



# MISSOURI SURVEYOR

A Quarterly Publication of the  
Missouri Society of Professional Surveyors

Jefferson City, Missouri

June 2026

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## CALENDAR OF EVENTS

### 2025 & 2026

#### July 17, 2026

Zoom Call, Board Meeting  
MSPS Office, Jefferson City, MO

#### August 10-12, 2026

Review Course  
Location Rolla, MO

#### October 1-3, 2026

69th Annual Meeting and Convention  
Oasis Hotel, Springfield, MO

#### December 11, 2026

Zoom Call, Board Meeting  
MSPS Office, Jefferson City, MO

**Front Cover:** A survey to recover GLO corner at the Northeast Corner of Sec. 33, T26N, R7E following severe blowdown from the tornado events of March 14<sup>th</sup> and April 2<sup>nd</sup> of last year. The monument fortunately remained, but all bearing trees were either damaged or destroyed. Overall, these tornados damaged an estimated 25,000 acres of timber across two Ranger Districts of the Mark Twain National Forest. It took over an hour to clamber 600 feet over windthrown logs to find the corner. Photo by Terry Throesch, USFS Surveyor.

**Back Cover:** One of our crew chiefs, Tom Sutherland took this photo and I thought it would be a good one for the magazine. Tom said they were working away at St. Louis Lambert Airport when suddenly, the robotic instrument said the target was lost and it was out of level on the data collector. When Tom and the crew looked back to see what the deal was, they saw this red tail hawk had found himself a nice perch. Image submitted by Jeremiah Ditch, PLS, David Mason + Associates

Chris Ferguson, Editor  
Austin DeSain, Editor



## Notes from Editor Ferguson's Desk

*Chris Ferguson, President-Elect, Editor*

Here's hoping everyone is having a pleasant spring, with plenty of work on tap. Often this time of year there's too much to do in a short time, and the weather doesn't always cooperate. Rain and wind are one thing, but as our cover illustrates, much more severe conditions can really influence when, where and how fast we can do our jobs.

This issue should prove to have plenty of variety, with another Member Spotlight feature from a decorated member of our Society, David Sherrill, PLS 2051. He looks back on his career as a crewman to officer of the Illinois Professional Land Surveyor's Association on to the state legislature where he crafted several bills elevating the profession "across the river", and finally on to expanding the surveying degree program at Southern Illinois University – Edwardsville.

Also included are several other articles of interest such as the initial point of the Public Land Surveying System visited by my editorial colleague Austin DeSain and company, this year's Trig Star scholarship winner, a visit to the US Capitol by NSPS, and an "Op-Ed" piece by yours truly about the declining numbers and advanced age of our chosen profession among others. Speaking of NSPS, be sure to check out "Surveyor Says" when it arrives in your email – it's always full of information on the national level useful to us here at home.

Watch out for severe weather this season and never push "just a couple more shots" when lightning is nearby. Stay safe, enjoy this edition and we'll see you next issue. 🇺🇸

*Chris*

## Notes from Editor DeSain's Desk

*B. Austin DeSain, P.L.S., Director, Editor*

Notes from Editor DeSain:



The June edition of Missouri Surveyor arrived quickly, maybe not any faster than previous years but it *seemed* that way! Time and perception of time are not the same, but that's for a different magazine. By now, the leaves have filled out and survey efforts are in full swing. I remember the old days of carrying car batteries around for your GPS Base in the humidity this time of year. Thanks to tech advances with battery sizes and capacities, those are just survey memories now.

*(continued on page 4)*

# THE MISSOURI SURVEYOR

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## President's Message

Mark W. Wiley, PLS



As I sit down to write the third installment of the President's message for my term I stop and ask, "where has the time gone"? When we stay busy things can get away from us and it feels like the profession has been very busy this year. It is something I don't want to talk about in detail, saving it for a conclusion of my tenure as your president.

When I think about the global accomplishments the land surveying profession has achieved it leaves me in awe not just of the profession but humanity in its entirety. It will be old news by the time this article is printed but we can think about the Artemis II space mission. Blasting off on April Fool's Day and splashing down on April 10, just a few days ago now. The last time we went to the moon surveyors were measuring with transit and tape, hunting for corners with a dip needle and paying a lot more attention to witness trees than we do today. We called each other on rotary phones that in a lot of cases were on a party line. I can remember more than once having someone stop us mid-sentence, asking us to give up our youthful chatter so they could make an adult call. Today most of us have no less than one mobile phone not just for phone calls but text and email too. Something that has popped up in society, sometimes saving us from disaster and other times throwing us under the bus. Where will we be in another fifty years, who knows, and those who try to predict have failed miserably over the years, so I won't.

While we can be fascinated with how far we've come, what with black box technology, whistle sticks and the robotic aspects of surveying, nothing will humble you more than having something get out of sync. As if to prove that point comes the task of writing this letter to y'all. No sooner did I come to an agreement with the fine editors of the Missouri Surveyor when it was due than my computer went belly up on my desk. We've all had issues with equipment, going back to the day when we took our magnifying glass off our neck and laid it on the nightstand without any thought, until we tried to turn our first angle the next morning. The EDM battery did not charge. The scanner you set up then look in the box and find the batteries are not here. The thing I've noted about most of my colleagues is their ability to "get over it". We are not a group of people who will stand around crying about our would-a, should-a, could-a's. When the final angle does not give us the correct answer, we are quick to go back and check the math. Should that not work we then move to checking the actual angle. We could kick back and do something weird with our results, but I like to think most of us have learned garbage in means garbage out.

(continued on page 5)

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## Notes from Editor DeSain's Desk *(continued)*

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This season's edition filled out with another excerpt from Foley's book, *The Genesis of Missouri*. I hope you've all enjoyed learning about the upbringings of this region and state as we continue reading about the path to government, with hurdle after hurdle in the way.

We also have an insightful article by my fellow editor Chris Ferguson to reminisce and ponder about surveying with "Where Have All The Surveyors Gone?". The front cover image tells a story of nature devastated after a tornado, a tricky point to access after all of the treefall. Also, our back cover image is a great one of a hawk making himself comfortable on a Trimble total station at the airport, sent in by Jeremiah Ditch at David Mason + Associates. Pictures and stories from your own survey experiences are welcomed for future editions, so please send them in!

We hope you can read this quarter's newsletter and stir up some of your own memories to share with younger surveyors. The transfer of knowledge often happens best with a good, insightful story about your own experiences. 🇺🇸

*Austin*



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## President's Message *(continued)*

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With our accomplishments come change. Surveyors were rightly concerned when they started using a box with a piece of glass to measure distances then again using satellites to acquire coordinates and inverse bearing & distances. How annoyed we can become when someone lays a tape measure between two points, we say are 3 feet apart and they tell us it measures 2.80' with a tape.

While things are constantly changing the surveyor embraced change quickly. Like when we could quit carrying a rake to look for markers because the metal detector worked so much better and was far less work. And some things have stayed the same, like reading and trying to understand the description and what its intent was. Going beyond what the words say, what did the Scribner mean when they wrote this? We still ended up going over the hill searching for that other monument because the one we were searching for was not there or what we found was more than a little sketchy. Going the extra mile, putting in that extra effort is all part of being a surveyor.

To that end we need to stay prepared to donate time to our causes, whatever they may be. Donating time to the surveying society by working with a chapter or helping with a committee. I know the legislative committee needed help this winter and it is to those folks who have gone the extra mile, on little notice, we owe a big thank you. Working to increase funding for the Land Survey Program and getting this bill out of committee. They also moved legislation like the Railroad and Geospatial bills through the process getting them closer to passage, but nothing is ever finished. I'm sure several of us can remember the three-minute video by Schoolhouse Rock: "How a Bill Becomes a Law".

We should not forget for whatever reason there always seems to be some group or power trying to take us back in time. Not sure about anyone else, but I have enjoyed the inside toilet and do not want to return to the land of the outhouse.

This year we had several individuals enter a new program. By signing up for the Spring Workshop and going through the Certified FEMA Surveyor (CFS) program sponsored by NSPS, adding yet another chapter to what we can do better than we used to. With the Spring Workshop behind us it is time to look ahead to the Fall Convention.

A heavy emphasis this fall will be on field to finish by different manufacturers. As my dad would say, there is more than one way to skin a cat. The question for these presenters being how do you think your mouse trap works the best? The differences between Real Time Kinematic Network (RTKN), Static (S), and Rapid Static (RS) will be discussed by the presenters. A presentation on recommended business practices for surveyors, designed to help them avoid being in jeopardy, seemingly presented as a game. You can't miss the annual business meeting when we vote for officers and directors. There will be segment called *Stump the Chumps* following the business meeting and don't forget you have the opportunity to sign up for committees too

This year the golf outing will be held at Bill & Payne Stewart Golf Course. We're also looking forward to sending young surveyors as a team to the NSPS Roundup. It will be interesting to see how they fare against other teams from other states. I think they will represent our state very well.

Boys and Girls, Young and Old; I leave you with this quote from Back to the Future when Doc Brown says to a Young Marty McFly – "Your future has not been written yet. No one's has. Your future is whatever you make of it. So, make it a good one." Let us as a profession continue to make this a noble pursuit giving the utmost of performance, participating in nothing but honorable work, placing service before profit and with the need for divine guidance. 🇺🇸

*Mark Wiley*

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# Where Have All the Surveyors Gone?

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by Chris Ferguson

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Sketch of 1860's survey crew (Orbis Inc. website)

**Something I hear** nearly every day when discussing timeframes to deliver surveys for clients is echoed in the title. I really don't have a standard answer for the general public ready – the explanation would take far too long. But what follows are some of my observations:

**The incredible shrinking profession.** This is not a new phenomenon, actually, it's been trending nationwide for years. Numbers of licensed surveyors have been declining steadily since the 1990's with more registrants retiring than are entering the pipeline. Missouri is not immune to this development. In fact, many new MO registrants are actually older practitioners already registered in other states.

This is rather ironic, since back when I was pursuing licensure, I was told more than a few times that “we got all the surveyors we need”. Somehow, I believe that attitude contributed to the decline.

**The Lions in Winter.** Just a few years back, I was just under the “average age” of land surveyors in the state as reported by the State Board. For some time, I remained in that demographic. As far as I know, I still may be, technically, a “young surveyor”. If so, that's alarming, because I turn 65 this year. So, a probable majority of us are already past retirement age. **We have an Image Problem.** When the layperson thinks of surveyors, most likely the first thing that comes to mind is “the side of the road gang” wearing highway yellow vests behind orange traffic cones. Granted, that is some of us;

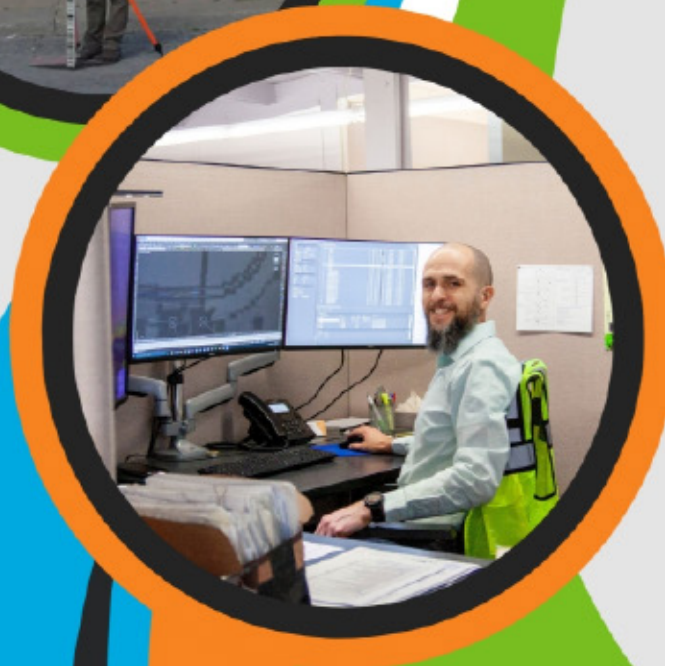
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## Where Have All the Surveyors Gone? (continued)

however, we have acquiesced to the mantle of tradesmen and slowly accepted a place in the public eye a little less exalted than fellow professionals such as engineers and architects, instead becoming thought of more like plumbers and bricklayers.

**“So how much do you make?”** This question was posed to me several times at a high school career fair I was part of in St. Louis County over 20 years ago. There was scant interest in the static display of GPS, total station, level and other items I set up. At the time, most kids had been conditioned to go to college for some sort of business major to maybe become the next Bill Gates. Perhaps times are slowly changing, and young people are gravitating away from accumulating massive student loan debt to obtain a useless degree while striving to join an overpopulated career field. But if future surveying students are out there, we’ll have to find them because I doubt they’ll come to us.

**Eating our young.** As a young crewman working my way up to “running the gun” and eventually on to party chief I saw many promising young people that, if they had chosen to take the same lumps as many of us during the “bad old days”, (layoffs, recessions, low pay, no insurance, high stress, night school, etc.) may have become good PLS’s themselves.

One of my favorite stories to recount to young people is of a fellow named Dutch. Dutch was the kind of crewman everybody wanted. Prompt, polite, did what was asked – no more, no less. But Dutch was absolutely unmotivated about advancing in the business. His sole ambition was to drive a Bunny Bread truck working a route on the “Eastside” as we called it in STL. Eventually, that dream materialized and he dropped surveying like a hot coal. Best wishes to him, but there were a lot more like Dutch I saw over the years leaving to chase other careers because they saw ours as a dead-end-job.

**5:1** This ratio highlights the gradual decline from a “full” survey party back in the day (Chief, Notetaker, Instrumentman, Front and Rear Rod/Chainmen) that was *sometimes* seen when I started. Each new technological development such as EDM, data collectors and eventually robotic instruments to RTK GPS whittled away the field crew size to where many “crews” are now just one person. Great for the bottom line as a business, but the opportunities to enter and progress are fewer and fewer. The old-time “apprenticeship” to learn and grow as a technician and eventual professional is nearly gone. It must also be stated that the substantial investment for advances in measuring has not been reflected proportionally by the fees we charge as a whole. Meaning we pay our people about the same as in 1990 adjusting for inflation.

