benefits to licensees include convenient locations, regional topics, and professional development hours recorded on their NCSS profiles to simplify tracking their history.

In 2022, NCSS offered nineteen fall seminars with an income of \$153,000. At the end of the 2013-2014 fiscal year, the education income was \$86,279. The significant growth enables us to provide more resources to you as members, including a robust library of online courses initiated in 2015.

NCSS has had great legislative success over the decade with the assistance of McGuireWoods Consulting and our lobbyist Kerri Burke. Legislative permission for a specialty surveying license plate raises approximately \$8,000 annually for the Education Foundation scholarship fund. Changes addressing the information included with DOT plans help surveyors find the records they need to complete surveys. Surveyors and engineers now both have equally reduced liability while working during states of emergency. A decrease of the statute of repose to seven years of liability from the commission of an error, removed confusing wording and placement in the NC General





Statutes removing ambiguity for the courts when deciding a surveyor's liability. The fair contracting act was a joint venture with engineers and architects removing surveyors' liability from the negligence of other subcontractors. All of these legislative initiatives benefit licensed North Carolina surveyors and reflect our presence at the North Carolina General Assembly in Raleigh. We have also survived increased attempts to drastically reduce education and experience requirements to the detriment of the public.

Another aspect of our legislative success is the transformation of our Political Action Committee from complete dormancy in 2011, to an active fund supporting those legislators who have helped us along the way. Thanks to Jamie Watkins, Shane Strickland, and Marshall Wight for resurrecting the PAC one \$5 raffle ticket at a time!

Another resource continuing to service our membership is our MAPS database. In 2015 MAPS President Charlie Morgan authorized the purchase of a scanner. That purchase and a new database allowed us to quickly load donated plats preserving the historical record of North Carolina surveys.

MAPS President David Alley and the committee members

continue to authorize funding for a contract scanner. The part-time work plus the generosity of your time and contributions have grown the database from a little over 600 maps to more than 26,000!

I cannot celebrate our success over the decade without celebrating my colleagues. I have been blessed with the most wonderful staff through the years. Rhonda Lester, Morgan Creager, Michelle Kenny, Sherri Barron, and our newest member, Alison Olwell, have all been women of excellence. It is amazing how dedicated and conscientious they all are. They have made my success possible, and I'm very grateful to have worked with each one of them.

I retire with NCSS in a good place. I know I have done my best for you. I hope you will remember me as a businesswoman with integrity. Those same qualities have been shown to me in return. I will always have the fondest memories of my time here. I'll continue to keep up through the website and Friday Feature. I now make way for new blood, new energy, and more growth in the future! In the words of the iconic Bob Hope, "Thanks for the memories."

Tip and Tricks

by John Story, PLS

At the recent NCSS Annual Conference we had three separate seminars that could fall into the category of ‘Tips and Tricks’ when it came to survey procedures. These contributions have come from NCSS Education Committee members and other active NCSS members. The Education Committee hopes this will be a series of articles where surveyors share ideas that can help us all to be more efficient and effective in our work. At the end of the article will be information on how you can contribute a ‘Tip or Trick’ that can be shared with our readership. The Committee hopes you find value and application to the following ideas.

The Employee Experience

Contributed by Bill Beardslee, PE, PLS, PP

It is very clear that a critical issue facing surveying firms is the obtaining and retaining of employees. The environment has changed dramatically. In the 1940’s and 50’s, employee mantra was “I need a job;” in the 60’s and 70’s and 80’s – “I want a job;” in the 90’s and 00’s – “I guess I should look for a job;” and today “How will this position fit into my lifestyle?” There is no more “my way or the highway.”

Employees will use as a job selection criterion the ability to work at home or have flex hours with no real thought of how that may affect the functioning of the firm or its profitability. This is true across all professional fields. I believe the fallout from “trophies for participating” has come home to roost. Keep in mind that, according to many management studies, the average employee changes jobs every 3 ½ to 4 years.

But the short answer to this situation lies in being honest with the employees. If certain ideas will not work in your organization, say so up front. This is also true for evaluating the impact of an employee’s activity. If it isn’t working, tell them so and together determine an alternate course of action.

