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SIDE SHOTS

Professional Land Surveyors of Colorado

Volume 45, Issue 2



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SIDE SHOTS

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*Side Shots is the official publication of the Professional Land Surveyors of Colorado, Inc.
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We have completed another Rocky Mountain Surveyors Summit conference and the attendance numbers look very strong. The education committee kept our conference expenses to a minimum and we also had one of the most successful silent auctions. Some of the events will need to be re-evaluated to determine the feasibility of continuing them and new ideas will need to be considered for the 2015 Summit. Overall the 2014 Summit was a financial success providing operating funds for three chapters and the PLSC for the coming year. We held our annual membership meeting during the lunch hour this year to encourage greater attendance and voted to modify our articles of incorporation. Per this vote some subjects will be moved to PLSC policies to enable future Board of Directors to more easily react to administrative concerns in the future. Once again the chapter summit meeting was held and valuable feedback was shared in a collaborative environment. We have accomplished getting the PLSC refresher courses videotaped as a result of these chapter meetings as well as availing scholarship funds for Certified Federal Surveyor (CFedS) training to our membership. There is still room for improvement and our Board of Directors will be working with each chapter to overcome identified challenges in the coming year.



As a reminder please renew your PLSC membership, if you have not already done so. As a voting PLSC member you are qualified to serve on the board of directors and 2014 is an election year for four Board members and all officers, so get those renewals in as soon as possible.

Our legislative committee was successful in testifying to defeat HB14-1198. This bill would have allowed active military, their spouses, and dependents under 22 years of age to practice surveying in Colorado provided they held licensure in another state for up to 3 years without first passing the state specific exam.

We do appreciate hearing from members both positive feedback and where improvements are needed, so feel free to contact any of the board members or officers with information that will help our organization improve.

Let's elevate the Survey Profession together!

Roger D. Nelson, PLS, CFedS
PLSC President (2011-2015)

DEDICATED TO THE IMPROVEMENT OF LAND SURVEYING EDUCATION AND PRACTICE.

FROM THE EDITOR



It was my pleasure to serve as moderator of the 2014 Chapter Summit meeting on February 27th, the first day of the 4th Annual Rocky Mountain Surveyors Summit. The well attended two-hour discussion covered a lot of topics, and everyone agreed that it was very productive. The

summary/minutes of this meeting are reproduced in this issue, and well worth your attention.

I have been attending meetings and planning sessions with Dr. Apostol Panayotov, Dr. Jan Van Sickle, Don Lambert and Ed Bristow about another attempt in the works to expand the degree program in Geomatics at the University of Colorado, something we would all like to see, particularly with the upcoming degree requirement for licensure. Don Lambert wrote an article in this issue of the need for this in Colorado. I have sent letters of support to key faculty members and administrators, as have Richard Heieren of WFPS and Curt Sumner of NSPS, and Roger Nelson for the PLSC. I will report any progress in future issues.

This month we feature the 24th installment of Control Points by Warren Andrews on the subject of gravity, the BLM Cadastral Survey letter from Randy Bloom, an article on what it means to be a professional by Earl Henderson, and the previously mentioned education article by Don Lambert. There is a fine letter from Ron Paolucci, a math teacher at Eaglecrest High School in Centennial, who participated in last year's TwiST program. I have also included a summary of the Western Federation of Professional Surveyors' Board of Directors meeting, held in Portland, Oregon on January 11, 2014,

including interesting news from other state associations. The Chapters have also provided us with their latest news.

Speaking of the chapters, the Colorado Spatial Reference Network chapter, or CSRN, is undergoing another reinvention toward education and outreach, and welcomes your input. See the discussion in this issue that took place at the Chapter Summit, as well as the news column contributed by Brian Dennis. Let's lend our full support to Brian in this endeavor.

There is an ad for the Four Corners Survey Seminar, to be held June 14-15th at Fort Lewis College in Durango, a valuable continuing education opportunity for those of you in that part of the state, and an ad for the "GeCo in the Rockies" meeting, a combination of GIS in the Rockies and Geospatial Conference of the West, to be held in Grand Junction in September. Take advantage of an early registration discount before May 31st.

If you have not renewed your membership for this year, or you are reading this magazine but have not yet signed up, please use the renewal page included in this issue and send it in now before you forget – you will be glad you did.