**Pop Culture.** There was a time that surveyors were more prominent in the community and overall awareness. Notice the two illustrations below. The first is a workwear ad from the “Golden Age” of surveying (1950’s-60’s) when the postwar boom raised demand for surveys to turn exurban farms into tract housing and shopping malls, interstate highways were being built, etc., all creating countless needs for as many surveyors as could be found. The other is more familiar and was a short series by cartoonist Charles Schulz making the iconic Snoopy from his Peanuts comic into a County Surveyor.





Although most of us probably didn't always want to become a surveyor from youth, at least most of us knew a little about them and what they did in part to exposure like above. I don't believe that's the case today.

**City vs. Country.** As scarce as surveyors may seem in metropolitan areas, even fewer are primarily rural practitioners. At one time, every county in Missouri had a County Surveyor. Now (at last review of the website of our fellow organization, MO Association of County Surveyors) there are probably only twenty-something active county surveyors out of a possible one hundred fourteen counties. Granted, First Class Counties don't elect anyone to the office and some Second Class Counties consider it optional, but that only eliminates a handful. So maybe only one out of four counties in the state have a county surveyor. Private rural surveyors are just as rare. There's still a few of us farm and forest surveyors out there, elected, appointed, or otherwise, but we have a larger area to cover and sometimes have to learn to say "no", or at least "not now".

Rural areas are not alone, however. My experience with the city was in the St. Louis area, and when a much younger me arrived at the end of the 1980's there was a tremendous subdivision boom. If memory serves me, there were least 75 listings in the Yellow Pages (which also covered St. Charles down to Arnold) under "Surveyors – Land". Many of those were sole proprietor shops with a RLS with a crew or two. But there were also some companies that had a dozen crews in the field and almost as many registrants and draftsmen in the office. A recent Google and AI search shows 46 firms today - a number I believe to be a little high since many don't venture into boundary surveys other than to support engineering design or construction.

**The Future is what we make it.** Getting the word out is important. Personally, I struggle a little telling curious folk that becoming a Professional Land Surveyor is an 8-year road to travel, with most losing interest as soon as they find out. All I can reply to that is "It ain't easy, but it's a pretty good living when you get there." Do we need some positive PR? Likely so, but where? Billboards? Television Ads? Radio? Social media?

I remember when you had to be made like the Mafia to get in a trade union. Openings often only went to offspring of card-carrying journeymen. But now everywhere you turn there's some appeal to join Laborers, Carpenters, Electricians and other apprenticeships. Smarter folks than me should brainstorm ideas to reach the 16 to 24-year-old crowd before they wander off elsewhere.

**Epilogue:** There was a time when surveyors were often the most educated and revered men on America's frontier, many later becoming statesmen and branching into other ventures. I think we all know who's on Mount Rushmore for instance.

As a rule, they were proud of their work and the effort it took to become one of us. We should be proud of our careers also. And if we really care, we can all make an effort to reach out to at least one promising young person to someday "take up the chain" (or, perhaps more appropriately – "grab the GPS pole") from us as we fade away into memory like the gentleman below. 🇺🇸



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## Highlights From the Spring Workshop

### Apr. 30 - May 1, 2026, Lodge of Four Seasons

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A concurrent Certified Floodplain Surveyor (CFS) course and exam were administered during the Workshop. Pictured are instructors and candidates for certification. They all look forward to using their new skills on the job.



The second day held a training session just for the technicians aspiring to sit for their PLS license. Pictured here are instructor staff (primarily from Missouri Geospatial Academy) and attendees. The curriculum was quite long-hand mathematics intensive!

*(continued on next page)*

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## Highlights From the Spring Workshop *(continued)*

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Professional surveyors and future professionals enjoyed lunch and conversation between meetings, reflecting on the day's informational sessions and catching up about happenings within the profession.



Attorney Bianca Eden and noted PLS Lecturer Kris Kline both gave detailed periods of instruction on Easements and Regulatory Authority/Statute of Frauds respectively. Every Workshop has at least some useful information every attendee can use in their daily practice.



Also pictured are just a few of the vendor sponsors who make events like this possible. Special thanks go out to Seiler Geospatial for sponsoring the breaks between sessions. There are far too many exhibitors to mention and show here, but we're grateful for them all! 🇺🇸

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# 2026 Trig-Star Winner

by Matt Wade, PLS, Scholarship Committee Chairman



This year's annual Trig-Star winner goes to Kyden Myers. Kyden is a senior at Gainesville High School R-V, Gainesville, Mo. He is scheduled to attend Arkansas State University in Mountain Home where he plans on getting an associate's degree in automotive systems repair. Afterwards, he intends to transfer to College of the Ozarks, in Point Lookout, MO to major in mechanical engineering. 🇺🇸

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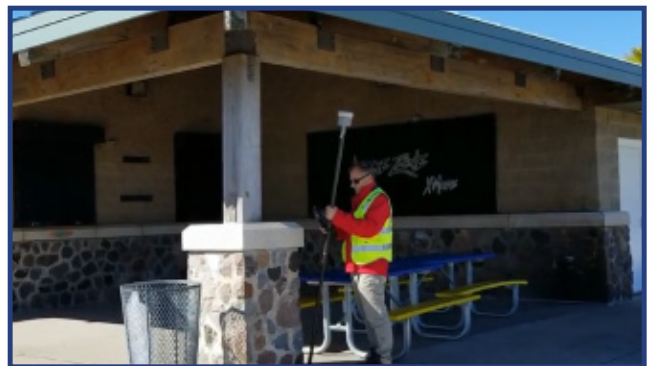
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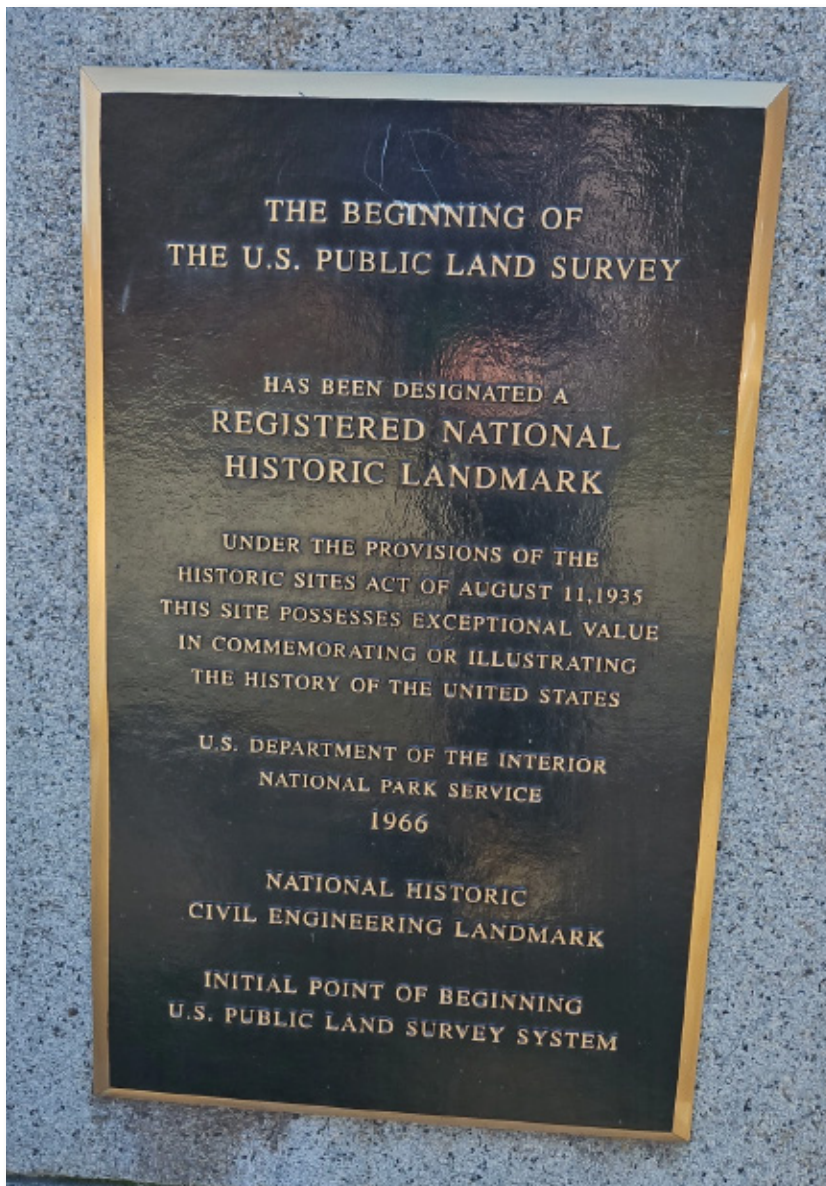


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# A Visit to The Beginning Point of The U.S. Public Land Survey

by B. Austin DeSain, PLS, March 9, 2026

On a trip for work to Pittsburgh, Pennsylvania in March, three of us took a side trek to visit a monument on the side of the road that we'd read about. It was about an hour west, at the tri-state corner for Pennsylvania, West Virginia and Ohio. The current granite obelisk monument has engravings on each side that include the state names in the direction it faces. The monument was erected in 1881, by joint a commission from the three states to re-survey and re-mark the boundary line established in 1781 which now falls in the Ohio River. The original point is referenced as being 1,112 feet south of the stone.



The significance of the tri-state corner to the Public Land Survey System is because when the Land Ordinance of 1785 passed, the tri-state corner establishing the north-south state line was used by Thomas Hutchins' survey party to extend a baseline west into Ohio (The Geographer's Line) from the Pennsylvania border, and lay out the first seven ranges of townships that were each a one-mile square section. The Land Ordinance of 1785 established a standardized system for surveying, selling and settling western lands. It introduced the 6-mile townships, divided into 36 sections to raise revenue for the government from sales.

Bob Boyer, PLS, Chris Ihde, PLS and myself took an Uber ride to the marker and talked a little about why we were interested in this roadside marker to our driver along the way. Needless to say, he did have more questions about surveyors and surveying the closer we made it. By the time we arrived, our driver was pretty excited to be there with three surveyors from the west. Most cars drive by everyday without noticing I'm sure, but to three surveyors who work in the systems pushed out from this point, this is a pretty good roadside attraction.

Initial Point of Beginning U.S. Public Land Survey System Plaque on the Granite Obelisk



Beaver County, Pennsylvania Historical Marker Sign

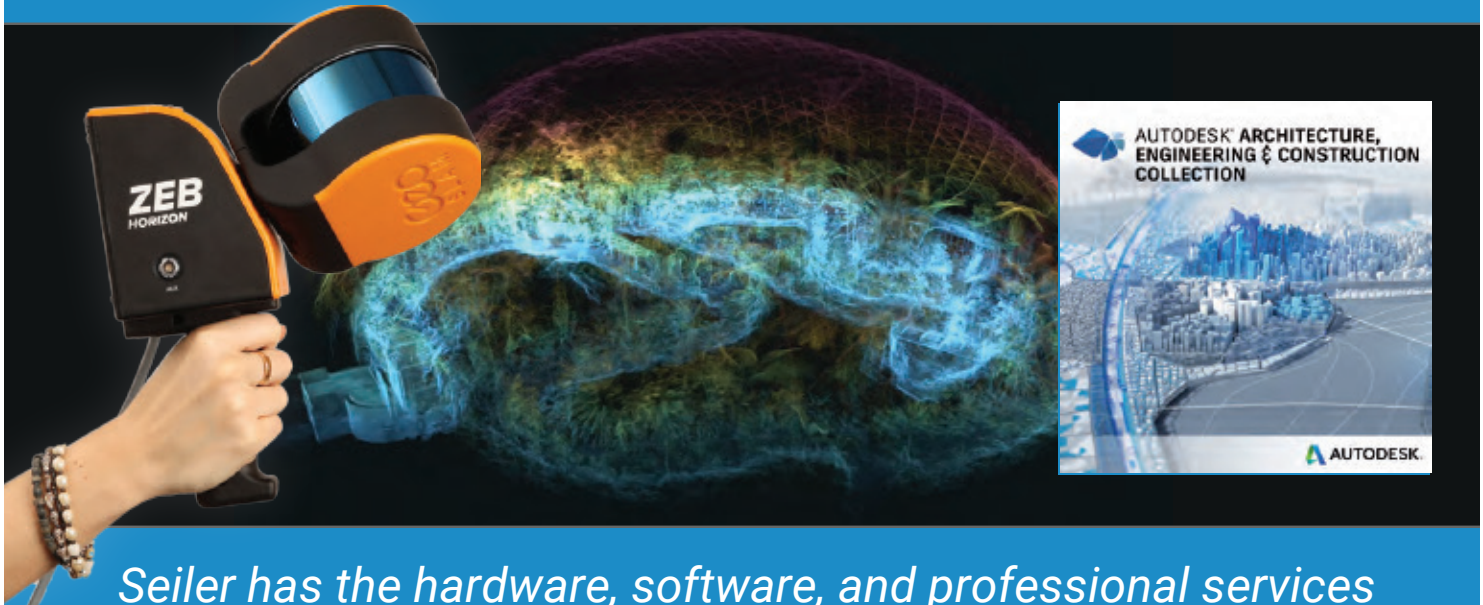


Ohio Historical Marker Sign, describing Thomas Hutchins' base line and laying out of the first townships.

*(continued on page 19)*



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# A Visit to The Beginning Point of The U.S. Public Land Survey (continued)



Pictured Left to Right, three surveyors: Austin DeSain, Chris Ihde and Bob Boyer 🇺🇸

## Member Spotlight

### A Professional Land Surveyor's Quest

#### Education / Practical Experience / Licensure / Professional Practice

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by David J. Sherrill, PLS, Program Director of Surveying and Geomatics, SIUE

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I wish I could tell you the whole story, but that may be for a later time. It has been over 50 years since I started this journey—from a student in surveying to becoming a practicing licensed surveyor in six Midwestern states.

