

November 2019

SIDE SHOTS

Professional Land Surveyors of Colorado

Volume 50, Issue 4

SAVE THE DATE!
Rocky Mountain
Surveyors Summit
February 26-28
2020

JUST A SIMPLE COMPASS

- page 7

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SIDE SHOTS

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*Side Shots is the official publication of the Professional Land Surveyors of Colorado, Inc.
and is published quarterly for the betterment of the surveying profession.*

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Hello PLSC,

The Rocky Mountain Surveyors Summit is coming up fast, February 26-29; put it on your calendar. Here is a little peek: Speakers Jeff Lucas, PLS and Steve Parish, PLS. And we changed the venue for next year, to the Denver Marriott West instead of the Arvada Center. The chapter summit is moving to Thursday evening, and we are having a social event on Friday night. The conference committee is working hard and raising the bar on the RMSS event this year. If you want to be a part of this highly motivated group, and help plan and run the event, contact Kayce Keane, PLS.



Please welcome Bryan Douglass, PLS, the new co-chair of the Legislative Committee, together with Scott Thompson, PLS, and our lobbyists Kathy Oatis and Steve Balcerovich. I believe this, one of our most mission critical committees, is in capable hands. Bryan Douglass, PLS, is a Survey Project Manager at Denver Water and the Jefferson County Surveyor. He made two presentations at the 2019 GIS in the Rockies conference. His first presentation was on the new Colorado 811 legislation and the second was a call for solidarity between the GIS professional and Colorado's county surveyors. Scott Thompson is the Mesa County Surveyor. He has been a licensed professional surveyor for 38 years, and he maintained consulting businesses in Grand Junction for 34 of those years, including Thompson-Langford Corporation and River City Consultants. So, if you have been waiting to get involved in the Legislative Committee, now is a great time to contact one of the co-chairs to plug-in and attend their meetings.

We have a number of opportunities coming up for surveyors to represent the surveying profession and reach out to future surveyors: The Adams County Commissioners' Career Expo, November 19, 2019, Girl Scout Geocaching Event, April 2020, The Scout Show, April 25, 2020 and the Denver Area Council BSA of America Camporee. You can help a scout learn how to navigate or even assist them in earning their surveying merit badges. I highly encourage you to get involved in one of these events, or similar events with your local chapter. The virtual-contours sand table is always a hit, and these events are some of the best ways to get the word out about how great the surveying profession is. Contact Brian Dennis or Becky Roland for more information.

Sincerely,

Steven Parker, PLS CFM CFedS
PLSC President

FROM THE EDITOR



This issue has an abundance of good reading material. Please pay particular attention to the two-page spread for the Rocky Mountain Surveyors Summit on February 26th to the 28th of next year, including the presentation topics, and the new location in Golden. Mark your calendars!

Gaby Neunzert continues to give us amazing articles, this time the history and complications of the use of magnetic compasses in the past. Earl Henderson presents a thoughtful analysis of Board Rule 6.1 on seal and signature requirements. There is an announcement of this year's winners of the annual Trig-Star competition. Alan Blair wrote a piece as a prelude to his presentation at the RMSS on the issues of ethics. There is a short article on this year's GIS in the Rockies conference. Todd Beers provided the meeting summaries and highlights of the boards of directors of both the NSPS and WFPS, including the always interesting highlights from other western states, and an overview of the CFedS program. Becky Roland provided the PLSC board minutes from the August 27th meeting, and the latest actual vs. budget report. And last but not least, the chapter news and listing of sustaining members concludes this issue.

It is also time to think about renewing your PLSC membership, and more importantly, do what you can to spread the word about the benefits of membership to those professionals you know who do not belong, and to newly licensed or other young people with career aspirations. I always found the PLSC to be a valuable break from the day to day work of surveying, to examine challenging issues, brush up on new technology and laws/board rules, further the development of new people coming into the profession, and most of all, interact with colleagues on a professional rather than a competitive level. Such collaboration and exchange of information and ideas benefits not only each of us as individuals, but benefits our profession, at a very reasonable cost. Think about what you can do to bring another surveyor into the fold!

On a personal note, I was overwhelmed by the response to my previous column, which I believed could possibly have been my last. The chemotherapy for my cancer has been difficult, but has shown some success in shrinking the tumors. I have been working from home and have been able to come back into the office part time, which has been very gratifying. My long term prognosis is unknown, but I am grateful for each day, and for the PLSC members who have extended their greetings and wishes.

JB Guyton, PLS, Editor

Have you renewed your Colorado PLS license?

**All 2019 PLS licenses expired with DORA
on October 31, 2019.**

You should have received a renewal email on or about September 26th
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There is a grace period, through December 30th, 2019; after that, your license will
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Just a Simple Compass

By Gaby Neunzert, PLS

As an instrument to obtain direction, the magnetic compass certainly ranks equal to GPS in significance. Many of bygone surveyors probably could hardly believe their ears when hearing that the old fashioned magnetic compass and GPS have many things in common. The main item is the sun or more specifically the sun's effect. Not all causes are fully understood, but fundamentally, the electrons (total electron count = TEC) emitted by the sun and interacting with the magnetic field of the earth, are a main source of natural errors. These disturbances cause the magnetic field to fluctuate, thus affecting the transmission of the electronic GPS signal and the alignment of the compass needle, among other effects. Even though now only used in an attempted resurvey, when no monuments can be recovered, this presentation will only dwell on the magnetic compass. The effects are more intertwined and mostly overlooked and are referenced to GPS only by implication.

Before proceeding, it should be noted that most of the probably several million magnetic surveys were made honestly and stand historically correct. In hindsight, it is however necessary to consider the physical limitations. And yes, considering the mostly undocumented changes of the magnetic field with time, a resurvey with a magnetic compass is impossible. However, by using at least two recovered physical monuments of record, an astronomic or GPS survey can be made for a bearing. This allows for the calculation of an approximate rotation parameter between the old and new.

The significance of the compass in surveying can be noted when it is realized that, from about 1750 until at least to 2000, every transit manufactured in the US had a compass in its base. However, it was soon realized that the pointing of the magnetic needle gave non-consistent results. Thus, during that same time period, surveying practice gradually shifted from a magnetic to a "permanent" astronomic alignment. Unfortunately, the majority of the surveying records fail to state the basis of bearing, which makes a resurvey of record only, without physical evidence on the ground, very nearly impossible.

Just as a topic listing, the magnetic compass is affected, in no specific order, by:

- a) Despite many records to the contrary, a magnetic bearing should be reported and recorded to the nearest degree only, regardless of the instrument used,

- b) Secular changes, i.e. changes in declination over a long time,
- c) Daily changes, somewhat predictable depending on the sun's location,
- d) Random changes, unpredictable effects due to "magnetic storms",
- e) Local, natural and man-made magnetic anomalies,
- f) Unreasonable extrapolation of data.

Magnetic bearing should be reported and recorded to the nearest degree only, regardless of the instrument used:

As will be pointed out below, there are just too many variables to justify a reliable field measurement to less than the nearest degree.

Secular changes, i.e. changes in declination over long time:

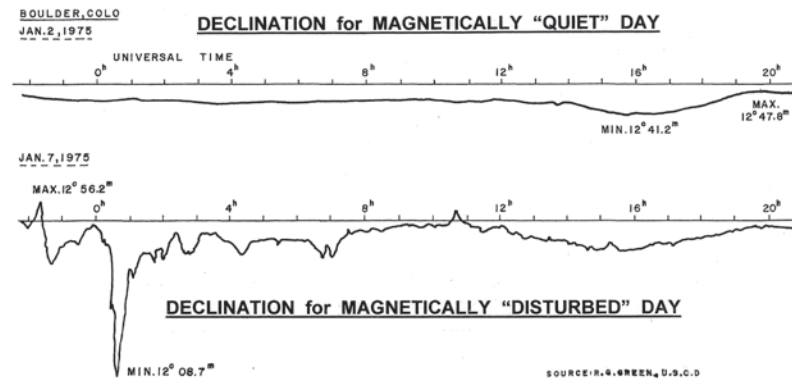
Declination is defined as the deviation from north, of the earth's horizontal magnetic lines of flux and it is considered to be a variable. For at least the last several hundred years the declination pattern has been drifting to the west, at a non-uniform and irregular rate. Ultimately, just like a pendulum, it is expected to swing back again.

An isogonic chart, showing the lines of equal declination for a specific epoch of time, is an excellent visual tool to convey the "big picture", but it is utterly useless to show the declination of a surveying station in the field. This simply, because the lines of flux follow the magnetic characteristics of the ground and not a hand or computer drawn smooth line, which is controlled by less than 10 magnetic observatories for the entire continental US.

Daily changes, somewhat predictable depending on the sun's location

Assuming a magnetically quiet day, the magnetic declination will vary between 10^m to 15^m of arc, most noticeably during the afternoon and at maximum solar exposure. (See Figure 1, page 8)

Figure 1



Random changes, unpredictable effects due to "magnetic storms"

Magnetic storms can occur at any time, day or night and are completely invisible to the unaided eye. They can occur without a cloud in the sky, affect the entire earth and can last from minutes to hours. The storms are caused by electrons ejected from solar eruptions and their interference of the earth's magnetic field. In space, the transmission of GPS data can either be partially or completely corrupted and the compass needle can swing wildly by maybe degrees. The storms' intensities and frequency appear to be directly related to the roughly 11+ year sunspot cycle.