Thanks to all who worked so hard to make the Rocky Mountain Surveyors Summit at the Arvada Center such a well attended, and well received success. I hope all of you had the chance to meet old friends, make some new ones, and learn a lot of new things.

JB Guyton, Editor, *Side Shots*

Control Points – Number 24

Gravity

By Warren Andrews, PLS

Gravity. What is it and does it affect surveying? The answer to the second part is yes and no. For precise geodetic surveying the answer is yes; for ordinary plane surveying the answer is no. I'll try and answer the first part of the question.

What is gravity? There are two definitions of the word in English. According to Webster's Dictionary the primary meaning is, "dignity or sobriety of bearing." But that's completely different from what I'm talking about in surveying. The secondary meaning in Webster (based on a concept of "weighty") is "the gravitational attraction of the earth's mass for bodies at or near its surface." The big Oxford English Dictionary says, "the attractive force by which all bodies tend to move towards the center of the earth." Well, OK, it's an attraction. This sounds like electricity and magnetism where the positive and the negative try to get back together again, like lightning or a magnet.

According to the physics textbooks, Sir Isaac Newton's law of universal gravitation announced by him in 1686 is stated as follows:

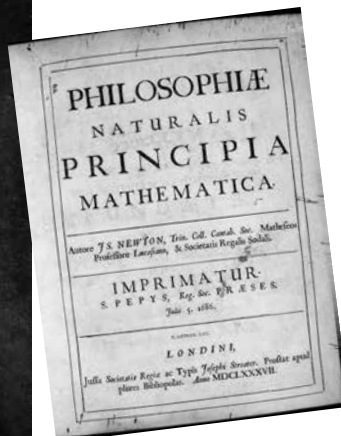
"Every particle of matter in the universe attracts every other particle with a force which is directly proportional to the product of the masses of the particles and inversely proportional to the square of the distance between them."

$$\text{The formula is } F \propto \frac{m_1 m_2}{d^2}$$

This sounds fancy but simple and accounts for essentially all the check measurements made (except in modern quantum theory). But there is one real mystery involved that nobody whatsoever has solved. That is, how and why does this attraction work across a distance with no connection at all in between? Sounds like science fiction or metaphysics or ESP to me. (The top-notch and best scientists hate to admit they don't know and don't have a clue.)

How does this affect surveying? The tiny difference that a plumb bob would not hang "vertical" and that a level bubble would not be "horizontal" makes no difference in ordinary plane surveying. For the most precise geodetic surveying when you're concerned with the geoid and the ellipsoid and all that other good stuff, maybe including using GPS, it does make a difference. The pull or attraction of gravity is not to the "center of the rotational earth" but to the "center of mass of the earth." This is what the term "deflection of the vertical" means.

For ordinary plane surveying you can forget all about the above. I've wondered about maybe the rare and exceptional case over a huge, high-grade iron ore body whether the plumb bob would actually noticeably swing out of plumb while the compass needle is going insane!



Sir Isaac Newton's law of universal gravitation was formulated in his work Philosophiæ Naturalis Principia Mathematica ("the Principia"), first published on July 5, 1687.



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March 27, 2014

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

Dear Mr. Guyton:

This letter is to inform you of official BLM cadastral surveys in Colorado that have been accepted and officially filed from December 23, 2013, through January 28, 2014, 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 <http://www.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. 3 S.	R. 98 W.	Sixth	1599	Plat Only	12/23/13	1
T. 49 N.	R. 1 W.	NMPM	1598	Plat & Notes	12/31/13	2
T. 45 N.	R. 11 W.	NMPM	1618	Suppl. Plat	01/16/14	1
T. 46 N.	R. 10 W.	NMPM	1618	Suppl. Plat	01/16/14	2
T. 41 N.	R. 10 E.	NMPM	1617	Plat & Notes	01/16/14	1
T. 42 N.	R. 10 E.	NMPM	1617	Plat & Notes	01/16/14	1
Amended Prot. Diag. No. 15		Sixth		Amended Prot Diag	01/28/14	9
Protraction Diag. No. 55		Sixth	1568	Protraction Diagram	01/28/14	6

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

P is for Professional

By Earl Henderson, PLS

I recently had the opportunity to teach a one evening class at the refresher course. The refresher course, for those who don't already know, is a multi-week evening class taught by a series of instructors for the purpose of helping potential licensees to understand the concepts they need to know in order to pass the licensing exams, either the FS exam to get their LSI designation or the licensing exam to get their PLS license, or for some individuals, both. I was asked to fill in for an instructor who had a late scheduling change. I enjoyed it very much, and I hope those in attendance enjoyed it too. But more importantly, I hope they learned some things that they didn't know before I got there and that they will be able to put those ideas into practice both now and after they become licensees.