I grew up in a small town along the Mississippi River, bordering three states: Illinois, Missouri, and Iowa. I was the son of good parents who taught me the importance of hard work, personal responsibility, faith in God, and respect for others. I was the “dreamer” of the family—the B–C student with a loving mother who thought I was a prime candidate for trade school.

After graduating high school in 1971, I attended a two-year private college where I earned a two-year Civil Engineering associate's degree (Engineering Council accredited). I enjoyed my survey courses, so I decided to become a licensed surveyor. I was quickly employed as an Engineering/Surveying Technician.

I had an excellent mentor in land surveying. He was very particular about field procedures for Public Land Survey System work and had strong experience in metes and bounds parcels. I received my S.I.T. in Illinois in 1975 and was extremely proud of my certificate. That pride was short-lived.

I experienced my first real taste of bias toward the surveying profession when a coworker—a young engineer—decided to play a joke on me. He put my certificate in the trash can next to my desk and said that was all it was worth.

Soon after, another company in Keokuk, Iowa (close to my hometown) offered me better pay, and away I went. On my first day, I found myself in the basement of the office building, sitting next to an old coal chute. What a step up!

It didn't take long to realize that, in the eyes of many engineers, surveyors were viewed as roofers, painters, handymen, cleaners—whatever needed to be done. They genuinely believed it was part of the surveyor's job description. Survey personnel were laid off in the winter due to lack of work and were consistently the lowest paid. At that point, I knew something had to change.

I loved surveying and didn't want to abandon it for engineering. I needed to work *within* the profession to improve it. I needed more education—but how?

I had a young wife and son in 1977 when I received a call from my alma mater asking if I was interested in enrolling in their new bachelor's degree program. They offered me the opportunity to teach a few surveying courses in exchange for pay and housing on campus. They kept their word. I parked an 18-foot Holiday Rambler camper (on loan from my father-in-law) on campus grounds.

I completed my coursework in two years. During that time, I also took classes at Iowa State University and the University of Illinois Extension in Peoria, including Surveying and Legal Principles. I earned my bachelor's degree in early 1979. That same year, I passed the Illinois P.L.S. exam and became a Registered Land Surveyor.

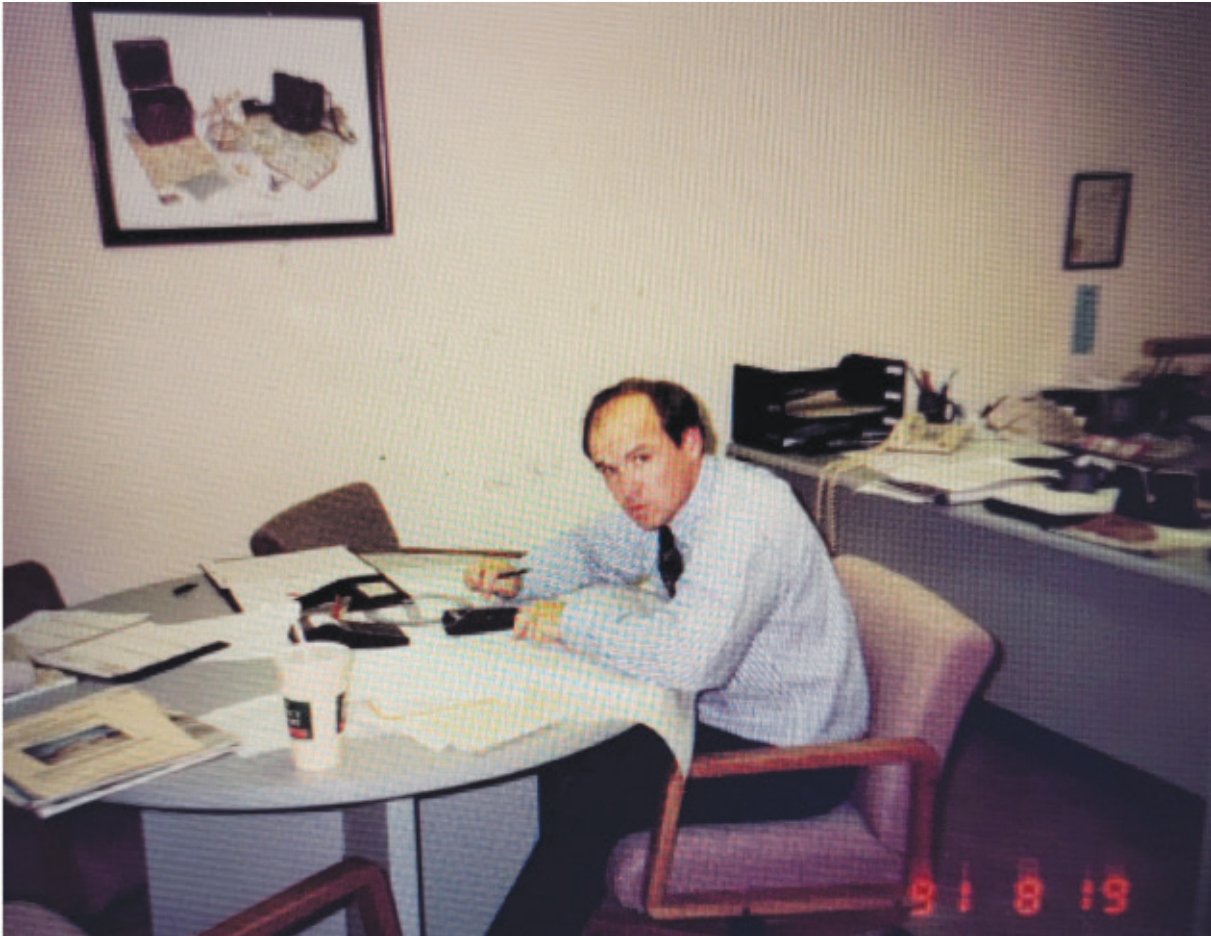
My family and I sacrificed a great deal, but I have no regrets. It was an invaluable experience. I was now a graduate with over 20 hours of surveying coursework, four years of field experience, and a license. I remember thinking, “*Look out, world!*”

I accepted a position as a Project Surveyor at a firm in Champaign, Illinois, where my professional career truly began. I became active in the Land Surveying Association at both the chapter and state levels and eventually served as a Delegate to the Board of Directors.

Despite this progress, surveyors were still not regarded as equals to engineers. I worked long hours, traveled frequently, painted walls, and when work was slow, washed company vehicles. I began attending local survey chapter meetings and was disappointed. They were unprofessional—more storytelling and drinking than meaningful discussion.

Then came President Jimmy Carter, and the recession of 1979–1980 hit. Surveyors were the first to be laid off—and that included me. At the same time, I learned I was going to be a father again. Once more, I put on my “big boy pants” and went job hunting. Lucky me.

I quickly received an offer as a Licensed Surveyor with an Illinois firm that had an office in St. Louis, Missouri. I earned my Missouri license the following year and was asked to run the survey section. This position came with a stable, five-year secured contract.



*David running his company, Sherrill & Associates, out of Edwardsville, IL in 1991*

*(continued on next page)*

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## Member Spotlight *(continued)*

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At that point, I realized I had a mission. That B–C student who loved surveying was determined to restore respect for surveyors and achieve parity with other licensed design professionals—in stature, pay, and job security.

I joined the Education and Sunset Committees as the Land Surveyors Act approached legislative review in 1989. Working with other like-minded surveyors, we developed a plan centered around a surveying program at Southern Illinois University–Carbondale. Our goal was to convince the surveying community that new educational requirements were necessary—similar to those adopted by professional engineers in the 1950s.

We proposed a four-year degree, four years of experience, and examination prior to licensure. Using SIU-C’s curriculum as a guide, we outlined required coursework in surveying, mathematics, and science. Knowing this would be a difficult sell—since 90% of licensed surveyors at the time did not hold a four-year degree—we included a ten-year grace period.

If approved, and placed into the Administrative Rules by the Legislature, an individual would have a 10-year grace period – from 1989 to 1998 – to apply and pass the licensing exam without a degree. I found the grace period to be essential for surveying students and surveyors with practical experience in the current pipeline with current rules to have a sufficient period of time to get licensed, before the new educational requirement went into effect.

The Illinois Surveyors Association embraced these points, and the Illinois Registered Land Surveyors Association Board approved the new rule by majority vote. The recommendations were submitted to the Illinois Department of Professional Regulation, drafted into legislation, passed by the General Assembly, and enacted in 1989, with the bachelor’s degree requirement taking effect in 1998.

Southern Illinois University–Carbondale carried the torch under Roy “Skip” Frank until his retirement. Around 2008, the program transitioned to Southern Illinois University–Edwardsville, where I assumed leadership.

The survey specialization embedded in the Construction program grew from five students in 2007 to sixty by 2020. In 2022, the university approved a new Bachelor’s degree in Surveying and Geomatics. As of 2025, we have 30 students pursuing the Bachelor’s degree in Surveying and Geomatics, and over 70 students pursuing the minor or equivalent coursework.

Over the past 28 years, I have personally witnessed the benefits of educational parity:

- **Stronger professional cooperation**
- **Increased ethical conduct**
- **Competitive salaries**
- **Expanded career pathways**
- **New teaching opportunities**
- **Greater career satisfaction**

Graduates from SIU–Carbondale and SIU–Edwardsville are filling critical surveying roles across the region in federal, state and local government along with private practice. The program and its advisory board remain committed to growth.

Education in surveying is the first step—like a parent preparing a child for life. That foundation allows young surveyors to grow through mentorship and practical experience under licensed professionals.

As a multi-state surveyor, I believe all states should champion a degree requirement for licensure. Our young surveyors deserve opportunity, stability, and professional parity nationwide.

MISSOURI SOCIETY OF PROFESSIONAL SURVEYORS

*Presents the*

# 69<sup>th</sup> Annual Meeting and Convention

**OCTOBER 1-3, 2026**

OASIS HOTEL & CONVENTION CENTER  
2546 N. GLENSTONE AVENUE  
SPRINGFIELD, MISSOURI

**PLANNING COMMITTEE**

SUSANNE DANIEL  
SHANE MACHIN  
MICHAEL WHITE  
MARK WILEY  
DEBRAH WOLFE

# THURSDAY, OCTOBER 1, 2026

7:00 am Registration and Breakfast

8:00-5:00 pm Hospitality Room

## 8:00-12 NOON **FIELD TO FINISH**

### **NAVIGATING UAV SYSTEMS AND PROCESSING BEST PRACTICES**

From takeoff to final deliverable, join us for a technical deep dive into modern UAV integration for land surveyors. We will clarify the NDAA Compliant vs. Blue vs. Green UAS compliance and compare top-tier manufacturers. Beyond the hardware, we'll analyze the technical trade-offs between RTK and PPK workflows and share proven strategies for post-processing. Learn how to optimize your data collection for faster, more accurate feature extraction and topographic mapping, turning complex point clouds into actionable CAD-ready data.

**Mark Schnesk, Professional Service Manager, Autodesk Certified Instructor, FAA 107 Pilot, Seiler Geospatial**

### **GNSS DATA REFINEMENT & ANALYTICAL PROCESSING**

GNSS data refinement and analytical processing involve post-processing raw satellite measurements to eliminate errors (atmospheric, clock, orbit) and achieve centimeter-level positioning accuracy. Techniques include PPK (Post-Processing Kinematic), PPP (Precise Point Positioning), and static analysis, which refine GNSS data for surveying integration using office software.

**Sean Cleveland, Assistant Manager Survey Tech Support, Seiler Geospatial**

### **MITIGATION OF GNSS ERROR**

GNSS error mitigation involves improving position accuracy by reducing errors from atmosphere, satellites, and reflections (multipath). This session will cover key techniques include using multi-frequency/multi-constellation receivers, Real-Time Kinematic (RTK) and Real-Time Network (RTN) for differential corrections.

**Jackson Craft, Geospatial Product Support Specialist, Seiler Geospatial**

### **CLOUD CONNECTED WORKFLOW: OFFICE TO FIELD AND BACK**

This course explores how cloud connectivity streamlines the modern surveying workflow from initial project setup in the office to data collection in the field and back to final processing and delivery. We will cover real-time data synchronization and seamless collaboration to reduce errors, improve efficiency, and keep teams aligned.

**Austin Shockley, Geospatial Product Support Specialist, Seiler Geospatial**

### **MOBILE MAPPING**

The process of collecting 3D geospatial data and imagery from moving platforms such as vehicles processing converts raw, sensor-rich data LiDAR point clouds, 360-degree imagery, and GNSS/IMU trajectory into precise 3D geospatial models. The workflow involves trajectory post-processing, LiDAR-camera fusion, and feature extraction using specialized office software.

**Pat Stack, GNSS, Robotics, Mobile LiDAR Product Specialist, Seiler Geospatial**

12:00-1:00 pm Lunch

12:30 pm GOLF TOURNAMENT at *Bill & Payne Stewart Golf Course*

## 1:00-3:00 PM **REAL TIME KINEMATIC (RTK) ACCURACY AND PRECISION NETWORK SOLUTIONS & TILT TECHNOLOGY: TOPOGRAPHIC SURVEYS**

Surveyors often contemplate the accuracy and precision of Real Time Kinematic Network (RTKN) Global Navigation Satellite System (GNSS) surveys. Surveyors ask how long and how many times should I occupy a point using RTKN techniques and methodology for acceptable topographic data collection? Consideration is given to the fact that we have significant advancements in GNSS

technology and methods. Surveyors have several GNSS constellations available. There are various network solutions such as iMAX and VRS. There are many measurement techniques and position algorithms utilized. Potentially, surveyors have taken for granted the level of accuracy and precision when using current GNSS technology and methods. A reminder that variability is found in GNSS measured data. This session studies various collections of survey data that can provide valuable insight. Comparisons are made between RTKN surveys measured using iMAX and VRS network methodologies. Occupations of instantaneous with tilt, 1s, 5s, and 15s observations are measured. Comparisons are made between these varying RTKN observations and conclusions are discussed.