For GPS, several private and governmental agencies report or even warn of solar eruptions and also maintain a historical record. Historically, detailed solar activity records are less than 200 years old.

Local, natural and man-made magnetic anomalies

Natural magnetic anomalies: Mostly caused by magnetite, a ferrimagnetic mineral and changes of the magnetic field in the mantle of the earth; anomalies occur mostly in igneous and metamorphic rocks. Magnetically the earth is a non-heterogeneous body and hence the magnetic lines of flux follow a non-uniform pattern.

Man-made magnetic anomalies: The entire country is literally inundated with iron/steel scrap thoughtlessly discarded, either visible above or below ground level, which can cause major, unpredictable disruptions of the natural magnetic field. For example, a vehicle parked too close, barbed wire fencing, rebar in concrete, buried pipeline, magnetic watch band or belt buckle, etc., all will exert an unknown magnetic influence.

Unreasonable extrapolation of data

Given that the deputized GLO surveyors received very little training and only had a rudimentary transit and a magnetic compass for direction, they deserve a major compliment for a job well done. The emphasis was to get the initial survey done and not worry about a later resurvey. It may be possible to ascertain the specific methods used by reading the field notes. However, the general procedure was to first establish an astronomic meridian at each base camp. With a magnetic compass, it was then possible to read the declination (var = variation) and then use it as a "constant" to control the direction of the current field work, often extending over many miles; as well on paper, copy this information to the township plat. Even though no additional declination measurements were made for an initial survey, the procedure worked as intended. Unknown at the time was that declination changes, especially in an east-west direction and that at least theoretically, each line in the township survey should have its own magnetic field measurement. For a resurvey based on record information only and no recovered monuments, this presents an impossible situation because the past magnetic data cannot be reestablished.

There are many GLO Township plats where the declination of record shown is constant or nearly constant across the nominally 36 sq. miles. This may physically be reasonable in the geologically inactive areas as in parts of the plains; however, it is very unreasonable in the geologically active areas, like the Rockies or the Sierras and many other places.

Bibliography:

Nelson, J.H., Hurwitz, L., Knapp, D.G., 1964; Magnetism of the Earth; Pub. 40-1, USCGS, Washington, DC
Caution: The "Magnetic Compass" chapter in some surveying texts should be read very selectively. Some still publish ancient myths, like obtaining the declination of a surveying station from a national isogonic map!

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Rocky Mountain Surveyors Summit

February 26-28, 2020 ~ Denver Marriott West

PLSC is pleased to announce Jeffery Lucas, JD, PLS as our Headline Speaker



Jeffery N. Lucas is the Survey Manager, Alabama Operations, for ESP Associates AL, Inc, a multi-disciplined engineering and surveying firm headquartered in Fort Mill, South Carolina (Charlotte area). Lucas has been in the surveying business since 1976. Lucas is a licensed attorney and was admitted to the Alabama State Bar in 2003. Lucas specializes in land boundary issues as an attorney, land surveyor, consultant, mediator and expert witness.

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- Department of Regulatory Agencies (DORA)
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EXHIBITS:

This year, the Summit will have an expanded exhibit hall with more equipment, products and services to see. There will also be social hours at the end of each day to relax and network with exhibitors and colleagues. Friday night will include a Casino Night.

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The Marriott Denver West in Golden, CO, is our new location. The Marriott is offering a discounted rate of \$139/room per night for attendees. For reservations, call 1-888-238-1803 and mention CO Land Surveyors for discounted rates. There is an online link on the Summit web page.



2020 Rocky Mountain Surveyors Summit is hosted by the Professional Land Surveyors of Colorado and the Front Range Chapters.

Here are just a few reasons to attend this event:

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Rule of the Month

Board Rule 6.1-Seal and Signature requirements

By Earl Henderson, PLS

You would think that a Professional LS would understand sealing and signature requirements and that those requirements would be second nature to them. But if that were the case, then I wouldn't be writing this article. To me, this is one of the most basic and simple acts we perform, yet it is also the act that shows the public and our fellow professionals that we are, in fact, professionals ourselves. And once again, as in many previous examples, I would suspect that the DORA Board is unlikely to suspend or revoke your license for this type of infraction. But if you find yourself facing discipline for a survey in front of the Board, or possibly worse than that, you find yourself defending your survey in front of a judge, infractions such as the ones discussed below can add up and define the level of professionalism of your plat and your work in general. How likely is the judge to accept your interpretation of a boundary line location when it becomes known to them that you aren't even capable of correctly sealing and signing the survey plat? In fact, not correctly sealing and signing your plat can invalidate it for those proceedings and result in your client losing the case from lack of a properly executed survey. I know I don't want to find myself in that embarrassing situation. So, let's review the requirements.

Board Rule 6.1.1 defines the specifications of your seal. I'm not going to get into any details or descriptions about this rule as I've never seen a seal for which I would question the specs. But it's a good idea to double check your seal to make sure that it does meet the specs.

Board Rule 6.1.2 describes the application of your seal. It must be applied, either manually or electronically, to the final record document you produce. Up to this point I don't think I've ever seen an infraction I'd bring attention to. But that's about to change.

Board Rule 6.1.2(a) indicates that your seal must be applied to "Each sheet of documents and plats resulting from the practice of land surveying." I see infractions of this rule often. It is quite surprising, if you start to pay attention, how often a multi-page Land Survey Plat has the seal and signature on the first page and no subsequent pages. Come on son. And what's even scarier is that this happens a lot on ALTA/NSPS Land Title Surveys for which we carry significantly larger risk

and liability. It is also a frequent violation on Subdivision plats. If a legal proceeding were to develop based on a survey you completed and you hadn't sealed and signed every sheet, the consequences could have a significant effect on your insurance, your reputation, your client and possibly your ability to continue to practice when the Board finds out. And all because of a simple lack of understanding this simple rule. So, seal and sign every sheet of every plat. It makes it easy to avoid the consequences. And since we're on the subject, we also apply certifications to our plats when we seal and sign them. I recommend using that certification on each sheet of your plat as well. The certification limits your liability so why would you want to take the risk that your liability is limited only with regard to Sheet 1 of your plat and not the other sheets? Your liability may or may not be extended on the subsequent sheets without a certification statement, but why take the chance? Why not make certain that your liability is limited on each and every sheet?

While we're at it, I also recommend to review the definition of Professional Land Surveying, Land Survey and Professional Land Surveyor found in CRS 12-25-202, CRS 38-51-102 and CRS 38-53-103 (and possibly elsewhere) to make sure you understand the meaning of the "practice of land surveying" as written in this rule. The definition far exceeds a LSP, ISP, ALTA/NSPS Land Title Survey and ILC. Your stamp is required on a great many types of documents other than those just listed. CRS 12-25-202(6)(c) is the blanket that allows for interpretation of the definition of Professional Land Surveying to be made by someone other than you (i.e. The DORA Board or the judge). So once again, why take the chance? If in doubt, seal it. You're likely to be liable for it anyway.

Board Rule 6.1.2(b) excepts reports from the requirement to seal and sign every page (thank goodness), because some of those reports can get pretty long. But note that you can seal and sign either the title page or the signature page. I tend to seal and sign the signature page, but that's just me.

Board Rule 6.1.3 baffles me quite often too when I review plats. The first part just says that the signature and date of the licensee must be affixed to the

document. I think we all know that. But unfortunately, we don't all understand the second sentence, "The signature of the licensee and date of the signature shall appear through the seal." You would think this is common knowledge. But apparently, it's not. I often see signatures and/or dates that are set aside from the seal. Really? But don't feel too bad because I see this on Architectural and Engineering plans too. So surveyors aren't the only ones without that common knowledge. Make sure your signature-and the date-both appear through the seal. It's more common to see signatures in the seal and the date off to the side than to see both off to the side. But as I said, it's frightening how often you'll see this once you start to take notice.

Board Rule 6.1.3.1 is a rule I've never encountered, but one that you may want to be aware of just in case. I'll let you read it for yourself.

Board Rule 6.1.4 deals with sealing documents that are not yet final. Notice it doesn't say anything about signing documents that are not yet final. I don't think I would ever sign a document that wasn't final but again, that's just me. But I do leave my seal on documents that are not yet final occasionally. After all, a preliminary LSP is a document you're releasing as a result of the practice of land surveying as discussed above (BR 6.1.2(a)) so it requires your seal but not your signature. And this rule states that if and when that's done, we must identify the document as being "Preliminary". IMHO this is a good policy when releasing a document that is not yet final even if your seal is not affixed. But I have occasionally seen documents with seals and no signature that were obviously intended to be preliminary but that had no mention on them that they were preliminary. Not only is this a Board Rule violation, but it's also a neck exposure violation.

Board Rule 6.1.5 deals with limiting the scope of the licensee's responsibilities with regard to the survey and plat. I think this is a good rule, but I also think it can be wrongly applied to some situations. It's part of a pet peeve of mine that I think would take up too much space for this one issue, so I'll leave it for another time, maybe even next time. But I would caution you to be very careful how you apply this rule, if you choose to apply it. Remember, the Board and the courts are not obligated to interpret this rule the way you interpret it and apply it to your situation. Just as the Board and the courts aren't obligated to interpret your survey as an ILC just because it's labeled an Improvement Location Certificate. You may be held responsible for aspects of a survey that you claim not to be responsible for in a limiting statement for other reasons. So, be careful with this one.