We had some laughs. And we talked about many different surveying concepts, laws, etc. But in preparing for this class I didn't realize that afterward, what I would think were the most important things I spoke of would be at the end, in closing. And that is that the P in PLS stands for Professional.

To me, being a Professional translates into a variety of aspects of my practice. It defines how I treat my clients, of course, but it also describes how I want to be treated by my clients. Professional defines that two way street.

Being a Professional defines how I treat other Professionals. I may disagree with some, but that doesn't automatically make their opinions invalid. We are a Profession of opinions. That's what a retracement survey is, an opinion. As a Professional, it is incumbent on me, if I find that another Professional has a different opinion, not to simply dismiss it out of hand. That other Professional's opinion may contain some ideas that I hadn't considered. Of course, if that other PLS hasn't written a surveyor's narrative, or explained their decisions on their plat it makes it more difficult to intuit what they were thinking. But as a Professional I think that I'm required to keep an open mind while forming my own opinion. I will then defend my opinion vigorously, but always in the back of my mind I'm open to the possibility that some additional facts may arise that require me to adjust.

Being a Professional also means protecting the public. That is the ultimate reason we are licensed by the State of Colorado. The average public citizen doesn't have a clue how we accomplish what we do or what

we're required to consider while we accomplish it. It's our responsibility to protect their interests in their property. That does NOT mean protecting our client's interests. It means protecting the interests of any property owner that could be affected by our survey. If the center of section is reset improperly, it affects all the properties in that section. The BLM Manual and the laws of the State of Colorado require us to protect the Bona Fide rights of those property owners. One reason I enjoy this Profession so much is that I'm NOT an advocate for my client when I'm performing a Monumented Land Survey. I'm an advocate for the truth regardless of how it affects my client.

One of the concepts I pushed hard to try to get the potential licensees at the refresher course to understand was that the test they are about to take, and which we all also took, is a test for minimum competency. However, as soon as they get that precious stamp they will be held to a higher standard than that (or their LSI designation for that matter because an LSI is a licensee, being the first entrance into licensure and requiring that all the same standards of a PLS be met even though an LSI can't yet stamp plats. Being an LSI could be considered more scary than a PLS because of that idea, but that's an article for another time) C.R.S. 12-25-208(1)(b) requires us all to "meet the generally accepted standards of the practice of land surveying through act or omission" which is a much higher bar than minimum competency. And the "generally accepted standards of practice" are NOT what 50% or more of local PLS's are doing. The best definition I've heard of "generally accepted standards of practice" is "What a reasonably competent surveyor would do under like or similar circumstances." That means, as a Professional, you can't just do what most of the other Professionals are doing even though it's the wrong procedure. It's our responsibility to understand the laws that govern our Profession and act accordingly, even if 99% of the other Professionals are not.

And lastly, for this article at least, being a Professional to me means to be always learning. And there are a lot of cheap and easy ways to do that, reading being one that first comes to mind. POB Magazine, Professional Surveyor Magazine, and The American Surveyor Magazine are all free subscriptions. Why on earth would any PLS not subscribe to these since they're free. The newsletter you're reading right now has been given an award for the best in the nation. And on top of that it's the best and easiest way to keep informed about changes in the laws of the State of Colorado that

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require you, as a Professional, to make adjustments in your practice of land surveying in order to remain in compliance with the current set of laws, rules, and policies. Are there still surveyors practicing using the 1973 BLM Manual? How about the 1947? What about the C.R.S. of 1995? Your PLSC membership provides this and other ways to stay informed, up to date, and in touch with the changes happening in our Profession within the State of Colorado and nationwide. But you're reading this aren't you? You already know that. And yet about 60% of licensees in Colorado don't belong to the PLSC. It makes no sense to me. I have a college friend who became a dentist who told me that the amount of money he has spent on continuing education is multiple factors more than what he spent on college and dental school combined. As a Professional, who could argue that they can't afford \$120/year for the nation's best land surveying newsletter?