**Jim Peterson, PE, PLS, PhD, Support Representative, Leica Geosystems**

**3:00-5:00 PM REAL TIME KINEMATIC (RTK) ACCURACY AND PRECISION NETWORK SOLUTIONS & TILT TECHNOLOGY: CONTROL SURVEYS**

Surveyors desire to provide adequate site control that meets a project's requirements. Surveyors often contemplate which GNSS technique and methodology is appropriate. The choice is between Real Time Kinematic Network (RTKN), Static (S), and Rapid Static (RS) GNSS surveys. This leaves the surveyor with several questions to be answered; 1) Which method will satisfy the project's requirements? 2) How many GNSS receivers and antennas should I use if RS is utilized? 3) How long should I occupy a point using RTKN and/or S/RS? 4) How many times should I occupy a point using RTK and/or RS? 5) What is professional, reasonable, & economic? An assessment of GNSS RTKN survey methods is needed to determine what satisfies the professional surveyor's needs. This session studies various collections of survey data that can provide valuable insight. RTKN survey data are collected using tilt technology, 30s, 60s, 120s, 180s, and 300s occupation times. Additionally, survey data are collected at varying offset times. Comparisons are made and conclusions are discussed.

**Jim Peterson, PE, PLS, PhD, Support Representative, Leica Geosystems**

5:00-7:00 pm Exhibitor Set-Up

# FRIDAY, OCTOBER 2, 2026

7:00 am Registration and Breakfast

8:00-5:00 pm Hospitality Room

**8:00-10:00 AM ANNUAL BUSINESS MEETING**

10:00-10:30 am Break with Exhibitors

**10:30-12 NOON STUMP THE CHUMPS**

This is your opportunity to quiz and ask probing questions of a panel of some of the state's leading Professional Surveyors

**Panelists:** Shane Terhune, PLS, Missouri Licensing Board; Darrell D. Pratte, PLS, Retired, Missouri State Surveyor; Joe Paiva, PhD, PLS, Midwest Geospatial Academy; Tom Bryant, PLS, Seiler Geospatial; Bob Shotts, PLS, Archer Elgin Shotts; Ray Riggs, PLS, Riggs Brothers Surveyors, LLC

**Moderator:** Tim Devaney, PLS, McClure Engineering

**12-12:30 PM AWARDS**

12:30-1:30 pm Lunch

**1:30-3:30 PM**

## **MANAGING YOUR SURVEYING BUSINESS IN THE 21ST CENTURY**

This program is designed to help surveyors navigate the challenges brought by a seemingly constantly changing regulatory climate, economy, technologies and society. Topics ranges from an in-depth look at some important societal trends such as the current regulatory attitude of legislators and understanding millennial employee motivations and expectations, to more traditional business topics such as risk management, contracts, and safety.

**Gary R. Kent, PS, Meridian Land Consulting, LLC**

3:30-3:45 pm

Break with Exhibitors

**3:45-5:15 PM**

## **MANAGING YOUR SURVEYING BUSINESS IN THE 21ST CENTURY CONTINUED**

5:15-6:30 pm

Reception with Exhibitors

# **SATURDAY, OCTOBER 3, 2026**

7:00 am

Registration and Breakfast

**8:00-10:00 AM**

## **THE SURVEYOR IN JEOPARDY**

This is a program presented in Jeopardy format with 6 different survey-related categories of 5 questions/answers each. The audience splits themselves into teams and one member of the team logs into the application. When the questions appears on the screen, teams can click to answer. The app identifies who clicked in first, and it keeps track of points. This is WAY more than just a simple trivia game; we take the time to make sure the audience understands the why of each answer, so it is absolutely a legitimate program and I have had many people tell me it's the best one they ever attended.

**Gary R. Kent, PS, Meridian Land Consulting, LLC**

10:00-10:15 am

Break with Exhibitors

**10:15-12:15 PM**

## **THE SURVEYOR IN JEOPARDY CONTINUED**

12:15 pm

Lunch

**1:00-3:00 PM**

## **MISSOURI STANDARDS**

The Missouri Standards for Property Boundary Surveys are jointly promulgated by the Missouri Department of Agriculture's Office of State Land Surveyor, and the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects, with input from the Missouri Society of Professional Surveyors' Standards Committee. These are the rules every Land Surveyor must follow, every day on every survey. These rules are so important, every Land Surveyor must review the rules every couple of years to renew their license to practice. This is a review of the rules, and a review of how well we follow those rules.

**Darrell D. Pratte, PLS, Retired, Missouri State Surveyor**

# SPEAKERS

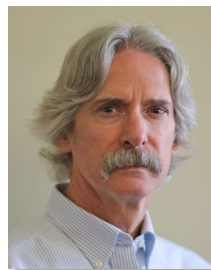
**TOM BRYANT, PLS**, is a professional land surveyor with more than 30 years of experience working in surveying. He graduated from Southeast Missouri State University in 1978 with a Bachelor of General Studies degree, studied at the University of Missouri-Rolla under Dr. Richard Elgin, and graduated from the University of Arkansas-Fayetteville, where he studied under Dr. David Knowles, with an associate's degree in surveying in 1984. Tom worked for several surveying and engineering companies in the Saint Louis area, implementing field to finish techniques, robotics and GPS into daily usage, until 2005 when he became employed by Seiler Instrument Company to head their Technical Support and Training activities in Saint Louis. In April of 2008, Seiler Instrument Company was awarded the contract to build and implement a statewide Real time VRS network for the Missouri Department of Transportation and Tom was assigned the position of Project Manager tasked with getting the Missouri Real Time Network operational. This was accomplished on February 1, 2010. Tom is a past President and newsletter editor for the Saint Louis chapter of MSPS, and has been a presenter at numerous surveying workshops in the Midwest. Since May of 2014, Tom has been the Trimble Geospatial Sales Representative for Seiler Instrument Company's Illinois Geospatial Territory. Tom is also an Adjunct Instructor in the Civil Engineering Departments at Washington University and was at Saint Louis University for ten years, both located in St. Louis MO.

**SEAN CLEVELAND**, Assistant Manager of Geospatial Technical Support for Seiler Geospatial, has over 20 years of experience in the land survey field. Sean has assisted in leading a team dedicated to technical support, training and effectively utilizing a diverse range of geospatial products.

**JACKSON CRAFT**, Geospatial Product Support Specialist for Seiler Geospatial, is a Geospatial professional with seven years of field experience in cadastral, construction, and infrastructure projects, starting with residential construction staking and sectional surveys at Aylett Survey, followed by wind farm development surveys at Westwood, and later leading projects as a Party Chief at McClure involving various survey types including ALTA/NSPS Land Title and Bathymetric surveys. Jackson holds a Certified Survey Technician credential from the National Society of Professional Surveyors, supported by coursework in Cadastral Surveying from the University of Wyoming.

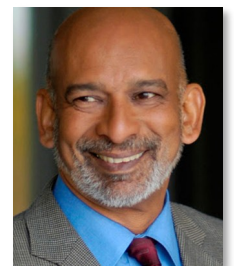
**TIMOTHY DEVANEY, PLS**, is a Land Surveyor and one of two Team Leaders for a geospatial group of more than 60 professionals in McClure Engineering Company's Midwest region. He was first introduced to geospatial technology and its applications while studying precision agriculture during his B.S. in Agronomy at Missouri State University, completed in 2007. After graduating, Tim continued exploring geodesy and precision layout through post-baccalaureate research and work as a photovoltaic systems designer and installer. He officially discovered his passion for land surveying while serving as a Survey Crew Chief and

completing the coursework required for Missouri licensure. Tim joined McClure Engineering in 2017, where he earned his PLS license and has remained deeply engaged in the evolution of survey technology. He has since completed an M.S. in Geographic Information Science from Northwest Missouri State University. Tim is passionate about teaching and learning alongside fellow surveyors. He is a strong advocate for the NSPS CST program, has successfully guided 10 individuals through NSPS CST certification, and is currently tutoring another group of candidates. He is an active member of the MSPS Young Surveyors Committee and serves as chairman of the MSPS Technology and GIS Committee. Outside of surveying, Tim enjoys spending time outdoors, working on his small family farm, and raising honeybees.



**GARY R. KENT, PS**, Gary Kent is a Professional Surveyor with Schneider Geomatics in Indianapolis. After 37 years, he transitioned to part-time in 2020 and formed Meridian Land Consulting, LLC through which he provides training, consulting and expert witness services. Gary was Chair of the Joint ALTA/NSPS Workgroup responsible for the ALTA/NSPS Standards from 1995 to 2021 and continues to be actively involved with the standards. He has presented programs on boundaries, standards, risk management, easements, leadership, safety and other topics multiple times in all 50 states. Gary served on the Indiana State Board of Registration for Professional Surveyors from 2004 to 2025 and is a past-president of both ACSM and the Indiana Society of Professional Land Surveyors.

**JOSEPH V.R. PAIVA, PHD, PLS, PE**, is President of Midwest Geospatial Academy (MGA). He is also instructor at MGA and is instrumental in helping educate the PLSs of the future, as MGA's courses are accepted by the Missouri Land Surveying Board for meeting the education requirements. Information on the coursework offered at MGA can be found at [www.geospatialacademy.us](http://www.geospatialacademy.us). Joe is also CEO of GeoLearn LLC ([www.geo-learn.com](http://www.geo-learn.com)), an online provider of video-based continuing education for land surveyors. Joe is past president of the Surveying and Geomatics Educators Society and has been involved in surveying education at the college level and for continuing education since the 1970s. Joe believes that the crisis facing surveying due to decreasing numbers of land surveyors can only be solved with participation from the practitioners doing more than encouraging young people to enter the profession.



# SPEAKERS



**JIM PETERSON, PE, PLS, PHD,** is a Support Representative for Leica Geosystems. He has over 36 years of experience as a professional surveyor, engineer, constructor, mapper, educator, and researcher with his FAA Remote Pilot Certificate. He completed his Civil Engineering Ph.D. in 2015 where he focused surveying and

mapping. His career took him across North America, Europe, and Australia promoting mobile mapping and unmanned aircraft systems (UAS). He was an Assistant Professor at several universities where he taught surveying and construction. He was also the program coordinator of a UAS degree. His professional career includes Consolidation Coal Company, McCarthy Bridge & Heavy, the Center of Expertise for Photogrammetric Mapping at the U. S. Army Corps of Engineers. He has been a Vice-President of aerial mapping companies such as Sanborn & Surdex. He also managed and owned several engineering, surveying, construction companies, and was a Domain Expert for Trimble Navigation and Gatewing. He was part of a \$20 million dollar research project through the National Science Foundation using UAS to collect high accuracy imagery to model the effects of climate on plants. He also had a research project with the Natural Resources Conservation Service where he investigated using UAS for wetland compliance. Prior to coming to Leica, he was a project engineer for the City of Springfield, Missouri where he managed infrastructure projects. He is passionate about all things geospatial, teaching, and his research.

**DARRELL D. PRATTE, PLS,** began his career in land surveying in 1974 as a chainman at Smith and Company, a multi-discipline engineering and surveying, firm located in Poplar Bluff, Missouri. Gaining licensure in 1985, Pratte accepted a complimentary membership to the Missouri Association of Registered Land Surveyors (MARLS). The position of State Parks Surveyor with the Missouri Department of Natural Resources (DNR) became available in 1987. In 1991, he left the Division of State Parks to work directly for the Cadastral Survey Section of the Land Survey Program (LSP) in the Division of Geology and Land Survey of DNR. Pratte was first elected to the MARLS Board of Directors in 1999. The following year MARLS changed its name to the Missouri Society of Professional Surveyors (MSPS) In 2002, Pratte was promoted to Chief of the Geodetic Survey Section of the LSP. Continuing on this management track, Pratte accepted the position of Missouri State Land Surveyor (SLS) in July of 2008. The following year he served as President of MSPS. In 2013, during Pratte's tenure as SLS, the Land Survey Program transferred from the DNR to the Missouri Department of Agriculture. 2013 brought the beginning of several accolades, starting with MSPS Surveyor of the Year. In 2016 he was awarded Surveyor of the Year by the St. Louis Chapter of MSPS, followed in 2017 with the Robert E. Myers Service Award. After 35 years with the State of Missouri, Pratte retired to Desloge, Missouri in November of 2021. In 2022, Pratte was elected to the Surveyors Historical Society (SHS) Board of Directors.

**MARK SCHNESK,** Professional Services Manager and Autodesk Certified Instructor at Seiler Geospatial, Mark has over thirty years of experience as a civil engineering technician along with experience in surveying and geospatial analysis. Mark graduated from Michigan Technological University. He is an Autodesk Certified Instructor, AutoCAD Civil 3D Certified Professional, AutoCAD Certified Professional, and an FAA Certified sUAS Pilot.

**AUSTIN SHOCKLEY,** Geospatial Support Specialist for Seiler Geospatial, brings several years of field experience in the land surveying industry. Over the past two years, Austin has been a key member of Seiler's Geospatial Technical Support team, providing front-line technical assistance, training, and field solutions to customers across a variety of geospatial products.

**PAT STACK** is a GNSS, Robotics, and Mobile LiDAR Product Specialist for Seiler Geospatial. Pat has over thirty years' experience with 3D scanning, Civil and Surveying sales and support for Seiler Instrument Company. Pat attended and successfully completed several Trimble 3D Laser training seminars at Trimble Navigation headquartered in Westminster, Colorado. Additionally, Pat has presented at several regional Land Survey Conferences across the Midwest.

**F. SHANE TERHUNE, PLS,** began his surveying career in 1978 with Williamson Engineering in St. Joseph, Missouri, as an entry level rodman and chainman. Shane attended courses from the University of Missouri-Rolla, Longview Community College, and Johnson County Community College. In 1991 he became a licensed Professional Surveyor in Missouri and in 2006 was licensed in Kansas. Shane has served as the elected Andrew County Missouri Surveyor since 1996. Shane has taught surveying courses part-time at Missouri Western State University and served on the Land Survey Advisory Board for the Metropolitan Community College for 8 years. Shane served on the Board of Directors of the Missouri Society of Professional Surveyors from 2001-2008, is a member of the National Society of Professional Surveyors and a Past member of Missouri Association of County Surveyors. Shane established Terhune Surveying and Mapping LLC in Savannah, Missouri in 2010, and still operating it today. He is a member of the National Council of Exams for Engineers and Surveyors (NCEES) and currently services on the Exam Committee for both Professional Surveyors and FS. Shane was appointed to the Land Survey Division of the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Landscape Architects, by Governor Mike Parsons and confirmed by the Missouri State Senate in January of 2022, currently serving as the Land Survey Division Chair.