Noted author Richard Branson opines: “Teach employees well enough so they can leave. Treat them well enough so they don’t want to.” Make your workplace somewhere the employees want to be.

Field Data Management

Contributed by Tim Guisewhite, PLS

Incorporating year month day format in your file naming can organize your files or project sub-folders by date automatically. YYMMDD Example for March 20, 2022 = 230320.

Field Data Management for Multiple Crews

Contributed by Jim Gellenthin, PLS

In larger firms who frequently work on larger projects:

- Assigning point range series to specific employee/crews when overseeing multiple crews helps identify who did what work on projects.
- Follow up to that – correlate the point number series for control/traverse points to the topo point range for each crew/individual.
 - IE: control points 100-199 and topo points 10,000-19,999
 - IE: control points 200-299 and topo points 20,000-29,999
- Allow points 1 through 99 to be primary site controls (like GPS or the initial primary traverse) for every job.

When Using Carson SurvCE

Contributed by Adam Canoy, PLS

Utilize the “Align in SurvCE” function. This easily translates and rotates points to best fit. It is also great for finding outliers that may not fit as expected in the field.

We hope you have enjoyed this inaugural article on ‘Tips and Tricks’ and will consider submitting your own contribution for future articles. Please send your ideas to John Story, Chairman of the NCSS Education Committee, at jstory@dg-anc.com.



John Story entered the surveying business working as a young man for his father. He earned his Bachelor of Civil Engineering Technology in 1978. In 1994, John became a shareholder and was named to the Board of Directors of Donaldson, Garrett & Associates, Inc. John has served on the NCSS Board of Directors in several roles such as the Mecklenburg Chapter President, NCSS Treasurer, and NCSS Education Committee Chairperson.

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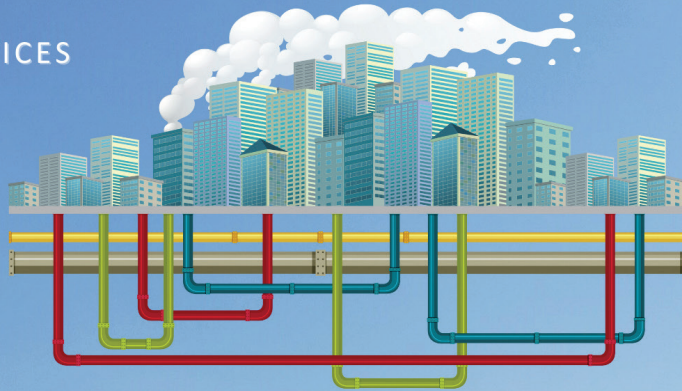
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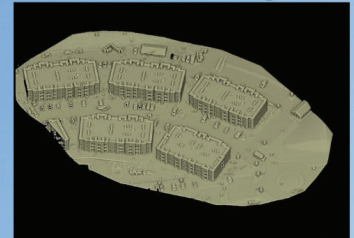
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Aerial



3D Scanning



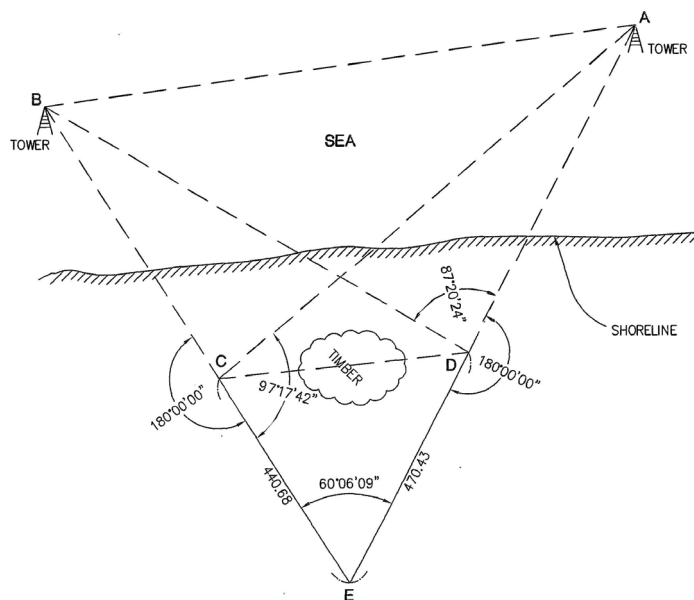
SUE



PROBLEM CORNER

PROBLEM:

The government has constructed offshore communication towers to help monitor the coastal waters. A fiber optic cable needs to be connected from the points on land to the towers for increased security. This cable will enable the towers to transmit more information quicker for surveillance and environmental purposes.



FIND:

- Distance AC = _____
- Distance AD = _____
- Distance BD = _____
- Distance BC = _____
- Distance CD = _____
- Distance AB = _____

Required Answered Format
 Distances: Nearest Hundredth

Looking for the solution?
 It's on our website at
www.ncsurveyors.com or
 scan this QR Code.



2023 Conference

The 2023 Conference at Harrah's in Cherokee was a tremendous success. Let's celebrate by the numbers!



1 - Grand Prize Winner, Cary Watts from Charlotte won the SSR Bison 400 U utility vehicle.



2



2 - Surveyors of the Year. Mike Adams, Surveyor of the Year voted on by his peers. Adam Canoy, Young Surveyor of the Year voted on by the Board of Directors.



11

11 - Different instructors shared their expertise through seminars titled De-escalation of Conflict, Tree ID, Successful Workflow, Field Tips and Tricks, Railroad Resources and more!



13

13 - Professional Development Hours available to surveyors.



35

35 - Booths were provided to vendors to display their newest equipment and services. They had plenty of time for face-to-face networking.



52

52 - Plats were entered into the plat contest. Congratulations to all our winners, especially Tim Guisewhite who won Best Overall.



270

270 - Registrants, which is the largest attendance ever recorded surpassing the years we attended Grove Park Inn.



330

330 - Attendees joined us for the NCSS General Membership Meeting on Friday. They were also treated to an update by NCBEES Executive Director, Andrew Ritter as he provided updates on the state of surveying.



1400

1400 - Dollars were given to support the President's Charity Choice ALS NC Chapter.



?

Untold - Dollars won and lost in the Casino.

THANKS FOR JOINING US!
SEE YOU NEXT YEAR

FEB 8-10 2024

SHERATON IMPERIAL RALEIGH, NC

PROFESSIONAL LICENSING: Rigorous for a Reason.

There is a debate taking place about the extent of licensing needed for many jobs. While legitimate concerns have been raised about the level and cost of licensing regulations for many trade and vocational occupations, one fact cannot be overlooked: **Professional licensing is different, it matters, and it is rigorous for a reason.**

AN IMPORTANT DISTINCTION

There is an important distinction between highly complex, technical professions that have a clear impact on public health, safety and welfare, and the trade and vocational occupations that are the primary drivers of concern around appropriate levels of licensing.

Professionals such as engineers, surveyors, architects, landscape architects, and CPAs are responsible for the physical and fiscal integrity of buildings and financial systems. They design and build public and private institutions - like schools, hospitals, bridges, roads, and tunnels - and ensure the accuracy of business, personal and public financial records, audits, and tax filings.

These professionals must master extensive, complicated codes and laws before they are authorized by their licensing board to certify compliance, quality, and integrity of work. This “seal of approval” confers a legal responsibility for upholding our public and private spaces and financial systems. This level of responsibility - and liability - rightly requires rigorous and ongoing education, examination, and experience.



75%

of voters believe that ensuring qualifications for certain professions is important.¹

ONE SIZE DOES NOT FIT ALL

One-size-fits-all legislation to weaken or eliminate licensing requirements would sweep up highly complex, technical professions and dismantle carefully developed professional licensing systems that protect the public.

These overly broad bills would eliminate the ability to establish, verify, and enforce qualifications. Instead, it would be left to market forces to sort the good from the bad, the qualified from the unqualified. Bad reviews or lawsuits after the fact would replace rigorous education, examination, and experience. That approach simply does not work for ensuring the structural integrity of a building or fiscal integrity of an audit.