I encouraged the students at the refresher course to start collecting surveying textbooks and other references now to build up their personal library. These will be the references they should use for their entire career as Professionals to help them decide how to make boundary decisions. I quoted them a phrase from a book published in 1912 during the course that evening. And new books are being published every year.

But then again, even if you receive all four of the publications I've mentioned and have a substantial library, it doesn't help unless you read them, and that with an open mind.

As I told the students that evening, getting that stamp is not the end or the goal, it's just the beginning, so don't stop learning once you get it, that's when the real education begins.

Maybe that's a good definition of a Professional, "A person developing the practice of a specialized occupation with an open mind."

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GPS/GNSS Topics

Stan French, BLM Cadastral Survey Chief

Public Land Survey System Case Study: Review of a Protest to a BLM Survey

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Saturday • June 14, 2014

8 a.m.-5 p.m.

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The Future of Land Surveying and Higher Education in Colorado

By Don Lambert, PLS

Thirty years in land surveying. It can't be that long since I first saw a tripod and attempted to keep track of tangent screws, lower motions and micrometers. Back in 1983 we mainly used optical theodolites and a 200' steel tape for most tasks. The company had one EDM – a Topcon guppy. I'm sure a few of you remember them. What an innovation that was. All of that chaining over uneven ground and through the brambles could be reduced to the push of a button... The construction plans were covered coordinates largely generated by using the HP-41C survey pac. We spent a lot of time over the hood of a truck watching the "bird fly."

Since my introduction to surveying the advances in technology have been remarkable. This rapidly changing environment has caused me to reflect on my journey in land surveying and possibly where the profession might be headed. How should the future practitioners of land surveying be best equipped to utilize all of the new technologies while at the same time continuing to employ the sound principles upon which the profession has always rested upon?

The many innovations have made surveying in the field much easier: servo driven total stations, field computers, and one man robots have changed the landscape. The advent of GPS was a seismic event for the profession. A decade and more later and it's still a bit of a miracle to me. Since then other tools have appeared on the scene: Lidar, laser scanning with UAS (unmanned aerial systems) on the horizon.

This speed of these modern technological gains finds its origin within Moore's law. In 1965 Intel co-founder Gordon E. Moore formulated "Moore's law" which "is the observation that, over the history of computing hardware, the number of transistors on integrated circuits doubles approximately every two years."¹ The key item here is the exponential rate of improvement to chip speed and memory density. At times it feels like we're riding a never ending wave; always something new to learn about – a constantly changing environment. The good news is that the basic principles of land surveying have remained largely unchanged. It's the tools we employ in our endeavors which have improved dramatically.

These tools and methods have increasingly been gathered under the heading of geomatics. According to the University of Melbourne, "Geomatics is concerned with the measurement, representation, analysis, management, retrieval and display of spatial data concerning both the earth's physical features and the built environment." Since spatial data is the central focus, geomatics provides a broad base upon which many disciplines rest including: the mapping sciences, land management, geographic information systems, environmental visualisation, geodesy, photogrammetry, remote sensing and land surveying.²