Board Rule 6.1.7 deals with record retention, which is defined as 3 years from the date you tender the document to the client, not the date you record or deposit the survey or document, nor the date you sign the survey.

I recommend starting to take notice of the seals and signatures on the documents you see when conducting research, or reviewing plans, or wherever you run into them. You too will be shockingly surprised at how often you'll notice that someone doesn't understand the very basics of what being a professional is all about. It's disappointing. If we're going to be accepted as professionals, then we have to act in a professional manner. And that applies to everything we do from the most advanced and complicated matters to the most basic and simple. The documents you release to the public by means of recording or depositing into the public record will be on file and available, possibly for eternity, or maybe just the next 3 billion years or so until the sun explodes and destroys the Earth, whichever comes first. So, for quite some time, well after we've all moved on to our Elysian Fields, those documents will be providing future folks with an insight into your competency and professionalism. I know that when I notice a document that isn't sealed and signed correctly it immediately instills in me a sense of the person's understanding and knowledge of this wonderful profession of which we are so privileged to be a part. And that sense of doubt and concern continues with each aspect of the survey I'm studying to try to determine if they did a reasonable job. If that PLS didn't understand how to seal and sign their work, what other aspects of the profession did they not understand? I'm already looking for them and expecting them, rather than defaulting to the position of accepting their work as is.

When you're dead and gone, and some future PLS, possibly even a protégé, happens upon your plat while conducting research, do you want them to feel a sense of hesitancy or relief? I know what I want them to feel. But I hesitate to expand on that thought.

Be safe out there.

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National Trig-Star Committee Selects Winners of the Richard E. Lomax National Trig-Star and Teaching Excellence Awards

The National Society of Professional Surveyors (NSPS) is pleased to announce the recipients of the 2019 Richard E. Lomax National Trig-Star Awards. The Trig-Star committee met on July 12-13, 2019 to determine the three top high school students from the national examinations submitted by state winners. This year there were thirty-six state winners submitted. A past president of NSPS, Richard Lomax was the driving force behind the elevation of the local Trig-Star program to the national level. In October 1994, Board action named this high school trigonometry skill award in his honor.



*Qingfeng
Li
First Place*



*Austin
Mazenko
Second Place*



*Henry
Hein
Third Place*

The Richard E. Lomax National Trig-Star Awards are as follows:

- First Place: \$2,000
Qingfeng Li, Laramie High School, Laramie, Wyoming
- Second Place: \$1,000
Austin Mazenko, Cherry Creek High School, Greenwood Village, Colorado
- Third Place: \$500
Henry Hein, Scholars Academy, Myrtle Beach, South Carolina

The Richard E. Lomax National Teaching Excellence Awards are as follows:

- \$1,000: Paul Street, Laramie High School, Laramie, Wyoming
- \$500: Jim Padavic, Cherry Creek High School, Greenwood Village, Colorado
- \$250: Jennifer Zhang, Scholars Academy, Myrtle Beach, South Carolina



Trig Star participants from Pine Creek High School in Colorado Springs, District 20, from left: Don Hulsey, PLS, Kyle Ma, Lauren Shrack, Angel Wang, Claudia Segal (1st place winner of a \$100 gift card from the PLSC), and Shaynie Segal. April Pierce (not shown) was the proctor and math teacher, and sponsor of the Mu Alpha Theta Math Honor Society.

A Matter of Ethics

By Alan Blair, PLS

Please join me at the Rocky Mountain Surveyors Summit. I have been asked to present at the summit a session on ethics. You may wonder, why me? The reality of it is that I am uniquely well qualified; and I have been around long enough to fall into the category of pundit. My hair is gray, I have never been convicted (an important distinction related to law) of anything and I love to join with other surveyors to explore the esoteric issues in surveying.

I thought I would offer an article to preface what I plan for the Summit in February. I want to share with those who attend some of the Codes of Ethics that have been developed by National, State and local surveyors' societies here in the "flyover" region of the USA. There is plenty of guidance out there and it would be presumptuous of me to supplant that wisdom. What I would like to do, with plenty of collaboration, is ponder whether these codes can supply solutions to some of the more stubborn problems plaguing our profession.

Morals or ethics? Laws or rules? Codes or guidelines? We are governed by laws and we are a most litigious society. We ask the courts to solve many of the most difficult issues that we should never face. If we lived by a code of ethics, could we not face questions and find our way? There's no law against it. Let me suggest a difference between morals and ethics.

The internet is a wonderful thing. I googled (who knew that a verb of such power could be conjured out of thin air) the question of morals v. ethics and found some interesting distinctions. Ethics are codes of conduct in workplaces or principles for groups. Morals refer to an individual's own principles regarding right and wrong. We could spend some time on determining from where moral codes come, but I wish to discuss ethics. I know from where they come. I googled that too. You will not see our colleagues develop codes of morals; they are the architects of codes of ethics. Ethics are those guides for specific groups, created by those groups that allow the group to function as a group. Can standards of practice be determined from a Code of Ethics?

Is it important to know the standards of practice for our profession. To what extent should I search for that monument that hasn't seen the light of day in 50 years or longer? What are the criteria for accepting a rebar with

no cap and which is not mentioned in the description that happens to be close to the corner I need in order to solve a boundary puzzle? I would argue that a surveyor needs to follow the standards of practice defined by what other professional land surveyors would do. Under Title 12 CRS:

12-25-208. Disciplinary actions - grounds for discipline.

"...(b) Failing to meet the *generally accepted standards* (emphasis added) of the practice of land surveying through act or omission;"

A surveyor can be disciplined for not following a standard. How does one figure out what the standards are and what is meant by generally accepted? One way would be for us to get together and talk through some scenarios.

What does the paragraph (g) in 12-25-208 CRS mean by, "(g) Performing services beyond one's competency, training, or education..."? It can't mean that I could be disciplined for doing something I've never done before or did not learn in school.

Here's another "... (i) Habitual or excessive use or abuse of alcohol, controlled substances, or any habit-forming drug;"

What constitutes "habitual" or "excessive"? How am I supposed to define either term relative to another surveyor? I drink coffee every morning. Is my use habitual? Is caffeine a drug? What difference does that make to you or me?

Here is our all-time favorite paragraph from 12-25-208:

"(h) Failing to report to the board any professional land surveyor known to have violated any provision of this part 2 or any board order or rule." Please can we keep my habitual use of caffeine between us?

From the PLSC Code of Ethics

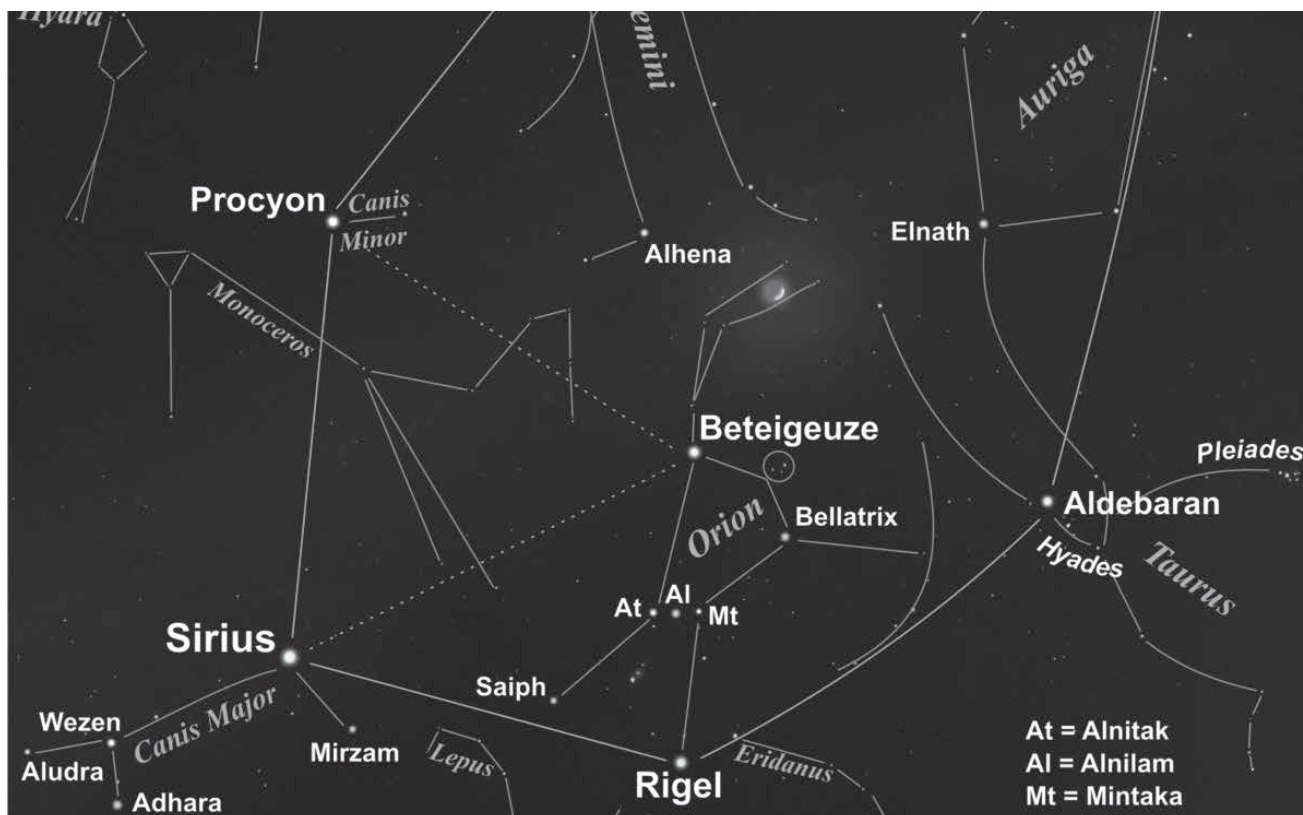
"B. Competition – Surveyors should be selected on the basis of their high qualifications for the particular project and for their specific integrity. Surveyors