67%

of voters believe that consumers are best protected by licensing boards that oversee professional exams, education, and experience requirements.¹



[1] Benenson Strategy Group. (December 2019). "Exploring Public Opinion of Professional Licensing."

LICENSING DONE RIGHT WORKS

There is no single, perfect professional licensing model. Licensing must take into account the unique distinctions and requirements of a profession. That is why it is best shaped by those with first-hand knowledge and expert understanding of the profession.

ARPL members have led with responsible licensing models that ensure the education, experience, and testing necessary to protect the public while also providing individuals with:

- Clear career paths
- Consistent and evenly applied licensing requirements across the profession
- Mobility and opportunities to maintain careers across different states

Our approaches to licensing are serving the public and professionals well. These models should be preserved – not destroyed.

Licensing done right works. Let's fix the problem, not create new ones.



ABOUT THE ALLIANCE FOR RESPONSIBLE PROFESSIONAL LICENSING

The Alliance for Responsible Professional Licensing (ARPL) promotes a responsible, balanced approach to professional licensing, educating policy makers and the public on the importance of high standards, rigorous education, and extensive experience within highly complex, technical professions that are relied upon to protect public safety and enhance public trust. The Alliance is composed of national associations that represent numerous professions and their licensing boards, and advocates for licensing practices within professions that deliver uniform qualifications, safety, and consistency, while also providing individuals with a clear career path and fair opportunities to maintain that career.



LEARN MORE

For more information on ARPL, please visit responsiblelicensing.org or email directly to info@responsiblelicensing.org

Time is Running Out

by David B. Zilkoski



It is now the Spring of 2023 and in two years, NGS will be finalizing the new terrestrial reference frames and geopotential datum. This is the seventh article in my series of Tarheel articles that have provided information on NGS's modernized NSRS.

ngs.noaa.gov/PUBS_LIB/NOAA_TR_NOS_NGS_0067.pdf).

My Spring 2022 article highlighted the time-dependent aspect of the modernized NSRS and why it is necessary for the new system. As stated in previous articles, NGS is developing models and tools for users to be able to transform coordinates between the four national terrestrial reference frames and the International Terrestrial Reference Frame, as well as estimate coordinates at epochs different from the survey observation epoch by accounting for movement.

My Fall 2022 article provided a few of my thoughts on lessons learned from the implementation of North American Vertical Datum of 1988 (NAVD 88) based on my experience as the NGS NAVD 88 Project Manager. I highlighted that no matter what any agency or an individual does, some users will not worry about a datum change until it is officially published, and they will then ask you why you did not inform them earlier about the change. Probably the most important thing for surveyors is to keep informed of the progress of the new NSRS and how the new, modernized NSRS will change how they access the NSRS (sign up for NGS's newsletters at <https://geodesy.noaa.gov/INFO/subscribe.shtml>). This brings us to this article.

The Fall 2020 article gave a brief introduction to what working in NGS' modernized NSRS in 2022 will mean to North Carolina surveyors. It briefly addressed the following questions: (1) Why is NGS modernizing the NSRS? (2) What are the expected changes from the old to the new NSRS? and (3) What does NGS mean by time-dependent coordinates?

My Spring 2021 article in *The Tarheel Surveyor* discussed the Deprecation of the United States (U.S.) Survey Foot and what that means to NC Surveyors. Well, the deprecation of the use of the "U.S. survey foot" became effective on December 31, 2022. No matter how many times the following statement has been written in many ways, surveyor still ask how do I handle previously published SPCS 83 coordinates. So, it is worth repeating again

- The bottom line is that the U.S. survey foot will be used for existing SPCS83 forever. That said, NGS will only provide SPCS2020 coordinates in meters and the international foot.

How will the data be delivered to users?