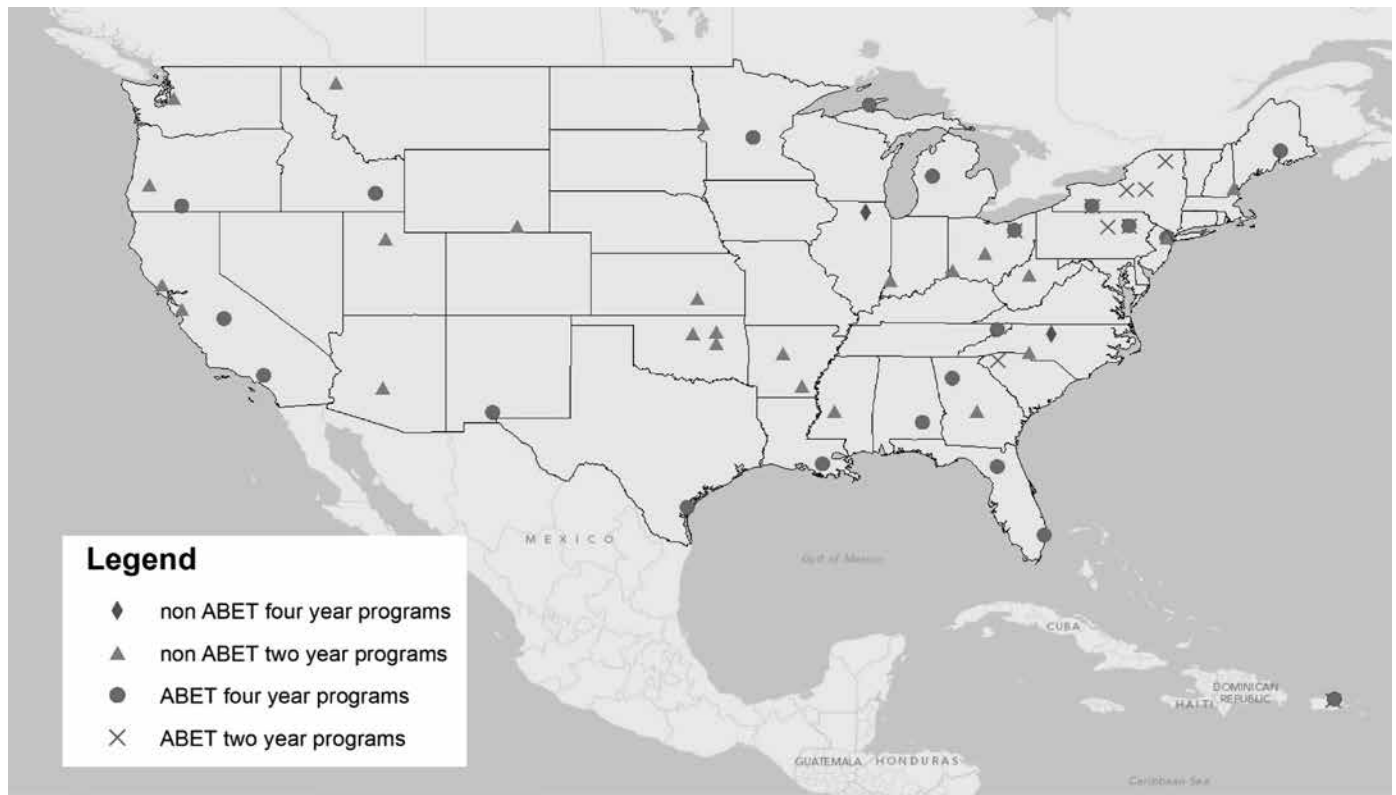
In Colorado "Professional land surveying" is defined as "the application of special knowledge of

1. principles of mathematics
2. methods of measurements
3. and law

for the determination and preservation of land boundaries."³

The first two items fall underneath the heading of geomatics. The third is the sole province of surveying where we examine all of the gathered spatial data and evidence and apply the proper legal principles necessary to complete a survey. Land surveying is a specialized branch of geomatics - a branch in which the public has deemed it necessary that its practitioners must be licensed to protect the public welfare.

This brings us now to Colorado House Bill 10-1085. It declares that, at a minimum, a two year associate's degree will be required to become a licensed land surveyor. The statute gives preference to completing "a board-approved surveying curriculum of four or more years". I believe that the new law is a very good thing because today's environment is very fast paced and complex. The only way a future land surveyor is going to be able to gain a broad understanding of the tools of geomatics and how they might best be applied to land surveying is through education. The companies where we work are specialized to take care of the needs of their clients. They don't have the time or resources to provide a proper overview of the industry.



Surveying & Geomatics programs

So, what does the board-approved curriculum look like? The answer is found within the State Board Rules and Bylaws. Section 4.7.2.1 states that “a Board-approved surveying curriculum of four or more years shall be one that has been accredited by the Accreditation Board for Engineering and Technology (ABET) or conforms with the Board guidelines for approval of land surveying programs.” A Board-approved two year curriculum would not need to be ABET accredited, but would need to consist of a minimum number of mathematics, surveying and surveying science courses.

Currently the National Society of Professional Surveyors (NSPS) works in conjunction with ABET (abet.org) to evaluate and qualify programs which meet ABET’s accreditation criteria. There are 22 four year and 9 two year ABET accredited surveying and geomatics degree programs. The NSPS “establishes the program criteria and maintains a team of academic and industry professionals who serve as evaluators of programs under the Engineering (EAC), Applied Science (ASAC), and Technology (TAC) criteria established by ABET”⁴. The NSPS also lists 2 four year and 24 two year non-accredited educational programs. The map above shows the locations of these.