continued on next page

Backyard Astronomy Note for the Quarter

By Alan Blair, PLS

My favorite time of the evening to observe the sky is when the sun has just set and I can search a region of the sky for the most prominent objects and spot them when they first become visible. By the time you read this in mid-November, the Summer Triangle will be lower in the western sky. The very bright Capella will be visible in the northeastern sky and, with Aldebaran, leads the Winter Circle into the winter sky. Jupiter and Saturn will no longer be visible. Fomalhaut, the loneliest star, will appear low to the southwest. Check out a great website with an interactive sky map called <https://www.skyandtelescope.com>.



Ethics from page 16

should not use any special advantage to compete unfairly with another surveyor.”

What is a special advantage? It can't mean that I am approached by a prospective client inquiring about the cost to survey a quarter of a section for which I completed a subdivision last year. Another surveyor could not compete with me on price. Is it telling me that I

should not base my estimate on my actual cost as offset by my special advantage of having records?

Once again, I invite you to join the discussion with your peers about these and other scenarios at the RMSS. It could give you a special advantage and provide a few CEUs in ethics training.

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September 24, 2019

Mr. John B. Guyton, Editor
Side Shots
3825 Iris Ave.
Boulder, Colorado 80301

Dear Mr. Guyton:

This letter informs you of official BLM cadastral surveys in Colorado that have been accepted from March 25, 2019, through May 29, 2019, officially filed, and are now available in the Public Room, Bureau of Land Management, Colorado State Office, 2850 Youngfield Street, Lakewood, Colorado 80215. The surveys will also be available at <https://glorerecords.blm.gov>.

The accepted surveys are listed below by township, range, meridian, group number, type, approval date and number of plats.

<u>Township</u>	<u>Range</u>	<u>Meridian</u>	<u>Group No.</u>	<u>Type</u>	<u>Approved</u>	<u>Plats</u>
T. 7 N.	R. 79 W.	Sixth	1639	Plat & Notes	03/25/19	1
T. 7 N.	R. 80 W.	Sixth	1639	Plat & Notes	03/25/19	1
T. 5 N.	R. 72 W.	Sixth	1709	Plat Only	04/25/19	1
T. 36 N.	R. 7 W.	NMPM	1689	Plat Only	05/20/19	2
T. 5 N.	R. 73 W.	Sixth	1678	Plat & Notes	05/23/19	1
T. 2 S.	R. 90 W.	Sixth	1665	Plat & Notes	05/29/19	1

As other surveys are completed, I will advise you of their acceptance. You may circulate this letter among the membership of the Professional Land Surveyors of Colorado.

Sincerely yours,

Randy Bloom
Chief Cadastral Surveyor for Colorado

GIS in the Rockies, 2019

By Adam Young

The 2019 GIS in the Rockies Conference had a great PLSC lineup this year! Several of the talks were some of the most attended out of the entire conference. Kayce Keane, John Hunter, Joey Stone and Bryan Douglass did an outstanding job communicating the synergy that the GIS and survey communities have and the definitive line that distinguishes the two. They clearly communicated the legal and liability aspects that come along with professional survey licensure in the State of Colorado and the weight of decisions that are made in the field and office and what decisions were made to get there.

John Hunter spoke on the New Colorado State Plane Coordinate System NATRF 2022; Joey Stone spoke about Grid vs Ground; Kayce Keane spoke about how she utilizes GIS data in certain workflows; Harold Schuch spoke about Photogrammetry for Drones; and Bryan Douglass gave two exciting talks about the new Colorado 811 legislation and a call for solidarity between the GIS professional & Colorado county surveyors.

We are looking forward to having an even greater PLSC presence next year, with much needed and informative talks about the changes coming to the NGS NSRS Modernization in 2022 and the Colorado State Plane Coordinates in 2022.



Presenter Bryan Douglass



Neil Wagner



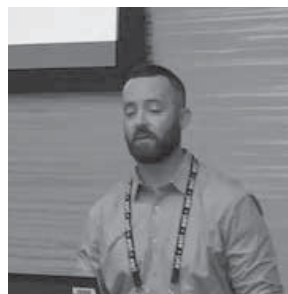
John Hunter



Kayce Keane



Teresa Smithson



Joey Stone



*Kayce Keane and
Bob Watson*

National Society of Professional Surveyors

Report Summary of Meeting

Todd Beers, PLS-Colorado Director

The National Society of Professional Surveyors (NSPS) held a board of directors meeting from September 26, 2019 through September 28, 2019 in Orlando, Florida.

Representatives of the majority of the 48 member states were in attendance. The various state reports can be found on the NSPS website (NSPS.us.com). Please review for news and updates from the various states.

I was able to attend a number of committee meetings and they are summarized below:

Western States Director's Council Committee - see minutes from meeting on NSPS website

- Discussion of NSPS lobby day in April 2019 was well attended from membership delegations and a lot of success over the past year from the NSPS lobbyist Mr. John "JB" Byrd (see a summary of the Joint Government Affairs activities on the PLSC.net website).
- A motion was developed (and latter passed by the NSPS BOD), for a letter of support from the NSPS that can be prepared, upon request from a surveying program to the regional council.
- Student competition programs from surveying schools should have support from the state societies.
- Licenses and Certificates were discussed. There was significant discussion on whether NCEES (leaning towards this in 2023) should provide certificates related to various modules of expertise (i.e. Boundary, PLSS, mapping, GIS, drainage, etc) and if NSPS should support the modules for licensure. The question regarding a "geodetic" certificate was brought up and there was no knowledge of any group pursuing this effort (AAGS, NGS had investigated it and ASCE may be working on it).
- Renton Technical College in Washington State has retooled their certificate program to be a partnership with employers who would pay students on their staff to participate in field related "labs" essentially on the job. The students are required to continue their education to obtain their certificate.

Joint Government Affairs Committee - see minutes from meeting on NSPS website

- Discussion of policy development process - States are to bring issues to the table for discussion and action by NSPS.
- Developing a database of members who know members of Congress, for contacting by our lobbyists on legislation matters.
- Railroad monumentation-NSPS is pushing to get legislation passed to require railroads to have their rails surveyed by a PLS, and valuation maps/survey, etc. provided prior to sale of railroad or description of rails. (*See the initial language on page 23*). It is desired to get input from any interested parties for this language.
- JB Byrd provided highlights of current actions/legislation affecting the surveying community-very positive and comprehensive. Please see PLSC website for summary of activities/status.
- Status of NSPS PAC-striving to raise 75K per year for lobbyist activities.
- Next lobby day in Washington, DC on April 1, 2020. All state members are encouraged to attend.

Workforce Development Committee - see minutes from meeting on NSPS website

- Discussion regarding the modification of the Bureau of Labor website definition of surveying, currently not very positive.
- Would like to develop a clearinghouse of information for states to access and use resources. Tennessee has an 8 minute video on surveying. Compilation of such resources is desired.
- Will be developing a Survey Monkey for workforce development that is occurring in each state. Provide any key questions to NSPS state directors for potential inclusion in survey.
- Encouraged to go to NSPS website for "Be a surveyor.com" link and other sources of outreach material that can be used.
- National guidance counselors conference will be attended by NSPS.
- Support and expansion of the CST program is highly encouraged. Several states have multiple test locations and testing times in their states.

ALTA Standards Committee - see minutes from meeting on NSPS website

- Gary Kent chaired the discussion of suggestions to the current standards of ALTA/NSPS surveys. Please see comments on PLSC website for potential changes. It was mentioned that over the past three versions of ALTA modifications the number of pages of suggestions was 25, then 12 and now 5. It is anticipated that a new version of the ALTA standards will be in force in 2020. Any suggestions will be reviewed and are encouraged to be submitted.

UAS Committee - see minutes from meeting on NSPS website

- The chairperson resigned from the committee and the committee is struggling for direction.
- The results of a survey was provided with over 400 responses, very comprehensive in nature, and can provide some guidance for the committee. Anyone interested in becoming the chairperson is encouraged to contact the NSPS state director. You do not need to be a director to be the chairperson of this committee.

Young Professionals - see minutes from meeting on NSPS website

- The young professional's website is being revamped and should be active by the end of October 2019. Website address is youngsurveyors.org
- The group is looking for sponsorship for creating a flyer for the organization and event sponsors. There is a student competition in early 2020.
- New leadership of this group was introduced at this meeting.
- The VP of the group has recently transferred to Grand Junction, Colorado and will be contacted to kick start the Colorado young professionals' group.