Well, on June 9th, 2022, Dru Smith, National Geodetic Survey (NGS) NSRS Modernization Manager, gave a webinar providing an update on the status of the modernization. The power point slides and video of the presentation can be downloaded from NGS' Webinar website under the following title: It's 2022...are we done yet? [https://geodesy.noaa.gov/web/science_edu/webinar_series/2022-are-you-done-yet.shtml]

My Fall 2021 article briefly defined the different types of coordinates that the National Geodetic Survey (NGS) will be distributing in the new, modernized National Spatial Reference System (NSRS) as defined in NOAA Technical report NOS NGS 67, Blueprint for the Modernized NSRS, Part 3, Working in the Modernized NSRS (<https://www.>

First, it mentioned that NGS will have a two-track approach to coordinates: Reference Epoch Coordinates (REC) and Survey Epoch Coordinates (SEC). My Fall 2021 describes these two types of coordinates. See the box titled "New Types of Coordinates." RECs are like coordinates computed by NGS in a nationwide

adjustment project such as the National Adjustment of 2011.

New Types of Coordinates

A two-track approach to coordinates

<p>Reference Epoch Coordinates</p> <ul style="list-style-type: none"> • An estimated “snapshot” of entire network • Every 5 or 10 years • Similar to NAD 83(2011) epoch 2010.00 	<p>Survey Epoch Coordinates</p> <ul style="list-style-type: none"> • Time-dependent! • Reflects coordinates at time of observation • Multiple SECs can show changes over time
---	---

(Image from: NGS June 6th Webinar - It's 2022...are we done yet?)

The June 9th, 2022, webinar provided a data delivery prototype example that NGS is working on. See the box titled “Primary Information – Prototype.”

The box below provides some of the basic information of a mark in the Primary Information section, such as its PID, name, stability, GNSS usable code, setting and the latest recovery information. As previously stated, the RECs and SECs will be provided in separate pull downs so the user can select the coordinates that they need for their project requirements. Again, this is a prototype, so users should feel free to send feedback to NGS. NGS wants to generate a usable product, and is interested in user feedback.

Data Delivery Prototype

NGS Home About NGS Data & Imagery Tools Surveys Science & Education Search

Enter PID: DI4044 Get Datasheet

Example PIDs: DI4044, AA4394, AA4401, AA4404, DK3338, DL8635

NSRS Datasheet: EBR018B (DI4044)

Primary Information	Show
Reference Epoch Coordinates	Show
Survey Epoch Coordinates	Show
Coordinate Plots	Hide

Reference Frame: CATREF

Latitude	Show
Longitude	Show
Ellipsoid Height	Show

Map and Photos Show

(Image from: NGS June 6th Webinar - It's 2022...are we done yet?)

NGS is developing new tools for obtaining information about published marks. They have developed two tools

that may be useful to surveyors today; for example, the “NGS Map” and the “Passive Mark Page.” Users can now use the NGS Map product to find the location of marks and information about the marks. The NGS map provides the ability to view multiple datasets provided by the National Geodetic Survey. These datasets are: NGS Datasheets, OPUS Shared Solutions, and NOAA CORS Network. This application not only allows users to plot these datasets but there is a measuring tool available, multiple basemaps, a select tool to select and export data as well as an attribute table to view all the attributes and filter the datasets by their attributes.

NGS Map Product



(<https://geodesy.noaa.gov/web/news/pdf/NGS-Releases-NGS-Map-to-Production.pdf>)

The Passive Mark Page Webtool provides the coordinate information for a mark.

NGS Passive Mark Page

National Geodetic Survey
Positioning America for the Future

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Passive Mark Page

This is a Beta product. NGS is interested in your feedback concerning its function and usability as well as how users would like to interact with NGS datasheet information in the future. Email us at ngs.feedback@noaa.gov

The information provided on this page may be out of date with the current published datasheet. Whenever there are differences the datasheet will be the authoritative source. Visit the [Datasheet](#)

Enter PID: AH9930 Get Data Recover this mark Go to Datasheet

Designation: UNV 18
Setting:
Last Recovery Date/Condition/By: 09/03/2019 - Not recovered, not found - NORTH CAROLINA GEOODETIC SURVEY