# REGISTRATION

Name \_\_\_\_\_ RLS # \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

## MSPS MEMBER

**MEMBER (3 days)** **\$400** \$ \_\_\_\_\_

DAILY RATE: Thursday Friday Saturday \$140 (daily) \$ \_\_\_\_\_

## STUDENT/TECHNICIAN

(NON-LICENSED)

**STUDENT/TECHNICIAN (3 days)** **\$300** \$ \_\_\_\_\_

DAILY RATE: Thursday Friday Saturday \$100 (daily) \$ \_\_\_\_\_

## NON-MEMBER

**NON-MEMBER (3 days)** **\$600** \$ \_\_\_\_\_

DAILY RATE: Thursday Friday Saturday \$220 (daily) \$ \_\_\_\_\_

## OPTIONAL ACTIVITIES

**GOLF** (Includes Cart & Two Mulligans) **\$85.00** \$ \_\_\_\_\_

**GOLF SPONSOR** **\$100.00** \$ \_\_\_\_\_

10% Surcharge for Late Registration (After 9/14) \$ \_\_\_\_\_

**TOTAL \$** \_\_\_\_\_

## PAYMENT OPTIONS

Credit Card (MC/V/Disc/AmX)  Check  Invoice my Organization

Credit Card # \_\_\_\_\_

Exp. Date \_\_\_\_ / \_\_\_\_ CVV Code \_\_\_\_\_

Send Registration Form with Payment to: MSPS, 722 E. Capitol Avenue, Jefferson City, MO 65101

Phone: 573-635-9446 | Fax: 573-635-7823 | Email: msp@missourisurveyor.org

Registration Deadline: Monday, September 14, 2026

## REGISTRATION INFORMATION

Registration fee is \$400 for Members and \$600 for Non-Members.

**The deadline for registrations is Monday, September 14, 2026.**

After this date, a 10% processing fee will be added to all registration fees.

The registration fee includes instructional materials, refreshment breaks, a lunch and breakfast each registered day, and a cocktail reception with exhibitors. To register, complete the attached registration form and mail, fax or email with your payment to MSPS.

Registration is open online at [www.missourisurveyor.org](http://www.missourisurveyor.org).

## GOLF TOURNAMENT

The Golf Tournament benefitting the MSPS PAC Fund will be held at the **Bill & Payne Stewart Golf Course**.

You may pick your partner or a foursome, If you do not have a partner, one will be provided to you. Tee-time starts will begin at 12:30 pm with a shotgun start. The cost is \$85 per person and includes 18 holes, a cart and two mulligans.

**Bill & Payne Stewart Golf Course**  
1825 E. Norton Road  
Springfield, MO 65803

## MEMBERSHIP DUES

We will be checking the membership status of each registration. If your MSPS 2026 membership dues are not paid you may add that amount to your registration fee. \$145.00 for PLS and \$35.00 for Associate members.

## LOCATION & LODGING

The Oasis Hotel & Convention Center is the site for the 2026 Annual Meeting of MSPS. A special room rate of **\$134.00** for single/double rooms has been extended until **Monday, August 31, 2026**. Reservations can be made by calling 888-532-4338. Parking is complimentary for all guests and attendees. Ask for the conference special rate and identify yourself with MSPS when making reservations.

**Oasis Hotel & Convention Center**  
2546 North Glenstone Avenue  
Springfield, MO 65803

BOOK ONLINE  
<https://www.choicehotels.com/reservations/groups/WV7024>  
Group Code: BSQPLJ

## HOSPITALITY ROOM

A hospitality room will be provided on Thursday and Friday during conference hours. Please see the registration desk for hospitality room location. A map of the area will be available at the registration desk.

## CONTINUING EDUCATION

This course has been approved for 21.5 Professional Development Units (PDUs) by the Missouri Board of Architects, Professional Engineers, Professional Land Surveyors and Professional Landscape Architects (2.0 hours of Standards).

**PDU Breakdown for each day is as follows:**  
**Thursday - 8.0 PDUs**  
**Friday - 7.5 PDUs**  
**Saturday - 6.0 PDUs**

## CANCELLATION POLICY

MSPS reserves the right to cancel the program and return all fees in the event of insufficient registration. A participant may cancel a registration at any time, however **ALL REFUNDS are subject to a \$25 processing fee.**

**NO REFUNDS WILL BE GIVEN AFTER Monday, September 14, 2026.**

## CONTACT INFORMATION

Contact Sandra Boeckman,  
MSPS Executive Director,  
at 573-635-9446  
should you have any questions.

MSPS  
722 E. Capitol Avenue  
Jefferson City, MO 65101  
Phone: 573-635-9446  
Fax: 573-635-7823  
[mmps@missourisurveyor.org](mailto:mmps@missourisurveyor.org)

Registration is open online at [www.missourisurveyor.org](http://www.missourisurveyor.org).

This article is offered to inspire surveying associations across the United States to make bachelor's-degree education a cornerstone of our profession's future.

Can other states do what Illinois did?  
As the Missouri motto says, "Show Me."  
I say—I just did.

At 72, I am preparing to retire from teaching but not from surveying. I see no reason to stop doing what I love—surveying the land.

[*editor's note: David promulgated and promoted several Statutes and Standards in Illinois passed into law that have enhanced the practice and professional status of licensed surveyors. They are not repeated here, but are familiar to IL PLS's and can be found online*] 🇺🇸



Ready for an aerial mapping survey (photo by David Sherrill)

**James T Schell**  
President  
surveyorsmaterials@yahoo.com

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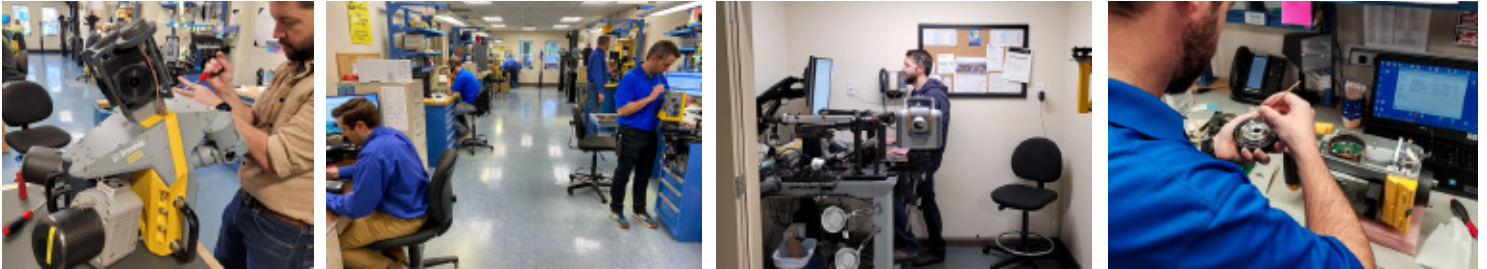
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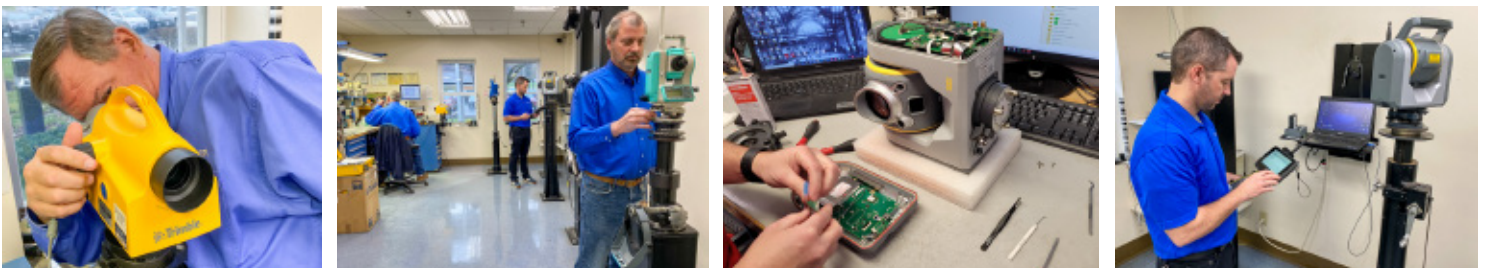
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# EXPLORING, SURVEYING, & MAPPING IN THE NORTHERN ROCKY MOUNTAIN WEST

## Surveyors Historical Society

### Rendezvous 2026

September 2<sup>nd</sup> through 5<sup>th</sup>

Join us in Missoula, Montana as the Surveyors Historical Society presents “historic exploring, surveying, and mapping” in the Heart of the Northern Rocky Mountain West.

- In the late 1700s, the Hudson Bay Company, the Northwest Company, and others sent trappers west into a large portion of what is now Canada and the Northern reaches of the United States, where, along with trapping, they gathered data that would be added to later maps.
- Map makers began compiling the mapping data gathered by trappers, explorers, and others to create maps of the area.
- Lewis & Clark travelled west through the Northern Rocky Mountains in 1805 and returned in 1806.
- Numerous trappers, traders, and explorers followed Lewis & Clark into the area in the first half of the 1800s.
- Gold discoveries by 1860 brought a rush of miners into the Northern Rocky Mountain West.
- The quest for a northern route for a railroad to connect the areas east of the Mississippi river with the west coast with brought government expeditions into the area in the early 1850s, to explore and map the Northern Rocky Mountains.
- The need for a travel connection between the upper reaches of navigation on the Missouri and Columbia Rivers resulted in construction of a Military Wagon Road in the early 1860s connecting Fort Walla Walla, Washington Territory, with Fort Benton in what was then Dakota Territory.
- The rapidly expanding western population resulted in a short number of years of Western Montana going from being a part of Oregon Territory, to Washington Territory, to Idaho Territory, and then to Montana Territory.
- Montana Territory was created in 1864. The western longitude border with Idaho was surveyed in 1898 & 1899. The border along the crest of the mountains was surveyed from 1904 to 1906.
- The GLO Survey of Montana Territory began in 1867 southwest of Three Forks, Montana.
- Yellowstone was established as the first National Park in 1872, and the first attempt at surveying the boundaries was in 1894.
- Government set asides of unpatented land resulted in nearly impossible to locate patented mining claims that were lost in the middle of what are now designated Wildernesses.



The 2026 Rendezvous will delve into all these topics.

# Rendezvous Program

## Wednesday, September 2<sup>nd</sup>

Board Of Directors Meeting  
Welcome Weary Travelers (food and cash bar)  
Annual Membership Meeting  
Hospitality Room

## Thursday, September 3<sup>rd</sup>

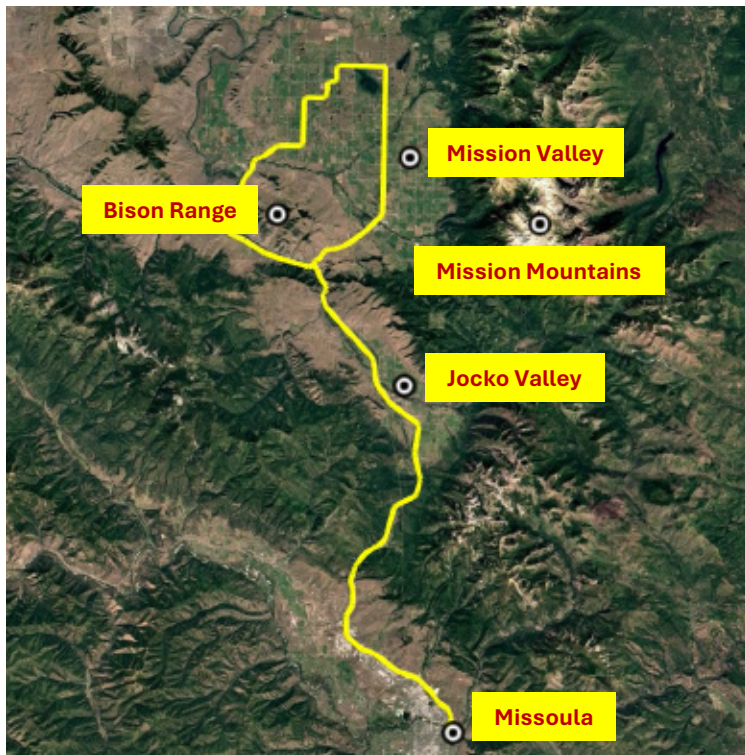
Breakfast at Hotel  
Morning Sessions  
Field trip to "Travelers Rest" & Holt Western Museum  
Outdoor lunch at "Travelers Rest"  
Afternoon Sessions  
Dinner on your own at local eateries (options provided)  
Hospitality Room

## Friday, September 4<sup>th</sup>

Breakfast at Hotel  
Morning sessions  
Lunch at Hotel  
Afternoon Session  
Swap meet, displays, and demonstrations  
Annual Banquet and Raffle

## Saturday, September 5<sup>th</sup>

Breakfast in Hotel  
Farmers Market next to Hotel (food and trinkets)  
Optional: Field bus trip to the Jocko Valley, the scenic Mission Valley, and the National Bison Range



# Spouse/Guest Program

## Wednesday, September 2<sup>nd</sup>

Welcome Weary Travelers (food and cash bar)  
Hospitality Room

## Thursday, September 3<sup>rd</sup>

Breakfast at Hotel  
Field bus trip to Butterfly House,  
Insectarium,  
& Garden