CST Committee - see minutes from meeting on NSPS website

- There are many resources available to assist with the presentation of materials for Certified Surveyor Training (CST) classes & preparation for the tests. PLSC will be contacting the CST board to learn more about what items are available so that we can enhance our work with the CST program.
- 17 newly active CST's in Colorado
- 2300 CST's total
- Renewals are \$40 annually



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more info or to register.**

NSPS Board - see minutes from meeting on NSPS website

- Presentation by United Surveyors of Arizona - Various items this state group is providing are very impressive. They wish to be an NSPS affiliate (with no voting rights) but there is another state group that is already an NSPS affiliate.
- NCEES grant acquired by North Carolina Society – \$365K for workforce development and will include NSPS, Tennessee, Georgia and Virginia. Goal is to bring surveyors to licensure, marking research and hire a marketing and administration person.
- NSPS Foundation has over 1 million in funds to be used for scholarships, disaster fund, medical bill assistance, etc. In late fall they will publish a newsletter, “Foundation Corner” to provide more details of the use of the foundation.
- The Education Committee Chair announced that there will be a student competition in Corbin, VA on April 1, 2020. 16-18 teams typically participate. They are looking for sponsors to participate.
- NSPS will be re-publishing the ACSM definition books. The will be rebranding it, and it will be available for purchase for \$14.
- FIG 2023 will be having its international conference in Orlando, FL from May 28, 2023 to June 3, 2023. They anticipate 2,500 attendees and 600+ presentations.
- NCEES professional surveying exam will be changed and it will become more modular with the following areas:
 - Core Professional Surveyor
 - Boundary
 - PLSS
 - Mapping/science
 - Incidental Drainage Design
- This is being done to ease comity between states without having to take another test. To be implemented within 2-3 years. The states will decide which modules are to be passed for licensure.

The next NSPS Board of Directors meeting will be in Arlington, DE on April 2-4, 2020 and will be in conjunction with Lobby Day to be held on April 1, 2020.

NSPS RAILROAD LEGISLATION

CONTENTS: UPON FILING THE NOTICE TO VACATE RAILROAD OCCUPIED LANDS, THE RAILROAD MUST DOCUMENT THE LOCATION OF ANY AND ALL EXISTING RAIL CENTERLINES. THE LOCATION OF SAID RAILS MUST BE DOCUMENTED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL SURVEYOR, LICENSED IN THE STATE WHERE SAID RAILROAD IS LOCATED.

THE METHODS AND ACCURACY OF SAID LOCATION SHALL MEET THE STATE MINIMUM STANDARDS OF PRACTICE IN THE AREA IN WHICH IT IS LOCATED.

THE RAIL CENTERLINE MUST BE LOCATED AT A MAXIMUM OF 100' (ONE HUNDRED FEET) INTERVALS. THE BEGINNING POINT, ENDING POINT AND INTERMEDIATE POINTS, NO MORE THAT ½ (ONE HALF) MILE APART, SHALL BE PHYSICALLY MONUMENTED, ACCORDING TO LOCAL SURVEYING STANDARDS AND TIED INTO THE NATIONAL SPACIAL REFERENCE SYSTEM.

LEGIBLE VALUATION MAPS AND HISTORICAL SURVEYS OF SAID RAILROAD LANDS, ALONG WITH THE RAIL LOCATION INFORMATION MUST BE PLACED ON FILE WITH THE LOCAL COUNTY (OR EQUAL) OFFICIAL RESPONSIBLE FOR OVERSEEING THE PRESERVATION OF LAND SURVEY INFORMATION. A LETTER VERIFYING RECEIPT OF SAID INFORMATION FROM SAID COUNTY OFFICIAL WILL BE REQUIRED PRIOR TO THE REMOVAL OF ANY RAIL INFRASTRUCTURE. IF THE RAIL LINE OVERLAPS POLITICAL SUBDIVISION LINE (I.E. COUNTY AND STATE LINES) THE SURVEY INFORMATION SHALL BE FILED WITH ALL SAID ENTITIES.

Western Federation of Professional Surveyors

Highlights from the 13 Western States

The Western Federation of Professional Surveyors (WFPS) held a Board of Directors meeting on September 14, 2019 in Reno, Nevada.

ALASKA (ASPLS) Steve Buchanan – Current membership is 185. ASPLS is modifying their membership categories and pricing structure. A new website is being developed and expected to launch soon. Conference will be held April 6-8, 2020 in Anchorage, AK. The University of Alaska Anchorage Geomatics program is in jeopardy even though it continues to attract students and produce graduates (12-15 annually for the last 5+ years). This is due to the Governor's veto of \$130 million from the university's operating budget. The Geomatics Advisory Board (GAB) mobilized and started a fundraising campaign to save the program and they have almost reached their goal of \$160,000.

ARIZONA (APLS) Mike Fondren – Current membership is 355. Chapters are currently reviewing their bylaws and a boilerplate has been provided to chapters to utilize as a resource. A membership survey was sent and the Board is reviewing feedback to determine what issues the membership finds most important and what new programs APLS can develop to provide more value to membership. A task force has been established to review the Arizona Minimum Standards. APLS is working with AGIC to develop language to address the 2022 Datum. APLS held a summer seminar featuring Michael Dennis. The event was successful and registration sold out. APLS developed a Right of Entry best practice guide which is available to members.

CALIFORNIA (CLSA) Ray Mathe & Rob McMillan – Current membership is 1592. CLSA Education Foundation provides over \$40,000 in scholarships each year. SB 556 which was opposed by the Board of Registration, CLSA, and ACEC was referred to the Committee on Business and Professions. The California Board of Registration has completed sunset review process.

COLORADO (PLSC) Roger Nelson & Todd Beers – Current membership is 329. PLSC Board voted not to raise dues and instead absorb the increase in NSPS dues. The 10th annual Rocky Mountain Surveyors Summit will be moved to a new venue in Golden, Colorado and will be held February 26-28, 2020. PLSC

volunteers have established a survey degree program at the Western Colorado Community College and Colorado Mesa University. PLSC has committed \$250,000 to the program. PLSC members will be participating in the Boy Scout Jamboree, Colorado State Guidance Counselor Conference, and various other career days throughout the state.

HAWAII (HLSA) Meyer Cummins – Current membership is 88. HLSA worked with its members and crafted a bill, SB 898, to amend the current Land Court Deregistration Legislation and require land owners seeking deregistration to submit a File Plan and Regular System description of the deregistered parcels as part of the deregistration process. The bill did not pass and HLSA is working to enlist a lobbyist to assist. HLSA held a successful workshop and plans to hold more throughout the year. Hawaii continues to struggle with unlicensed practice.

MONTANA (MARLS) Dick Smith & Russ Kluesner – MARLS conference will be held February 19-21, 2020 in Great Falls, MT. The Montana Board of Registration presents commemorative pins for 30 years of licensure. MARLS Board of Directors will review an updated Standards of Practice Manual at their next meeting. MARLS is in the process of updating their laws and regulations reference guide. Dave Dorsett has retired and Corryn Greenwalt is now the survey instructor at Flathead Valley Community College.

NEVADA (NALS) Nancy Almanzan & Matt Gingerich – Current membership is 252. NALS membership has increased 40% over the last four years. The APLS-CLSA-NALS Conference will be held March 28-31, 2020 at the Luxor Hotel in Las Vegas, NV. NALS passed a resolution reaffirming support of a four-year degree requirement for licensure. A bill tracking service is used to identify legislation that affects the profession. NALS has recently established and funded a Young Surveyors Network (NV YSN). The YSN has been extremely active and assists NALS with many outreach opportunities. The NDOT Ad Hoc Committee was formed in March 2019 with an immediate goal of increasing accessibility of NDOT records. The committee has helped to create direct lines of communication between NALS and NDOT. A workshop was held in both Reno and Las Vegas to provide a demonstration of the NDOT AX system.

Discussion is occurring on possible funding to make this system accessible by the public. The bylaw amendments recommended by the NALS Board of Directors passed. The amendments broaden the purpose of NALS to include attracting and mentoring the next generation of land surveyors. In addition, retired and honorary membership categories were added. NALS continues to support the Great Basin College survey program and has pledged to help fund a second professor. Workforce development continues to be a key focus and NALS has sent a letter to the Nevada Career and Technical Education (CTE) department to determine if we can partner on outreach efforts.

NEW MEXICO (NMPS) Allen Grace – New Mexico State University was awarded the 2019 NCEES Surveying Education Award with a \$25,000 grand prize. The Young Surveyors Network is very active in New Mexico and assists in outreach activities. Bills HB-268 and SB-312, for the required 4-year degree, were not successful at this session and have been tabled. NMPS will stay focused on these areas.

UTAH (UCLS) Mike Nadeau – Current membership is 399. The Surveyors Historical Society Rendezvous will be in Salt Lake City September 18-21, 2019. UCLS Conference will be held February 19-21, 2020 in St. George, UT. Legislative Committee is working on legislation to address the 2022 datum and on language to include legal descriptions as part of the definition of land surveying. UCLS participates in the TrigStar and Boy Scout merit badge programs.