PID: AH9930	State, County: NC, UNION
Stability: Y	Country: US
GNSS Usable: Y	Latitude: N 34° 54' 17.47159"
Orthometric Ht. (m): 211.077	Longitude: W 089° 43' 37.89430"
Vertical Datum: NAVD 88	Ellipsoid Ht.: 180.670
Vertical Source: ADJUSTED	Position Datum: NAD 83(2011)
Order/Class: 2/2	Position Source: ADJUSTED
Geoid Ht (m): -30.391	Network Accuracy Hz (cm): 1.78
Geoid Model: GEOID18	Network Accuracy Ellip (cm): 1.88
GNSS Ortho Ht. (m): 211.06	Ortho Ht. Residual (cm): -1.6

(<https://beta.ngs.noaa.gov/datasheets/passive-marks/index.html>)

These tools are useful today and I am sure something similar will be incorporated into the new, modernized NSRS. NGS is trying to develop tools useful to everyone, but that will not be possible unless they hear from users. The following statement on NGS beta products explains how to provide feedback and why it is important:

“NGS is interested in your feedback concerning its function and usability as well as how users would like to interact with NGS datasheet information in the future. Email us at ngs.feedback@noaa.gov.”



David B. Zilkoski served as Director, National Geodetic Survey, from 2005 - 2009 and was the Project Manager of the New Adjustment of the North American Vertical Datum of 1988. He currently works as a geodetic consultant on NGS' modernization of the National Spatial Reference System. He is Chair of North Carolina Geodetic Survey Advisory Committee and a member of the North Carolina 2022 Reference Frame Working Group.

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NSPS Memorandum of Understanding

In 2012, NCSS agreed to partner with the National Society of Professional Surveyors (NSPS) to foster membership on both the state and national levels. As a result, your membership with NCSS now includes dual membership with NSPS. Read the MOU on our website at: www.ncsurveyors.com/about_ncss/governing_documents/nsps

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The Most Important Angle

by William B. Ciccolella, PLS



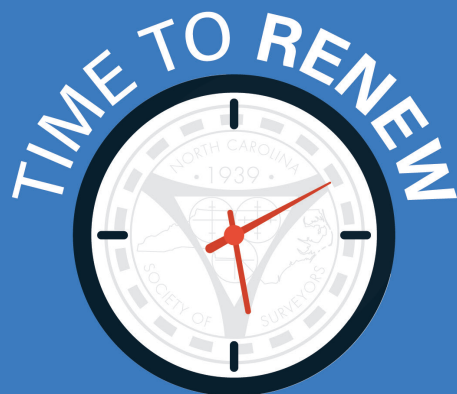
When my first boss started teaching me what he knew about land surveying, one of the first lessons I got was about how we hold angle over distance, and that no angle was more sacred than 180 degrees. “Keeping a straight line straight,” Don called it. He went on to explain to me that the descriptions found in many old deeds and plats are more akin to a pirate’s treasure map than depictions of mathematical fact. So, when we were retracing an old boundary, Don insisted we verify the location of a line we were tying into with more than the front to back distance as indicated on our deed. He wanted shots on that line’s endpoints, because that old line ran straight from end to end when it was first established, and so it still does. The only way to be sure there isn’t a gap, or an overlap is to survey the line’s original endpoints. I’m not going to say Don moved irons he found to be errant, but when we were done there was an iron ON that line, we didn’t set a new one, and there wasn’t one in the errant location anymore...

Today we follow “modern” surveys based on field work done with total stations and data collectors. Sometime around 1980, the numbers in deed descriptions and on plats became much more reliable, and a decade later it seems this reliability in the numbers was almost universal. But reliability in the numbers isn’t the same as reliability in the location. Having a deed based on a 2012 survey that calls for an iron pipe on an adjoiner’s line that isn’t really on that line is still a possibility. Re-establishing the original line is the only way to know the proper corner location. Sometimes, this is impossible because the original corners are gone. But frequently there are at least some other irons that were (or were

supposed to be) set on that line that can be a good witness for the location of the old line.