The most notable aspect of the map is that there are no degree programs offered in Colorado. The closest is found at the University of Wyoming offering 52 credit hours of courses in land surveying which “students can apply their surveying coursework toward a Bachelor of Applied Sciences in Organizational Leadership with a concentration in Land Surveying through the College of Agriculture.”⁵ Until a few years ago we had two in-state programs: a two year curriculum at Westwood College which was a continuation of the old Denver Institute of Technology program started in the 1950s and an ABET certified surveying degree at Metropolitan State University of Denver under the direction of Dr. Herb Stoughton.

While there aren’t any undergraduate programs currently in place there is a graduate degree program administered by Dr. Apostol Panayotov; The Masters of Geomatic Engineering curriculum within the College of Engineering and Applied Science at the University of Colorado Denver campus. This is a continuation of the Geographic Information Science course of studies which has been active for many years at UCD. Areas of study include surveying, geodesy, mapping science and cartography, GPS, GIS and remote sensing. Dr.

Panayotov's goal is to enhance and expand the program into a four year degree satisfying the board criteria. This is a very promising development and since many of the courses, teachers and resources will already be in place it makes sense to support this effort.

It's very unfortunate that the Westwood and Metro State programs have ended just at the time when we need them the most. To best serve the public and the profession it is absolutely necessary that we work to re-establish a two year program and an ABET accredited four year program. This is not going to be easy. It's going to take some hard work and the dedication of the surveying and geomatics community to develop these, but now is the time to pursue such a goal. If you would like to get involved in this effort I encourage you to contact the PLSC. As the old saying goes "The more hands the lighter the work".

Hopefully this article has provided some information and will help to fuel the ongoing discussion about this very important topic.


Footnotes

- 1 Wikipedia; "Moore's Law"; http://en.wikipedia.org/wiki/Moore's_law - accessed 03/31/2014
- 2 University of Melbourne; "Geomatics"; <https://coursesearch.unimelb.edu.au/majors/22-geomatics> - accessed 03/31/2014
- 3 C.R.S. 12-25-202(6)(a)
- 4 NSPS; "Education"; <http://www.nsps.us.com/> -accessed 03/31/2014
- 5 University of Wyoming; "Land Surveying"; <http://www.uwyo.edu/civil/landsurvey/> - accessed 04/04/14
- 6 ABET; "Why Accreditation Matters"; <http://www.abet.org/> - accessed 03/31/2014

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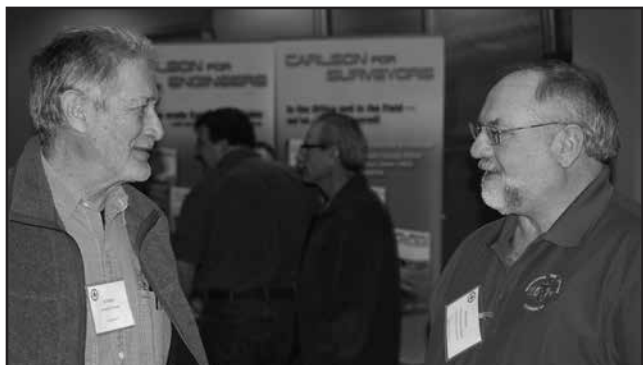
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*Jan Sterling and
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Curt Sumner