WASHINGTON (LSAW) Ben Petersen & Jeff Lynch – Current membership is 872. LSAW will hold a fall seminar series which will include a track for survey technicians. The track is being developed to also prepare technicians for the NSPS CST exam should they wish to pursue certification. The LSAW-WFPS Conference will be held February 26-28, 2020 in Tulalip, WA. Featured speakers include Kris Kline, Dave Doyle, and John Stahl. LSAW has affiliated with American Association of Geodetic Surveying (AAGS) which provides LSAW members a discount on AAGS membership. The LSAW Chapters have each adopted new bylaws which are in conformance with the LSAW bylaws. The Evergreen State Surveyor (ESS) magazine has been revived and is now being published, in both print and digital format twice a year. LSAW will introduce monument preservation fund legislation during the 2020 legislative session. The Washington Uniform Common Interest Ownership Action (WUCIOA) affects all subdivisions of property and agencies are working to determine how this affects surveys.

WYOMING (PLSW) Mark Corbridge – Current membership is 198. Fall Technical Session will be held November 7-8, 2019 in Casper, WY. PLSW is working with the Board of Registration and the University of Wyoming on an outreach program to elementary through high school students. PLSW is also working with GeoInquiry in conjunction with the GIS community to reach high school students. A beta version of this program has been presented to teachers and was well received. The national TrigStar winner was from Laramie, WY.

WFPS OFFICERS 2019-2021

Steve Parrish installed the 2019-20 WFPS Officers and the gavel passed from Matt Gingerich to Mike Nadeau. Mike Nadeau (Utah) – Chair; Ben Peterson (Washington) – Chair-Elect; Mark Corbridge (Wyoming) – Secretary/Treasurer; Matt Gingerich (Nevada) – Immediate Past Chair

WFPS FOUNDATION

The WFPS Disaster Relief and Scholarship fund has been established through the NSPS Education Foundation. Donations are now being accepted. The criteria and application information has been sent to all State Associations and can be found on the WFPS website. Urgent assistance is needed for land surveyors that have been affected by the California wildfires.

The WFPS Foundation has awarded a California surveyor relief funds to aid after their home and all belongings were lost in the recent California wildfires.

Donations can be made mailed to WFPS:
526 South E Street, Santa Rosa, CA 95404.
www.nsps.us.com/donations/donate.asp?id=18191

WFPS AREAS OF FOCUS

Providing Resources to Benefit State Associations
WFPS is dedicated to providing resources to state associations. Following are a few of the resources that are available:

1. Speakers Bureau
2. Article Bank for Association Magazines
3. STEM Outreach Flyer

Serving as a Regional Voice

WFPS has adopted a resolution to support Quality Based Selection (QBS). The resolution is attached for your use. Should your state need a letter of support from WFPS regarding a QBS issue please contact the WFPS Office at admin@wfps.org.

WFPS sent a letter of support of the Amicus Brief prepared by NSPS to the Louisiana Supreme Court in the case of Crooks vs. the State in support of the effort to the reconsideration of the court ruling.

WFPS has adopted an elevator pitch to provide a quick response to what a surveyor does: "We're really good at math and measuring. We use light beams, satellites and drones. You know that GPS in your car or phone? Well, that's accurate to about 10 feet. Good enough to get you to a restaurant or Home Depot. The stuff we use? We're talking millimeters - about the thickness of a dime. Did you know there's four faces on Mt. Rushmore and three of them are surveyors. The other guy started the Panama Canal and got teddy bears named after him. We also show you the limits of what is probably the most expensive thing you will ever own - your property - so you stay friendly with your neighbor and out of court. And when you make your fortune, and that ship pulls into

harbor with your new jet-black BMW? Well, we surveyed the sea floor to make sure it doesn't bottom out. You know those steep curves on the NASCAR tracks? A surveyor laid those out just right so the cars don't jump over the top. Well, sometimes they do anyway! And when you get back from your Caribbean cruise, and it's been pouring rain and your plane lands at 200 miles per hour at (name of airport)? You know why you don't skid off the runway and make the 11 o'clock news? Because we banked the runway so the water runs off. We saved your life. Your welcome."

About WFPS - PowerPoint

Get to know WFPS and how we serve the 13 western state surveying association. Visit the WFPS website, click "About WFPS" and download the WFPS PowerPoint.

Western Federation of Professional Surveyors Report Summary of Meeting

Todd Beers, PLS-Colorado Director

The Western Federation of Professional Surveyors (WFPS) held a board of directors meeting on September 14, 2019 in Reno, Nevada.

Representatives of 8 of the 13 member states were in attendance. A report from WFPS, including a summary of state reports, can be found on page 24.

Mr. Steve Parrish, CFedS, was a guest and presented a summary of the CFedS program (see attached). The CFedS program is on sound financial ground, and the only official instructors for the program are Steve Parrish or state BLM Cadastral Chiefs (or their designated staff). Mr. Parrish mentioned that there will be a new PLSS overlay from the BLM available, and interested parties should contact their state BLM Cadastral Chiefs.

There is a PowerPoint presentation of "About WFPS" on the WFPS website at wfps.org. In addition there are links to state association magazines, a speakers bureau and WFPS resolutions as well as number of other items of interest to surveyors. Please check it out!

Among numerous items, there was discussion of what each state is doing for community outreach and any resources they may be using (PowerPoint presentations, virtual sandbox, brochures, etc.).

Any examples of state legislation for state plane datums

for 2022 can be sent to the Wyoming WFPS Director, for other states to potentially emulate.

There was an update on the NCEES program. Michigan and California are currently the only states to have a liaison with NCEES. There was an NCEES meeting on August 2019 in Washington, DC with over 300 attendees from 73 boards. The conference was over a 5-day period. Mobility of licensure was one of the items discussed. The next conference will be in Houston, TX.

Several states are presenting and providing testing sites for the NSPS CST program. NSPS has resource materials for this effort.

The next WFPS Board of Directors meeting will be in Marysville, WA on February 28th, 2020 and will be in conjunction with the Washington State conference.

About WFPS:

The Western Federation of Professional Surveyors (WFPS) was formed in 1979. The Board of Directors includes two delegates from each of the 13 western states. WFPS serves as a regional voice for land surveyors and meets bi-annually to discuss practice issues affecting surveyors in western states. For more information about WFPS and the state associates, visit WFPS.org.

Certified Federal Surveyor (CFedS) Overview

Presented to WFPS Board - Sept. 14, 2019 - Reno, NV

The CFedS program was originally developed “to enhance the level of knowledge and expertise in the professional land surveying community for work performed in Indian Country.” It was developed by BLM Cadastral Surveyors and BIA Realty. It is one of the strategies in the Fiduciary Trust Model (FTM). The FTM (2004) was written as a ‘road map’ for the Office of Special Trustee (OST) for American Indians. The OST was established in 1996 to assist with Indian trust management for beneficiaries.

When the FTM was created, the Department recognized that accurate trust and boundary management begins with good surveys and that the private sector provides an excellent resource for accomplishing these surveys. The CFedS training prepares private land surveyors to work on Indian and Alaska native lands, which have some unique survey issues. Over the years, the CFedS program’s application has been expanded to include boundary work for all federal interest lands.

What is a CFedS?

A Certified Federal Surveyor (CFedS) is a state licensed land surveyor who has successfully completed the CFedS certification process. CFedS may perform a wide range of cadastral services within the state(s) he or she is licensed to practice land surveying. Certain services will be under the direction and control of the appropriate BLM Chief Cadastral Surveyor. CFedS can provide more avenues for accomplishing cadastral services for Indian trust lands and other federal interest lands.

The core curriculum consists of 7 taped courses. The instructors are surveyors from BLM, USFS (retirees), Office of the Solicitor and the BIA. It is very comprehensive, and from the feedback that we have received, it has been very rewarding for those certified. The first class graduated in May, 2007. There are continuing education courses, which are required in order to maintain the CFedS certification. Presently, there are twenty-one (21) official CFedS Continuing Education courses.

Current Status of the CFedS Program

The CFedS Program is continuing on solid financial ground, with a current (May, 2019) bank balance over \$200,000. New trainees are registering every month and most of the CFedS are keeping current on their Continuing Education (CE) credits. There are currently about 580 active CFedS and about 120 active trainees. The CFedS Program allows LSIT trainees to become CFedS Candidates. As of April there were 4 active CFedS Candidates, and 10 active CFedS Candidate Trainees. Eleven (11) CFedS trainees successfully passed the June 7, 2019 final exam.

Most of our software platform is based on 2005-2006 software technology and we recognize that an upgrade is needed. Flash, Windows 10, and hardware advancements have required us to frequently seek work-arounds to enable CFedS and Trainees to use the CFedS course hard drive and several of the formats we use for our CE courses. We are exploring available and affordable ways to upgrade our course materials to be compatible with other devices that are being used in today’s fast paced computer environment.

Our CFedS Panel presently has seven (7) members. We have two (2) BIA related Panel vacancies that our Program Manager, Janet Wilkins, is working on filling. Our CFedS Panel recognizes the need to update the technology that is being used for the delivery of CFedS courses. Many CE courses are delivered through DVDs and we know that DVD drives are mostly obsolete in the newest technology. Our Panel is at the beginning stages of discussing the best ways to address these issues. The Panel intends to work with NSPS over the next several months to find solutions and efficiencies for the CFedS Program that will contribute to the sustainable delivery of the CFedS Program courses.