Although the front to back error might nowadays be tenths of a foot instead of tens of feet (or hundredths of a foot instead of hundreds of feet), in my opinion rear corners should always be reset based on other nearby rear corners on that same line, not platted sideline distances. Although I am much more inclined to hold a record sideline distance from back to front than from front to back because the rear corners are more likely to be original and the neighboring front monuments may be replacements based on other nearby replacements, the basic rule here is to set missing back corners from other back corners, and missing front corners based on other fronts, even though the irons found may be from a different “make, model, and year.” The result is “keeping a straight line straight.”

William B. Ciccolella graduated from Guilford Technical Community College with an Associate in Applied Science degree in Surveying Technology. Bill also earned a Bachelor of Science in Business Administration from Western Carolina University. He has worked for the NC Dept. of Transportation and with several local surveyors. Bill is the President of Accurate Surveying. He has served as President and Vice President of the Piedmont Chapter and has won a host of ribbons in the NCSS annual Plat Awards. He has three children, two step children, and lives with Martha in marital bliss in Bethania.



We hope you will join NCSS as we continue to make your professional well-being our primary concern.

Renew Online
Beginning May 23, 2023

MEMBER PROFILE

Dean Exline



Wife's Name
Kris Exline

Children & Grandchildren

Erin Exline lives in Winston-Salem, NC, and works for Forsyth County Parks System. Nastassja Howell is a nurse in Ohio. She is married to Cody and mother to two of Dean's favorite people, daughters Finley and Theo.

Favortie Move

Red, with Bruce Willis

Favorite Food

Barbequed anything!

First Job

Pumping gas, washing windshields, and checking the oil at a full-service gas station.

Vice President Dean Exline's childhood goal was to follow Peter Pan's footsteps and never grow up. When that didn't work out, he thought about becoming a State Patrol Officer. Life sometimes has different ideas. In high school, Dean went to work for his brother, who was a licensed surveyor on several projects around southern Ohio.

Coming from a family of surveyors, one could argue it was in his DNA. He grew up camping with his entire family, including his dad, who was a forest ranger. He loved surveying work and began working towards licensure.

When Dean graduated from college, he went to work for American Electric Power as a surveyor. Over the next 22 years, he worked on a traveling survey crew throughout the Midwest. He mapped everything from power lines, power facilities, inspection tunnels inside concrete dams, coal bunkers, and massive electric switchyards. He even worked inside a nuclear reactor vessel!

In 2000, he wanted a change and moved to Wilmington, NC, to work for an engineering firm as a Survey Manager. The events of 9/11 in 2001 led to downsizing, allowing Dean the opportunity to open his own business GeoInnovation, PS. At its busiest, he had multiple crews and an office in Columbus, Ohio. At one point, Dean held licenses in nine states. Twenty-one years later, he still enjoys guiding his company, although he now sticks closer to home.

Dean is most proud of a project he completed in Huntsville, Alabama, called Bridge Street Town Centre. It involves approximately 100 acres of mixed-use development. GeoInnovation performed a complete ALTA Survey, multiple condo map changes, limited construction staking, engineering surveys, and other services over nine years. He chuckled that he was in Huntsville so often that the front desk of his favorite hotel handed him the keys to the same room each week when they saw him walk in.

What is Dean's favorite equipment to use while accomplishing these projects? A GPS receiver. He thinks the advent of GPS surveying equipment has helped change the profession more than any other item.

Dean also volunteers his time to help support the profession. NCSS members elected Dean as Vice President of NCSS in November. He began serving his term in February. He will move through the positions of the Executive Committee to become President in 2025. He has served on the Long-Range Planning Committee for the past 18 months. He also served on the Cut Score Review for the FS exam a few years ago. "Serving the profession is a great way to understand what actually goes into keeping the profession a profession," according to Dean.



What piece of wisdom would he give a young surveyor starting his/her career? "Embrace and keep up with technology, but don't let it rule the way you do business. The technological advancements of the last 40 years have made surveying easier, but you will still need critical thinking skills and human intervention to make it all work."

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