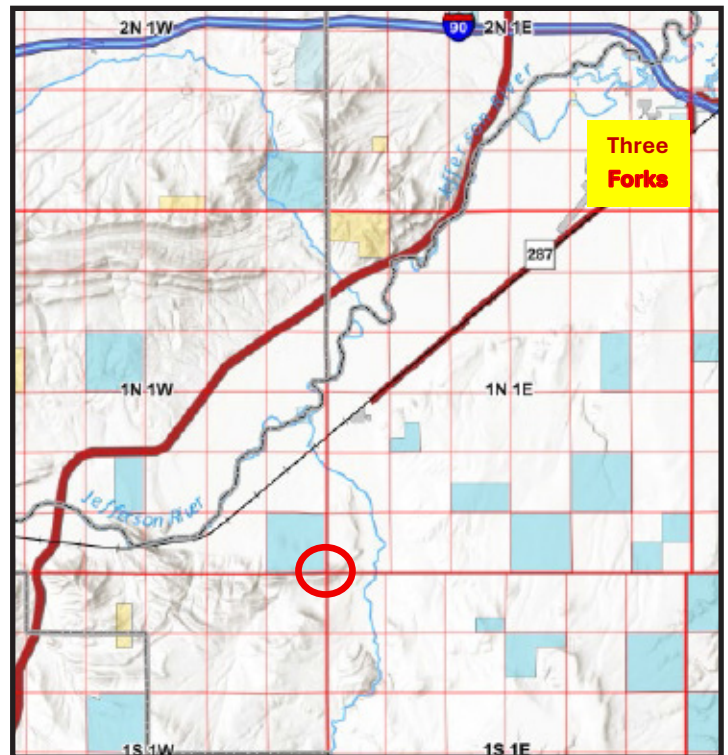
Field bus trip to "Travelers Rest" (identified campsite of Lewis and Clark) & Holt Western Museum  
Outdoor lunch at "Travelers Rest"  
Self-directed walks and shopping in downtown area.  
Dinner on your own at local eateries (options provided)  
Hospitality Room

## Friday, September 4<sup>th</sup>

Breakfast at Hotel  
Guided walking tour of historical downtown Missoula  
Field bus trip to Rocky Mountain Elk Foundation  
Lunch at Hotel  
Annual Banquet and Raffle

## Sunday, September 6<sup>th</sup>

Second optional event: Hosted visit to Montana Initial Point by travelers heading east and carpoolers traveling to and from the site. The site is located 160 miles east of Missoula off interstate 90 southwest of Three Forks



# Featured Speakers & Presentations

- *Aaron Arrowsmith's Maps of the West* Austin Heany, Local Historian
- *Lewis and Clark in Western Montana.* Bruce Mehelish, Local Historian
- *Methods of David Thompson and others when mapping the Northern Rocky Mountain West.* Denny DeMeyer, PLS, Washington
- *John Mullan, the Pacific Railroad Surveys, and mapping a military wagon road.* Bill Weikel, PLS, Montana
- *Survey of the boundaries of Yellowstone National Park* George Borneman, PLS, Montana
- *Survey of the Montana/Idaho Border* Kurt Luebke PLS, Montana
- *12-year Search for the lost Babtiste Mineral Claims* Linda Smith, PLS Montana  
Dave Dorsett, PLS, Montana

## Optional self-directed activities

Hike to the “M”, 650 feet above the valley floor with a view of everything in the Missoula Valley.



Walk the riverfront trail to see the Missoula Carousel and maybe see kayakers on Brennan’s Wave.



Ride the Missoula Carousel, watch children and adults play in Dragon Hollow, and enjoy the river front.



## Hotel & Airport Information

### Holiday Inn Downtown

- 200 S Pattee St. Missoula, Montana 59802
- The reservation room rate is \$239 (single/double) per night plus tax. Parking is complimentary
- To reserve a room, call Holiday Inn Downtown directly at 866-246-3541
- Rooms are reserved under Surveyors Historical Society
- The Rendezvous Rate will be available until **August 2<sup>nd</sup>**, 2026

### Missoula International Airport

- Located 10 miles west of Missoula.
- Served by United, Delta, American, Allegiant, Alaskan, & Sun Country.
- The Holiday Inn provides a shuttle for guests.

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# ***The Genesis of Missouri from Wilderness Outpost to Statehood*, by William E. Foley**

## **Introduction and Selection for Missouri Surveyor**

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*by B. Austin DeSain, PLS*

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Early settlers in the region now called America should have rights to the lands that they settled on before the purchase. The settler's claims to their prior lands, as you can imagine, would be a near impossible task to prove otherwise. Further back, the Spanish had rules that defined a land claim and France before that. Both France and Spain's rules seemed pretty loose though, considering most of the settlers were provided with the rights to their land even though they did not meet all of the requirements. Also though, the land in this part of the world was remote and without much promise other than settling on, so it was given easily. With the purchase, came the increase in value, population, and fraud.

"The extend of fraud in Spanish land claims can never be fully determined. If all land claims that had failed to fulfill every requirement of the Spanish law to the letter had been judged fraudulent, then the number of valid claims would have been small.", Foley mentions. Many claims were backdated before the Treaty of San Ildefonso, to appear legal under Spanish rule. Antedating documents was rampant in Spanish and American claims in the first years of the 1800s. In just a few weeks preceding the official transfer of power, over 200,000 acres of the best mining land in Missouri were surveyed and granted to private individuals. President Jefferson warned congress of the fraudulent practices by 1804.

Another interesting set of situations from this period has to do with the disputed boundaries of the purchases. Several major, overlapping, and unresolved land claims involving Spain, France, the United States and the presence of sovereign indigenous were disputed and may still be to some extent. There was a dispute at the southwestern border near present Texas and Louisiana, where Spain and the US disagreed on the boundary being either the Sabine River or the Calcasieu River. U.S. General James Wilkinson and Spanish Lieutenant Colonel Simon de Herrera had an informal agreement to avoid military conflict between the rivers, and made it clear that neither country could maintain an armed force there. Needless to say, it became a notorious haven for outlaws, thieves and murderers until about 1821, after a treaty awarded the territory to the United States from the Sabine River.

Another disputed area was near the present Florida panhandle. Spain who controlled the Western Florida region during the purchase, did not acknowledge that the purchased area included Florida west of the Perdido River. Towards the northwest, the boundaries of the territory that transferred from Spain to France in 1800 extending towards the Rocky Mountains and into the British areas to the north were not clearly defined and remained questionable through the transfer to the US. The readers of *The Missouri Surveyor* can understand how the need for a surveyor was a critical one to define the boundaries and rights of the lands that came with the purchase. Some of the tasks were indeed daunting, and the surveyors appointed needed the full support of their government to make clear judgements and establish the boundaries, but even the government was not yet clear in the region.

### **Chapter 10. The Turmoil Continues, pages 172 to 181**

William C. Carr, territorial land agent, joined Lucas in opposing the liberal interpretation favored by Penrose and Donaldson. Charged by the secretary of the treasury with investigating cases of suspected fraud and representing the United States in questions involving public lands, Carr frequently corroborated Judge Lucas's reports.

Both Lucas and Carr expressed their disapproval of Governor Wilkinson's repeated attempts to meddle in the land-claims controversy. In an obvious effort to enhance his own popularity, Wilkinson had advised territorial residents not to sell their claims in panic after promising to use his influence to secure confirmation of their grants. Wilkinson's decision to employ Antoine Soulard as the territorial surveyor general further aggravated the situation. Soulard had served in that capacity

under the last two Spanish governors and was closely linked with members of the St. Louis land junto. 5 In February 1806, Congress took steps to supplant Soulard's authority by placing the Territory of Louisiana under the U.S. surveyor general's jurisdiction. Efforts by Governors Harrison and Wilkinson to retain Soulard and his assistants in their posts failed, and Surveyor General Jared Mansfield recommended the appointment of Silas Bent as Upper Louisiana's principal deputy surveyor. Following his arrival in the territory in the fall of 1806, Bent, whose sons Charles, William, George, and Robert subsequently became renowned nineteenth-century western fur traders and merchants, reported finding numerous erasures, inaccuracies, and apparent alterations in Soulard's surveys. Even after his ouster, Soulard frequently appeared before the board of commissioners to defend his surveys and to support the confirmation of individual claims. 6

Concerned about the governor's constant interference in the land-claims cases, Secretary Gallatin wrote to Jefferson suggesting that "General Wilkinson be advised that he has nothing to do with the land business." 7 Shortly thereafter, Gallatin again warned the president that Wilkinson should be watched closely, pointing out that he had allied himself with every major Spanish land claimant in Louisiana, including Gratiot, the Chouteaus, and Soulard. 8

With a bitter struggle currently raging within Congress and among members of the Republican party over legislative attempts to settle the long-disputed Yazoo land claims that had resulted from the Georgia legislature's corrupt dealings in the 1790s, the president and his advisers were particularly sensitive to the potential for controversy inherent in cases of alleged land fraud. Unfavorable reports on the activities of Upper Louisiana's board of commissioners increased their apprehension. Further evidence of the board's inclination to favor wholesale confirmations came when the Penrose-Donaldson majority approved the appointments of Charles Gratiot as clerk and Philippe Marie Leduc as translator. Both Gratiot and Leduc held numerous unconfirmed Spanish titles and were intimately associated with other major land claimants. When Attorney General John Breckinridge concurred with Carr's allegations that the extreme liberality of the commissioners' decisions had injured the interests of the American government, Secretary Gallatin urged Jefferson to remove the offending officials. The president submitted the whole matter to members of his cabinet for their consideration, and, although they unanimously agreed that the decisions handed down by the commissioners had been illegal, only Gallatin and Dearborn felt that removal would be justified. Relying upon the opinions of Madison and Breckinridge, Jefferson decided that despite the commissioners' incorrect interpretation of the land laws, their errors had not emanated from improper motives. 9

According to the president's wishes, Secretary Gallatin prepared a set of instructions for the land commissioners, informing them of the attorney general's opinion so that they could revise their decisions to conform with his rulings. Gallatin also admonished the commissioners to adhere strictly to the letter of the law in the future and to leave to Congress any attempts to liberalize confirmation policies. 10

The commissioners modified their positions slightly as a result of Gallatin's instructions, but relations between Lucas and the other members failed to improve. Donaldson and Penrose often met to transact official business at irregular times and places without informing either Lucas or Carr of their intentions. In response to the continued complaints of improprieties, Gallatin sent a new and more detailed set of instructions to guide the commission. 11

Unhappy with the rigid restrictions placed upon the board's right to confirm titles, Donaldson decided to go to Washington to seek a new and more favorable law for the land claimants. After his departure from the territory sometime in the fall of 1806, the business of the board of commissioners came to a virtual standstill. Since many of the board's original decisions had still not been revised in accordance with the attorney general's ruling, Commissioner Lucas angrily denounced Donaldson for having returned pertinent original documents to their owners prior to his departure from the territory. Without this evidence, Lucas maintained that the commissioners would not be able to reconsider the cases in question. He refused, therefore, to join Penrose in submitting to the secretary of the treasury a report of the decisions handed down by the board of commissioners until all necessary changes had been made. Even though he offered to meet with the remaining commissioner to record new claims, Lucas declined to render any additional decisions in specific cases. 12

When Penrose and Donaldson demonstrated continued reluctance to adhere strictly to instructions from Washington, the

*(continued on next page)*

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## ***The Genesis of Missouri from Wilderness Outpost to Statehood (continued)***

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president revised his evaluation of their conduct. His disgust with the two commissioners was obvious when he wrote to Gallatin, "I have never seen such a perversion of duty as by Donaldson & Penrose." 13 Jefferson removed Donaldson from his position as recorder and named Frederick Bates of the Michigan Territory as his replacement, and Secretary Gallatin directed the commissioners to suspend any further decisions on cases until Congress had completed action on a new act it was considering for adjusting Louisiana land claims. 14

Thus, the status of the Spanish land claims remained substantially unchanged when Wilkinson left the territory in the summer of 1806. No final decisions had been handed down by the board; numerous petitions had been circulated by opposing politicians frantically maneuvering to take advantage of the situation; tempers had flared, and the emotional fervor had grown so intense that on one occasion an enraged Rufus Easton had burst into the board's proceedings and publicly caned Donaldson in retaliation for what he believed to be the commissioner's slanderous comments. 15 In the midst of such turmoil, the prospects for a speedy resolution of the land-claims issue in Louisiana were not promising.

Although the land-claims business and the local political feuding consumed most of Wilkinson's attention during his final days in office, that had not always been the case. At the outset of his administration, the governor had devoted considerable time and energy to the military and defensive matters that Jefferson had assumed would be his principal concerns. When he first arrived in St. Louis to take up his duties, Wilkinson found 150 Sac and Fox Indians waiting to confer with him about the fate of the Sac warrior whom they had turned over to Governor Harrison the previous year. Harrison had ordered the prisoner accused in the Cuivre River murders to be confined in the guardhouse at the local garrison after promising to seek a presidential reprieve for him. Jefferson approved Harrison's request for clemency and pardoned the Indian in February, but word of the president's action had still not reached the territory three months later when the hapless warrior was shot and killed while attempting to escape. The entire affair had been badly handled, and it fell to the incoming governor to make amends with members of the victim's tribe. With great ceremony Wilkinson belatedly produced the presidential pardon, which he delivered to the dead man's relatives along with a lecture suggesting that the shooting had been the Great Spirit's way of bringing the murderer to justice for spilling the blood of his white neighbors. 16

Wilkinson proclaimed the Sacs satisfied with his explanation, but it was probably the gifts and whiskey that momentarily persuaded them to conceal their anger over the incident. The governor did acknowledge that the visiting tribal leaders had reiterated their unhappiness with the terms of the treaty their representatives had negotiated with Governor Harrison. That experience had taught the Sacs a costly lesson: the Americans wanted one thing above all else—their lands. Already aware of the widespread disaffection caused by that agreement, federal officials hoped to divert the Indians' attention and increase their dependence on the U.S. government by opening a government-sponsored trading factory and running them into debt. 17

Secretary Dearborn instructed Wilkinson to give immediate attention to the selection of a site for the proposed government trading post that would be convenient to Indians on both the Missouri and Mississippi rivers. After conducting an extensive search, Wilkinson initially selected a tract near Florissant belonging to a Widow James. When she had second thoughts about selling her farm, he chose an alternate location on the Missouri River four miles above the Mississippi junction at the mouth of Cold Water Creek. Wilkinson had been forced to purchase land from a private owner because, as he noted, virtually all of the land on both sides of the Missouri, extending from the Mississippi to several miles above St. Charles, had been claimed by individuals.