In order to facilitate this effort, the CFedS Panel has created a Technology Committee to research and review the current status of the program course content delivery system and make recommendations for improvements. The CFedS Panel also created an Outreach Committee to make recommendations for future outreach efforts, and also a Continuing Education Committee which will work directly with the BLM to identify and create course content for future CE courses. We are also working

closely with a permanent BLM Cadastral Surveyor, through our Phoenix based National Training Center (NTC), for advice on our CFedS course materials.

The CFedS program intends to provide additional variety in the CE course offerings. As part of our outreach efforts, we are evaluating the possibility of offering our CE courses to a broader group in the land surveying community. A variety of State Surveyor Associations, particularly in the Western States, have requested CFedS qualifying workshops. We provided CFedS workshops, in 2018, for MN, NV, and CO with 91 CFedS attendees along with good attendance from non CFedS participants. In 2019, we have provided CFedS workshops in CO, AK, MT, WA, CA/NV, and AZ with 119 CFedS attendees and attendance from non CFedS participants. We presently have requests for a CFedS

workshop in WA, UC Fresno-CA, ND, UT & CO in late 2019 and early 2020.

Steve Parrish communicates with CFedS on an almost daily basis through their Continuing Education (CE) requirements and in response to the frequent questions and suggestions he receives about the Course content. He hears overwhelming support, and positive comments, about the value of the CFedS Program for its content and overall guidance in working with federal interest lands. If you have questions and/or suggestions please contact the CFedS program at cfedspm@cfeds.org.

Respectfully Submitted,
Steve Parrish, PLS, CFedS
CFedS Training Coordinator
CFedS Panel Chairperson



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SURVEY SYSTEMS

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Board of Directors Meeting Minutes

August 27, 2019 • 4:30PM

1. Call to Order: Parker

Name	Position	Chapter	Attending
Steve Parker	President	Southern	x
Don Hulsey	Vice President	Southern	x
Shaun Lee	Sec/Treasurer	Central	x
Becky Roland	Exec. Director	n/a	x
Paul Bacus	Director	Northern	x
Eric Carson	Director	Central	
Brian Dennis	Director	Southern	
Mike Greer	Director	Central	x
Leif Joy	Director	NW ¼	x
Eric White	Director	Southern	
Tom Sylvester	Director	Western	x
Scott Thompson	Director	Western	x
Todd Beers	Ex-Officio	Central, NSPS Rep.	x
Parker Newby	Non-Voting	Southwest	
Roger Nelson	Non-Voting	WFPS Delegate	
Guests:			
John Hunter	Geo-Coordinator		x
Peggy Streicher	GIS in the Rockies		
Heather Lassner	TrigStar		
Bryan Douglass	Legislative Committee Co-Chair		
Shawn Clarke			

2. Determination of Quorum (6 voting): Lee

3. Any changes to the Agenda?: Parker

- a. Add LTAC Predictable Fees under Legislative Committee
- b. Add Chapter Summit schedule under RMSS

4. Review of Action Items from Last Meeting: Parker

- a. Todd Beers will set up a meeting with Jeff Jones at CCD and someone from the Archivist Office to determine the volume of material
- b. ~~Becky Roland will work with Shaun Lee to get online banking set up for Chapter payments.~~
- c. New person at Key Investments – need to get Shaun access
- d. ~~Presentation on what NSPS does is available (Becky will post under resources on the website)~~
- e. ~~Set up general membership email (membership@plsc.net)~~
- f. Icebreaker at Summit – Allow new attendees to say hello
- g. ~~Steve Parker to communicate the importance of Chapter participation on Board calls even if just at the end for Chapter reports and attendance of PLSC Board at Chapter meetings~~
- h. Leif Joy asked everyone to think of award nominees for presentation at Summit and that there is someone from each Chapter

5. Financial Items: Parker/Lee/Roland

- a. 2019 Financials
- b. Investment Update from Key Bank (Savings, Earnings, Performance)

6. Colorado Coordinator Activities: Hunter

- a. Special Committee on State Plane
 - i. Presenting at Chapter Meetings – need champions at each Chapter at least (Scott Thompson – Western)
 - ii. Set up Ad-hoc Committee
 1. Need to have responsibilities/expectations for committee members
 - ii. Option 1 – Board agreed via voice vote (unanimous)
 1. Send an email from PLSC as an official position.
 - a. Steve will solicit Board members not on call then send to John Hunter.

7. WCCC Update/Scholarship Committee: Sylvester

- a. Approval of T. Henderson Application
Scholarship Committee approved application for \$1,500. The PLSC Board has no objections.
- b. Follow up on our contribution to the CMU Endowment Fund – Have we made this year's contribution?

- c. 19 current students – more balanced number of students across courses

- d. About 75% are distance learning – most of these are working for survey companies

8. Summit Update: Roland

- a. Request to provide Steve Parrish with an Honorary Membership
 - i. Steve will contact Gene Kooper for context on this. Table to next meeting.
 - ii. Becky will check the website for Bylaw coordination.
- b. Chapter Summit schedule
 - i. It is an important event.
 - ii. Board consensus is Thursday night would be the better option.
- c. Consideration of PLSC paying for one day of the Rocky Mountain Summit fees for any student enrolled at WCCC Land Surveying and Geomatics Program (or a waiver of the fee, whichever works best for the books). This is to further their education, introduce them to continuing education opportunities, introduce them to the PLSC, and provide an opportunity for the PLSC to welcome them and encourage their continued education.
 - i. Ask the RMSS Committee for input.
Consider volunteer requirement.

9. NSPS MOU Renewal: Beers/Parker

- a. Board asked to add the 5-year term for this \$10 increase in the MOU to be signed.

MOTION: For PLSC to pay for the first year (2020) increase for NSPS of \$10 and advertise this with members. The Voting Membership dues will be reviewed for 2021. (Joy/Sylvester)

Approved unanimously

- b. Steve Parker will sign the MOU with the edit for the term of the increase.

10. QBS Update: White

- a. No report

11. Requests for Pro Bono/Survey Support: Roland/Lee

- a. Ask attorneys how they manage these types of requests – Becky
- b. Mike Greer or Pat Green might have the “What a Land Owner Should Do” kind of article

12. Reports

- a. Executive Director: Roland
- b. Lobbyist/Legislative Committee: Thompson/Douglass
 - i. AES Board activities
 - ii. LTAC Predictable Fees
- c. Membership Committee: Carson
- d. Outreach Committee: Dennis
- e. Education Committee: Hulsey
- f. Trig Star Committee: Lassner
- g. CST Committee: Blair
- h. GIS in the Rockies Liaison: Streicher
- i. Side Shots Report: Roland

- j. NSPS Representative Report: Beers
- k. WSPS Delegates’ Report: Beers/Nelson
 - i. September 13-15 - Reno

13. Chapter Reports

- a. Southern: Hulsey
 - i. John Hunter presented in July
 - ii. Next meeting in September in Pueblo
 - iii. Career Days next month
- b. Central: Clarke
 - i. Summer Picnic September 14 at 1PM – Univ. and Arapahoe
- c. Northern: Bacus
 - i. Tony Fendick is new President
 - ii. Next meeting August 29
 - iii. September 5 giving out books to Voting members
- d. NW ¼: No report
- e. Western: Sylvester
 - i. Hosted summer meeting
 - ii. Start meetings in September (9/11)
 - ii. Elections are coming up
- f. Southwestern: No report

14. Next Meeting Date and Location

- a. Meet monthly: September 24
- b. BOD business work group: Sept 19th at 3:30

15. Adjourn (Beers/Lee)



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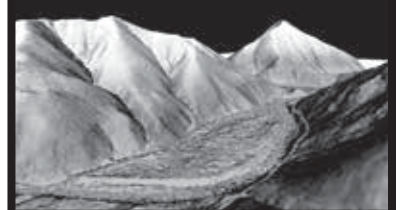
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Learn more at coloradomesa.edu/wccc/programs/land-surveying-geomatics



Contact WCCC Students Services at 970.255.2600 for admissions, registration and financial aid information.