The site was also designated as the location for a new U.S. military installation to replace the dilapidated Spanish fort in St. Louis that currently housed the army garrison. Construction on the combined facility got underway in August, and it was ready for occupancy in the fall. Cantonment Belle Fontaine, as it was called, served the region as military headquarters for

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the next two decades, but the adjacent trading factory was too remote from the Indians it was intended to serve to get much use. Officials eventually closed the trading house in 1808 and transferred the goods to new factories at Fort Osage, on the Missouri River a few miles east of present-day Kansas City, and Fort Madison, on the upper Mississippi near the mouth of the Des Moines River, 18

With Lewis and Clark on the way to the Pacific in 1805, Wilkinson was keenly aware of the president's interest in exploring the nation's new western expanses. No doubt that was on his mind when he dispatched two military expeditions from St. Louis following his arrival that summer. He sent Lt. Zebulon M. Pike and his "damned rascals" to explore the upper reaches of the Mississippi. Pike's instructions called for him to collect geographical information, to purchase sites from the Indians for potential military forts, to invite selected chiefs to visit St. Louis, and to show the American flag in the region. At the same time Wilkinson sent Pierre Chouteau and a military party under the command of Lt. George Peter on a similar mission up the Osage River to confer with Osage leaders in an effort to heal the split between the Missouri and Arkansas factions. Jefferson wanted to reunite the numerous tribe in a single location in order to make room for eastern Indians. 19

Wilkinson looked upon these expeditions as a first step in implementing broader U.S. policy objectives for the trans-Mississippi West. One paramount American goal was the reduction of Spanish and British influence among the western tribes. Under orders from Jefferson to keep Canadian-based British traders out of the territory west of the Mississippi, the governor issued stringent new regulations governing the Indian trade in the Missouri valley. In addition to an order restricting trading licenses to American citizens, he also proposed to end the use of firearms in the Indian trade. Fierce protests from local traders, led by the Chouteaus and Manuel Lisa, persuaded him that a prohibition of firearms in the fur exchange would seriously injure St. Louis-based trading operations without depriving unfriendly tribes of weapons, so he dropped the unpopular regulation. 20

Despite Wilkinson's efforts, British influence remained largely undiminished. Like most frontier dwellers, General Wilkinson believed that the maintenance of strong military posts in the interior was the only effective means of establishing American hegemony in the region, but the economy-minded Jefferson administration repeatedly vetoed such plans, insisting that trade was the key to control. 21 The rejection of Wilkinson's proposal for building fortifications in the upper Missouri and Mississippi watersheds came too late to cancel an expedition under the command of the governor's son, Lt. James Biddle Wilkinson, that was already on its way up the Missouri. The governor had assigned his son to escort an ailing Oto chief to his village and then establish a U.S. post at the mouth of the Platte River. A hostile Kansa Indian party prevented them from reaching their destination and forced them to return to Cantonment Belle Fontaine. It was just as well, for upon hearing of the undertaking, Secretary Dearborn immediately recalled the unauthorized mission and severely reprimanded Wilkinson for having dispatched it without prior approval. Maj. Seth Hunt's allegations that the venture was a private trading expedition outfitted by Wilkinson and his friends at government expense probably triggered Dearborn's angry rebuke. Though unproven, Hunt's charges had a ring of truth to them. 22

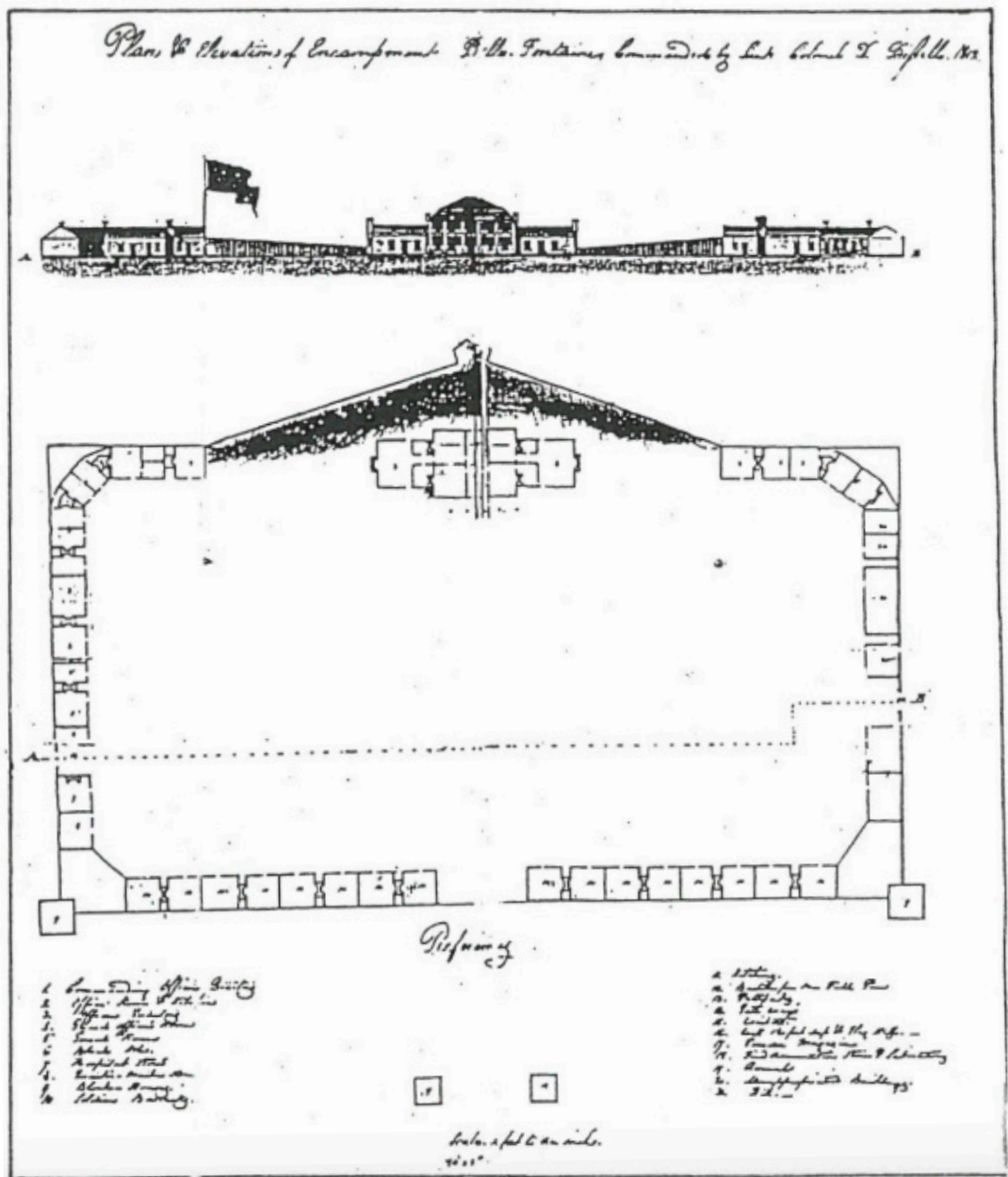
Lingering hostilities between the Osages and a confederation of eastern Indians led by the Sacs and Foxes continued to be a serious problem for territorial officials. Governors Harrison and Wilkinson summoned representatives of the contesting tribes to meet in St. Louis to discuss the situation in 1805. The first delegations began arriving in September, but Wilkinson found little cause for optimism. At the same time that the Sacs sent a tribal contingent to the territorial capital to negotiate, they also dispatched a war party to renew their attack on the Osages. Wilkinson blamed the continuing Sac depredations on dissatisfaction with the 1804 treaty and the influence of British traders. 23

Representatives from the Delawares, Miamis, Potowatomis, Kickapoos, Kaskaskias, Des Moines River Sioux, Ioways, Sacs, Foxes, and Osages heeded the government's call and gathered in St. Louis. Bowing to intense pressure from U.S. officials, the tribal representatives agreed to sign a treaty pledging an end to all hostilities, but as soon as they left town, many of them cast aside the American-dictated agreement and resumed their warfare. Both Harrison and Wilkinson remained apprehensive about the safety of their respective territories and urged the federal government to send a military force to Prairie du Chien to subdue the belligerent Indians. 24

*(continued on next page)*

# The Genesis of Missouri from Wilderness Outpost to Statehood *(continued)*

During the ensuing winter and spring, the Sacs continued their raids against the Osages, and when they failed to locate their Indian adversaries, they occasionally turned against isolated white settlers. Sac raiding parties killed two white hunters along the Missouri, drove off cattle and destroyed Nathan Boone's saltworks in central Missouri, and murdered another saltmaker north of St. Louis. In December 1805 Wilkinson again ordered representatives of the marauding tribe to report to St. Louis, where he delivered the strongest possible warning, stating that, unless the Sacs ceased their depredations and returned all Osage prisoners, the U.S. government would withhold all trade and supplies from the tribe. But this time the well-worn threats were to no avail, and the Indian dissatisfaction grew worse by the day. 25



The first U.S. military fort established west of the Mississippi River was created in 1805 while the Corps of Discovery was struggling over the Rocky Mountains. Fort Bellefontaine ("beautiful spring"). 1812 sketch of Cantonment Bellefontaine from U.S. Army Center of Military History, U.S. National Park Service.

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Although the president had been forced to retreat from his earlier plans for closing Upper Louisiana to white settlement altogether, he continued to press proposals for removing settlers from the territory's more sparsely inhabited regions. He instructed Governor Wilkinson to investigate the possibility of transferring the residents of the scattered settlements below Cape Girardeau to more heavily settled portions of the United States. 26 By making the existing settlements more compact, Jefferson hoped to facilitate the administration of justice, strengthen western outposts against possible attacks, and create more space for displaced eastern tribes. Even the usually aggressive Wilkinson recognized the need for caution in initiating any such program. He recommended that relocation could best be accomplished by discouraging further settlement in the affected area and by offering inducements to those already residing there to move elsewhere. After conversations with the governor, Edward F. Bond, a resident of the Cape Girardeau district, expressed enough interest in the scheme to open discussions with settlers there and in the neighboring New Madrid district. Bond's letters to Wilkinson and Jefferson suggested that the plan could be carried out if the price was right, but he acknowledged that some old families were much opposed to it on any terms. 27

While continuing to advise his superiors that the objective appeared attainable, providing that the government adopted the necessary measures and that all territorial officers cooperated, Wilkinson was forced to concede that securing the assistance of other territorial officials would not be easy. 28 Moses Austin spoke for most local residents when he warned high-ranking officials that unless they abandoned their quixotic schemes for depopulating the western bank, they would have "cause to regret the moment they became possessed of Louisiana." 29 Jefferson quickly discovered what his Spanish predecessors could have told him: the footloose and fiercely independent American frontier settler could not be confined to a few well-protected enclaves.

The lack of support for consolidating white settlement forced the president to move more slowly in implementing his closely related project for making the Ozarks a dumping ground for eastern Indians. In addition to resistance from nearby white settlers, the powerful Osages, who claimed most of the region, were in no mood to tolerate additional intrusions on their lands. For the moment all such plans had to be quietly shelved.

The anti-Indian prejudice and the fear of Indian violence in the white community that helped quell Jefferson's plans for relocating eastern tribes in Louisiana also hampered the tasks of officials charged with maintaining harmonious relations between the two peoples. White violence against Indians was as serious a problem as Indian violence against whites, but in the white community the standard of justice was clearly different when Indians were involved. Samuel Hammond, Jr., unquestionably overreacted when he first shot and then stabbed to death a drunken Kickapoo warrior brandishing a tomahawk in the St. Louis streets, but Attorney General James Donaldson's attempt to prosecute him drew cries of protest from outraged local inhabitants. A hastily summoned coroner's jury quickly exonerated Hammond of all charges. Although Donaldson's actions against Hammond were undoubtedly justified, the entire affair was more a matter of politics than of a concern for Indian rights. As a staunch Wilkinson partisan, Donaldson had seen an opportunity to embarrass the accused's uncle, Col. Samuel Hammond, Sr., who recently had fallen out with the governor over Hammond's refusal to sign a petition supporting Wilkinson's confirmation as governor. The handling of the Kickapoo incident intensified the enmity between them and brought the influential Hammond, who initially had been a Wilkinson defender, to the forefront of the anti-Wilkinson ranks. 30

Slowly and painfully, the Jefferson administration had to revise its estimate of the obviously deteriorating situation in the Louisiana Territory. The unrelenting political quandary made it necessary to reconsider Governor Wilkinson's role, particularly in view of reports the president had begun to receive early in 1806 suggesting the possible existence of a western conspiracy under the leadership of Wilkinson and Aaron Burr. Keenly aware of his tenuous position and obviously disturbed by rumors predicting the imminence of his removal, the governor wrote to the president and to Senator Samuel Smith pleading his cause. 31

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## ***The Genesis of Missouri from Wilderness Outpost to Statehood (continued)***

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As late as 4 May 1806, Jefferson, anxious not to alienate the general's influential friends, assured Senator Smith that no immediate change was contemplated in Wilkinson's status, but it seems obvious that the decision to remove him as governor already had been made. Only two days later, on 6 May, Secretary Dearborn ordered General Wilkinson to take command of military operations in the Territory of Orleans as a consequence of threatened hostilities with Spain. 32