PLSC Treasurer's Report

		Actual as of 8/31/19	2019 Budget				
Income							
	Scholarship	3,965.96	58,500.00				
	Silent Auction	657.00	750.00				
	Summit Income	84,125.00	100,000.00				
	Publication (books)	0.00	150.00	Bacus Book, Supreme Court Book and Initial Points			
	Refresher Course Income	9,075.00	11,550.00	18 students all classes; 11 single class regs			
	Refresher DVD	2,400.00	900.00				
	GIS in the Rockies	0.00	1,500.00				
Membership Dues							
	NSPS Dues	7,280.00	8,440.00				
	Membership Dues			FY2019 #	FY2018 #	FY2017 #	FY2016#
	Voting	22,550.00	23,210.00	205	226	216	209
	Associate	7,050.00	5,550.00	94	106	106	80
	Sustaining	4,830.00	4,140.00	21	16	20	15
	Student	120.00	60.00	4	3	3	3
	Retired	300.00	240.00	5	5	7	5
	Membership Dues Subtotal	34,850.00	33,200.00	329	356	352	312
	Total Membership Dues	42,130.00	41,640.00				
	Miscellaneous	0.00	50.00				
	Side Shots Ads	1,980.00	4,000.00				
	Total Income	151,612.96	219,040.00				
Expense							
	BOD/Chapter Summit Meetings	1,674.00	1,800.00				
	Side Shots	9,911.80	12,000.00				
	Awards	660.33	1,000.00				
	Scholarship	3,965.96	58,500.00				
	TwisT	0.00	0.00	TwisT phasing out?			
	Endowment	0.00	50,000.00				
	Other	0.00	500.00				
	PLSC	3,000.00	1,500.00				
	CFedS	0.00	1,500.00	1 CFedS			
	Chapter/Matching	0.00	2,500.00				
	Trigstar	965.96	2,500.00	To NSPS & schools			
	Refresher Course						
	Speaker honorariums/planni	727.92	2,400.00				
	Online Course Development	0.00	1,500.00				
	Copies/Printing	0.00	500.00				
	DVD Sales	170.14	0.00	moving to online posting			
	Supplies, Bus	722.24	250.00				
	Storage	1,271.00	1,000.00	moved to climate control unit			
	Special Projects						
	???	0.00	0.00				
	Merchandise	0.00	500.00	need new logo gear			
	Publication (books)	4,058.58	0.00				
	Outreach			Building Sandbox			
	High School/Middle School	514.02	750.00	Colorado Guidance Counselor/County Career Fairs			
	Scouting	27.98	250.00				
	Legislative	408.60	600.00	Breakfast with Legislators, Capitol Hill Day			
	Trigstar	0.00	400.00				
	6PM Plaque Renovation			\$1056.25 fee in 2018			
	Tax prep	0.00	750.00				
	Web Site	619.99	4,000.00	Design/Web Tool work			
	Web Site - Don Lambert	1,000.00	1,000.00				
	Lobbyist	10,000.00	15,000.00				
	Travel, Bus	1,139.17					
	BOD Travel	0.00	2,000.00				
	WFPS Travel	433.96	3,000.00				
	NSPS State Directors	0.00	0.00				
	NSPS Travel	6,022.60	5,500.00	DC in April, Wisconsin in Fall 2019			
	Credit card/Bank Expense	4,211.01	3,852.96				
	Insurance	549.00	600.00				
	Miscellaneous, Bus	10.00	150.00				
	Phoenix AMC	13,909.70	25,000.00				
	Postage	89.05	500.00				
	Membership Packets						
	Books	0.00	3,000.00				
	Decals	0.00	250.00				
	Postage	0.00	500.00				
Dues							
	NSPS Dues	7,280.00	8,440.00				
	Chapter Disbursements	0.00	6,180.00				
	RMSS Chapter Distribution						
	NCPLSC	0.00	3,500.00				
	SCPLSC	0.00	5,000.00	additional \$1000 towards sandbox			
	CCPS	0.00	9,500.00				
	RMSS Meeting Expense						
	Promotion	0.00	2,500.00				
	Supplies	1,040.91	1,000.00				
	Copies/Printing	557.28	2,000.00				
	Attendee Food/Beverage	24,484.46	25,000.00				
	Speaker Travel/Expense	6,370.20	7,000.00				
	PLSC Meeting Expense - Oth	900.00	1,500.00				
	Total PLSC Meeting Expense	33,352.85	39,000.00				
	Total Expense	102,729.90	218,172.96				
	Net Income	48,883.06	867.04				

CHAPTER NEWS

CCPS

Hello to all our Members,
I hope that everyone is well and that you are enjoying the fall colors.

We had our end of summer barbeque a few weeks ago at deKoevend Park in Centennial. The live music was enjoyable, and the food and drink were tasty. Many thanks to our members and guests for attending.

We would like to thank Frontier Precision for their donation of beverages and a BBQ-themed raffle gift, Vectors for their donation of beverages along with supplying a cornhole set and KanJam for everyone to use and a shout out to AzTec Consultants for the use of their barbeque and a cornhole set. Much appreciated.

As we move into the fall, we have one more general meeting at Table Mountain on the 24th of October. Jeff Jones with the City and County of Denver is our featured speaker. If you can, please come out and have dinner and some conversation with some of your fellow surveyors.

We have election season coming up in the next two months and we are always looking for people to serve our membership. Please give some thought to serving. More correspondence will follow in November.

With winter coming and the push to get projects completed, please, everyone be safe.

Shawn Clarke, PLS
CCPS - President

NC PLSC

After a "summer break" from monthly meetings, the Northern Chapter reunited at the new Lost Dog Tavern in Johnstown at the beginning of September. We kept it simple, hosting a social gathering over a few cocktails and appetizers and handing out Paul Bacus's 2019 edition of the Colorado Right-of-way and Easement laws.

In October we welcomed Jackie Barrow from Weld County to teach us tips and tricks for navigating the county website for right-of-way research. Being that every county's website differs from the next, we welcome any county right-of-way specialist to join our meetings and give a tutorial on their website navigation. Wrapping up this meeting we elected Laine Landau as the head of our Scholarship Committee along with two new enthusiastic directors, Reade Roselles and Ron Perkins!

On November 6 we will be hosting Vectors, Inc. for a FIELD ORIENTED MEETING! We welcome all field crew members to attend and learn the techniques of calibrating field equipment and the maintenance required to keep these expensive tools in good condition. We encourage all attendees to bring their equipment for a hands-on experience. We will send out an invite with the location of this meeting.

Our December meeting will be a Holiday Party

on December 17th at the Budweiser Event Center in Loveland. We will be attending the Colorado Eagles hockey game, watching comfortably in a 40 person suite.

The Northern Chapter meetings are held the first Wednesday of every month. We hope to see some new faces!

Tony Fendick, PLS
President, NC-PLSC

NW 1/4 PLSC

The NW 1/4 met on August 7th at the Dry Creek Park complex in Hayden, Colorado. For you history buffs out there, Hayden is named after F.V. Hayden, the head of one of the four great surveys of the western United States in the U.S. in the 1870's. I have seen an original Hayden Atlas and it is something to behold.

The meeting itself was quite open ended. The practicing surveyors in Northwest Colorado - Rio Blanco, Moffat, Routt, Jackson and Grand Counties - continue to see the same litany of issues that we have over the years. We have roughly two dozen lots in Stagecoach, a large subdivision originally platted in the early 70's, that have been flagged by Routt County Planning until the boundary issues are resolved. I believe there are also some lots in Steamboat Lakes Subdivision in North Routt County that have a similar "hold" put on them. What happened is that a local surveyor came in from the exterior boundary of the subdivisions and recreated an offset boundary, not honoring any of the original monuments in the interior of the subdivisions. Thus, you have duplicate boundaries, easements and building setbacks since these newer monuments are anywhere from 3 to 10' away from the original monument position on half acre to one acre lots typically.

A new item that has cropped up lately in Routt County is the impact of Road Viewer's reports. These are typically over a hundred years old, when Routt County was still in its infancy. The County sent out a "Road Viewer", who in some cases surveyed a road alignment, but in many cases did not. Adding to the difficulty and conflict in the situation is the fact that most of these Road Viewers Reports are not recorded documents, nor do many of them have any conveyance documents attached or any indication of compensation. They exist in the Road and Bridge Department, not in the Clerk and Records Office. Thus, Title Companies cannot find them, even when researching back to the original land patent. More on this issue in a future issue and its impact on the local surveying community!

Respectfully submitted,
Brian T. Kelly, PLS
Vice President, NW 1/4

CHAPTER NEWS

SWC – PLSC

The SW Chapter hosted John Hunter, PLS, the Colorado NGS Coordinator at our July meeting. John presented the data, research and the input that he has received from the geodetic community across the state and from the NGS. Discussion of the upcoming State Plane options ensued and many surveyors in attendance felt that a statewide zone would be adequate for their needs.

During our October 15th meeting we will be discussing the speaker schedule for 2020 and other possible Chapter activities for the upcoming year. The next Chapter meeting will be January 25th, 2020.

Parker S. Newby, PLS
President – SW Chapter PLSC

WCLS

The western slope has experienced another busy summer for surveyors. Residential development continues steadily as well as public works projects designed to meet the population increase and new businesses that are moving into the grand valley.

The WCLS hosted a social meet and greet on July 12th at the Ale House in Grand junction. The July meeting date for the WCLS is a traditionally informal

and family friendly event focused around getting to know other surveyors outside a professional setting.

The September meeting was held at Main Street Bagels in Grand Junction from 7:00 A.M. to 9:00 A.M. Discussion was had regarding the low distortion projection proposal for the western slope and how it will affect what surveyors in Mesa County have been using for decades. Consensus seemed to be that what we have been using should not be disturbed or modified, the proposed NGS projection appears to do nothing to improve what is already in place.

Tom Sylvester discussed changes in effect for the LSI/PLS application process, allowing candidates to sit for the test prior to state approval of credentials.

City of Grand Junction surveyor Peter Krick discussed how the new SUE law is affecting subdivision construction and possible requirements on as-built data for water and sewer taps.

Elections for new officers and 3 director seats are upcoming for the WCLS. The ballot will be prepared and distributed sometime in December 2019.

Alec Thomas, PLS
President, WCLS



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