Worsening relations between Spain and the United States caused by a dispute over the still-unresolved Louisiana-Texas boundary provided Jefferson with the perfect opportunity to extricate himself from a very difficult political predicament. Under the pretext that military necessity dictated Wilkinson's departure from the territory, the president ousted him from Upper Louisiana without formally removing him as territorial governor. At least partial credit for this solution to the president's dilemma must be given to Congressman Matthew Lyon of Kentucky, who had suggested such a plan to Jefferson only a short time earlier. 33 Although Wilkinson's departure did not necessarily mean that his tenure as governor had ended, most Louisianans interpreted it that way. Upon receiving his order to go to New Orleans, the governor protested to the secretary of war that rumors emanating from Washington had anticipated his instructions far in advance of their actual public disclosure. He clearly feared that the widely accepted view that his reassignment had been designed to get rid of him was in fact true. Although he acknowledged his orders on 16 June, Wilkinson dallied in the territory for two more months, possibly waiting to see what materialized in the rapidly developing Burr intrigue. In fairness to Wilkinson, his wife's serious illness may also have contributed to the delay. 34

In July, Wilkinson ordered Lieutenant Pike, who had returned to St. Louis in April with maps and reports from his journey up the Mississippi, on a second and ultimately more important expedition to the west. Pike was ordered to escort some Osage captives recently released by the Potawatomis to their villages, to assist the Kansa Indians in negotiations with the Pawnees, to make overtures to the warlike High Plains Comanches, and to explore the Arkansas and Red rivers. Wilkinson's motives in dispatching Pike on this mission continue to be debated, but it is clear that the young explorer was an innocent pawn who knew nothing of Wilkinson's intrigues with Aaron Burr. Within a year's time, Pike discovered the peak that bears his name, became lost three times while exploring and mapping in the Rockies, and fell into the hands of Spanish officials, who charged him with spying. After briefly detaining the American officer in Chihuahua, the Spaniards allowed him to return to the United States in 1807. There he found himself suspected of complicity in the Burr conspiracy, which had broken into the open during his absence. 35

When Wilkinson finally left St. Louis on 16 August 1806, the Burrite plot was reaching a critical juncture, and the Louisiana Territory loomed large in the former vice-president's secret plans. In Wilkinson's absence, Joseph Browne, Burr's brother-in-law and the territorial secretary, became Louisiana's acting governor. Taking advantage of that situation, Burr sent his chief of staff, Col. Julien de Pestre, to St. Louis in October to recruit support for his mysterious western enterprise, but the French emigre received a cool reception. Aside from Robert Westcott (who was Browne's son-in-law), Maj. James Richardson, and Dr. Andrew Steele, Colonel de Pestre found few takers in St. Louis for the proclamations and commissions he was carrying. David Delaunay, the adjutant general of the territorial militia, Maj. Pierre Provenchere, and Col. Auguste Chouteau all rejected the overtures of Burr's agent. Chouteau went so far as to attempt to throw the commission offered him into a fire. Colonel de Pestre made a hasty retreat from St. Louis to Kentucky, but Rufus Easton, Major Bruff, and other opponents wasted little time in forwarding reports of his alleged activities to officials in Washington, D.C. 36

The end of the year saw a marked upswing in Burrite activity in the Louisiana Territory. While his recruiters sought to attract volunteers in the vicinity of New Madrid, Burr and his party of one hundred or so men—far fewer than the twelve hundred they had counted on reached that settlement on 1 January 1807 after descending the Ohio. They remained in New Madrid only briefly before continuing down the Mississippi. When word reached St. Louis that Burr was approaching the territory, Major Westcott and Dr. Steele set out to find him, and while en route to New Madrid, they were joined in Ste.

Genevieve by John Smith T and Henry Dodge. Their party failed to link up with Burr, possibly because they had learned that a presidential proclamation had been issued on 27 November authorizing Burr's arrest. Clearly Burr's plans were unraveling. Even Wilkinson had by then turned on Burr, whom he now charged with plotting to invade Mexico. Everywhere the reports of the alleged conspiracy generated excitement and interest. When Smith T and Dodge returned to Ste. Genevieve, they were greeted with warrants issued by territorial judge Otho Shrader charging them with treason. Dodge submitted to arrest, posted bail, and then proceeded to use his fists to settle the score with several of the grand jurors who had indicted him. Smith T characteristically drew his pistol and defied the authorities to arrest him. They chose not to, and the allegations were not pursued further. 37

**Credit for this selection of pages from *The Genesis of Missouri From Wilderness Outpost to Statehood* is thanks to The University of Missouri Press, Columbia, Missouri**

**Author's Notes Cited from this selection:**

#### **Chapter 10. The Turmoil Continues**

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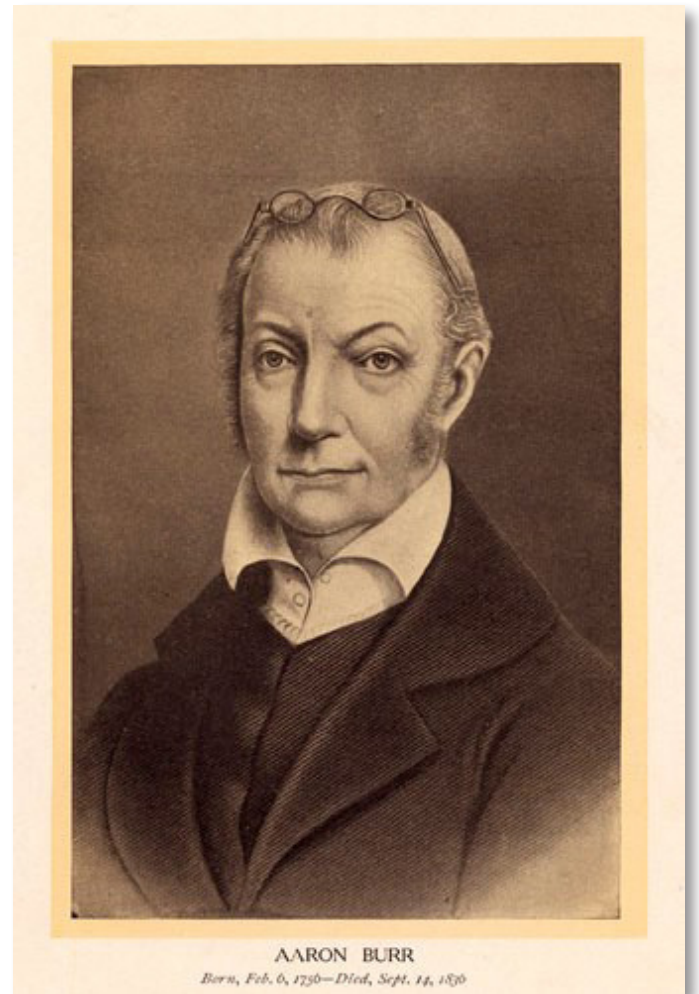
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*Aaron Burr Image from the National Park Service Article - So, What Happened While Lewis and Clark Were Gone?*

*(continued on next page)*

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## ***The Genesis of Missouri from Wilderness Outpost to Statehood (continued)***

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15. The first certificates of confirmation were not issued until 8 December 1808. See Eugene Morrow Violette, "Spanish Land Claims in Missouri"; Carr to Moses Austin, 12 August 1806, in Barker, ed., *Austin Papers*, 1:113-14.
16. Wilkinson to Dearborn, 27 July 1805, in *Territorial Papers*, 13:165.
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18. Dearborn to Wilkinson, 19 April 1805, Wilkinson to Dearborn, 27 July and 30 December 1805, in *Territorial Papers*, 13:116-17, 167-68, 358. The complete story of Fort Belle Fontaine's construction is told in Kate L. Gregg, "Building the First American Fort West of the Mississippi," and an account of the trading factory there can be found in Russell M. Magnaghi, "The Belle Fontaine Indian Factory, 1805-1808."
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35. Jackson, Jefferson and the Stony Mountains, 250-54. See also Donald Jackson, ed., *The Journals of Zebulon Montgomery Pike*.
36. Carter, “Burr-Wilkinson Intrigue,” 458-59.
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## Surveyors Review Course

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# NSPS 2026 Day on the Hill and Director's Meeting Notes

by Mike Zahner, PLS, NSPS Missouri Director

From April 13<sup>th</sup> to the 17<sup>th</sup>, forty-five states were represented for Day on the Hill held annually in Washington, DC, with 105 participants representing their jurisdictions. As part of the outreach to keep Professional Land Surveyors prominent with our elected representatives, about 160 visits with members of Congress or their assistants took place during the week. Three main issues were the focus for the 2026 Meetings:

1) Geodesy Prioritization- NSPS respectfully urged members of Congress to add a provision to the 2026 Highway Bill authorizing the National High Definition (HD) Map in the Bureau of Transportation Statistics (BTS) to improve highway safety, increase economy for road users, and prioritize geodesy and GPS in the future.

2) Alpha-gal Allergen Inclusion Act- NSPS respectfully urged Congress to enact legislation that amends the Federal Food, Drug, and Cosmetic Act to add alpha-gal to the definition of "major food allergen."

3) TAP Pilot for 2027 NDAA- NSPS respectfully urged Congress to include a provision to the 2027 National Defense Authorization Act (NDAA) to authorize a pilot program in DOD's Transition Assistance Program (TAP). The program's purpose would identify and assist members leaving the Armed Services having relevant training and skillsets in surveying, mapping, and geospatial experience to transition those specialties into applicable career opportunities available in the civilian sector.

Many directors were very impressed by our cover and article in the March issue of the Missouri Surveyor about Alpha-gal. It is good to know that the word is spreading.

**PAC**- In 2025 the NSPS PAC collected about **\$19,600**. So far this year the **Jefferson Club** has the following number of members:

**Benjamin Banneker Level \$1,000 per year**- 10 members

**Andrew Ellicott Level \$500 per year**- 14 members

**Jeremiah Dixon Level \$250 per year**- 5 members

At the PAC Committee Meeting all 21 participants (the best I could tell) raised their hands to donate \$250 to the PAC. Most were donating beyond their Jefferson Club Level. Peer pressure is an amazing thing.

Treasurer's Report- NSPS is cutting back on certain items for meetings due to the rising costs. For example at this meeting:

- Pot of Coffee cost- \$150 (We paid for our own at the Starbucks in the hotel)
- TV for meeting room- \$1,400 (Tim Burch bought a couple for \$400 each for the meetings)
- Box lunch- \$57 each. We did use sponsor's money for the Awards lunch on Thursday.

We are very fortunate to have sponsors step up and take care of these costs.

Sponsorships range from \$500 to \$25,000 per year.

Thank you to the MSPS board for continuing to be a State Affiliate Sponsor.

NSPS has about 15,000 members. With 40,000 to 50,000 PLS's in the US, only about one third are members in their State Societies.

Young Surveyor's Network (YSN) Student Competition

26 States were represented at the student competition.

There was a total of 215, including YSN members, volunteers (65), and students.

It was a record turnout and a huge success. 3 volunteers were from Missouri.

NSPS Foundation Board

\$97,000 will be granted this year from the Foundation Board.



Mike Zahner (center) with young surveyors in front of Congressman Jason Smith's office on Capitol Hill.



NSPS Members representing states across the nation gathered for a group photo. Image courtesy of Executive Director, Tim Burch. 🇺🇸

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# Surveyors Historical Society

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by Darrell Pratte, PLS

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In 1977, some surveyors got together with the intent to form a not-for-profit group, the sole purpose of which would be to preserve the art and science of the historical aspects of land surveying. From these austere beginnings was formed the Surveyors Historical Society (SHS). Today, SHS enjoys a membership of over 300 people from across the United States.

The SHS Mission Statement is:

“The Surveyor’s Historical Society documents the evolution of surveying and mapping through the collection and preservation of artifacts, records, and accumulated knowledge. The society seeks to use its unique and comprehensive repository of surveying material and the knowledge of its members to develop educational opportunities and support others engaged in similar efforts.”

Bringing this statement to life is a multitude of special projects. From the Henry David Thoreau Final Point in the Sleepy Hollow Cemetery at Concord Massachusetts to the Sucia Island Remonumentation Project in San Juan County Washington.

In 1997 SHS put together a field party to try to recover Ellicot’s Stone at the confluence of the Ohio and Mississippi Rivers. This event was a success in terms of turnout, but not much in terms of finding the Stone. Everyone agreed to meet back in Paducah, Kentucky in 1998. Another attempt to locate the Stone failed, but still a lot of people did come to Paducah. Such were the humble beginnings of the Annual Surveyors Historical Society Rendezvous.

No one is saying Ellicot’s Stone cannot be recovered, but the next year, 1999, the Rendezvous was held in Luary, Virginia. Since then, the SHS Rendezvous has recovered, resurrected, and restored Stones all over this nation. Though the Rendezvous does not always center on monument recovery. Sometimes the scope of surveys conducted in an area is a story worth telling.

The 2027 Rendezvous promises to be just such an event. A colonial area where much of the land was promised to the worthies of the Sovereign. Upon becoming the Twenty-First State, in 1821, it became the home of the First Capitol of Missouri. Come to St. Charles and the 2027 Annual SHS Rendezvous. Held in conjunction with the 2027 MSPS Annual Meeting it will provide a great moment for both groups to get to know each other. This is the second time Missouri hosted the Rendezvous, and it is easier to say only Kansas and Oklahoma are the two Missouri Border States yet to host a SHS Rendezvous. The other six played host to this event, so the Rendezvous is no stranger to the Mid-West United States.

Most all the information contained in this missive is found on the Website: <https://www.surveyorshistoricalsociety.com/aws/SHS/pt/sp/about> It is a great resource to learn about, find out about, or join (if so inclined after doing the research) the Surveyors Historical Society. 🇺🇸



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Pulling up to a “Century Farm” in Sec. 2, T49N, R29W on a cloudy spring morning to begin the day’s farmstead survey. Photo by Chris Ferguson. 🇺🇸

## Articles and Photos Welcome

**MSPS offers you an opportunity to showcase your and/or your company’s work in the Missouri Surveyor reaching nearly 1000 readers!**

You are invited to share photos and/or stories much like what is in this issue with the rest of our professional community. All that’s asked is to take high-quality pictures (thumbnail photos do not scale up very well) and submit the articles in Microsoft Word. Send those with a brief description to either of the magazine’s editors listed on the front page and look for your chance to be in the next edition! 🇺🇸

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