Dean Glorso and Tyler Port



Peg Ackerman and Dave Pehr



*Kayce Keane and
Chuck Hutchins*



*JB Guyton, Chris Power and
Dean Glorso*



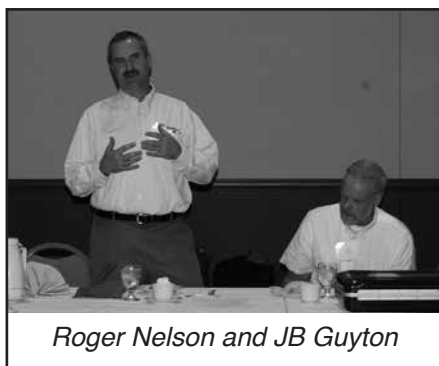
*Dave Kuxhausen and
Earl Henderson*



Paul Bacus and Roger Nelson



*Dave Kuxhausen and
Kayce Keane*



Roger Nelson and JB Guyton



Dustin Muir

Photos by Mike Greer

PLSC Chapter Summit - Minutes

February 27, 2014, 7:00 – 9:00 P.M. Arvada Center for the Arts



Chapter Summit attendees: Seated, from left, Laine Landau, Todd Beers, Becky Roland, Roger Nelson, JB Guyton, Chris Power, Jon Tessin, Steve Parker. Standing, from left, Gary Kent, Dean Glorso, James Rihanek, David Kuxhausen, Anthony Perazzo, Doug Ritter, Chris Raml, Kevin Kucharczyk, Alan Blair, Paul Bacus, Curt Sumner, Terry Maw, Tom Sylvester, Patrick Green, Les Doehling, Mark Joannes, Mike Bouchard, Michael Kervin and Kayce Keane. Photo by Mike Greer.

Minutes:

Roger (Nelson): Opening remarks, introduction of Curt Sumner of NSPS to speak about state society memberships.

Curt (Sumner): I assume that most of you have seen the memorandum of understanding (MOU) for state societies. The NSPS goal is to build a stronger advocacy base. The Associate membership fee has dropped from a high of \$225 down to \$40, so we are not in it for the money, but for a broader base. Student memberships are now \$10, down from \$30. Can join directly or via your state society. Are you licensed in more than one state? Membership based on state of residence, or where you work (example of living in Delaware but working in Pennsylvania). The NSPS database should catch it whenever someone pays twice, and issue a refund. Current members – may have a refund for a partial year, up to the point of the new one. States pay the NSPS within 120 days after state dues come in. The only mandatory part of the MOU is that regular members in your state must join. Board of Governors is advisory. Board of Directors now comes from states with membership. 41 state societies, including Washington D.C. have MOUs now. Hawaii, New Hampshire and Utah are signing soon.

Roger: This is an easier sell to Colorado if the \$40 will not increase for years.

Curt: MOU takes care of that, for fee to change, states would have to renegotiate. Primary purpose is advocacy. Better to deal as a bigger, stronger organization,

more influence if they can point to a larger group. Must show unity as a profession. It is important to have states involved to communicate effectively with those states' politicians.

Alan (Blair): Is the MOU customizable to states?

Curt: Yes. Example, sharing of membership data when you join, timing of dues, etc.

Roger: I would ask everyone here to bring this subject to your chapters. An upcoming survey will determine how much of the PLSC membership might decline due to the higher fee if we joined.

Curt: A handful of states, like Tennessee, actually increased their members after joining.

Gary (Kent): Indiana may have lost a couple, but minor even though it was a big concern.

Curt: When any of you are discussing this at the chapter level, I am available for questions.

Roger: Let's move on to the agenda.

JB (Guyton): The next topic, for about 15 minutes, is the future of the CSRN.

Brian (Dennis): The state of the CSRN is an ugly picture. While there was a full board last year, this year the President was injured, and no one was reelected. Jan Sterling doesn't want to continue. The Vice President was term limited. Kayce Keane is a new director, others are either term limited or declined to continue. There is

a lack of direction and leadership. So what do you guys want to do with the CSRN? Has the time for it passed? It created GPS Day/Surveyor Week component, with 60-100 young people attending. Scouts, TrigStar students, GIS users, parents, interested teachers. If it was to drop down to a committee, the event could keep going. Did radio interviews with NSPS, ESRI was interested, 2 years in a row. I will lead, as I have done for the past 7 years, or step back for someone else.

Kayce (Keane): I like the idea of a committee. Brian could chair it, continue all activities.

Brian: CSRN now functions through chapter dues, must go to a committee to fund activities. \$1,800 in bank, can fund this year OK.

Laine (Laindau): Another idea is that another chapter could adopt you. What is the annual budget?

Todd (Beers): Only \$400-600.

Terry (Maw): The Board of Directors will decide this.

Paul (Bacus): Anything else on tap besides GPS Day?

Brian: Building a bridge to vendors, private companies and to others in the GIS community.

Kayce: CSRN had a board who's members were not PLS's but interested in the profession, a part of the bridge. Disbanding is the easy way out, but it is important for those bridges to continue.

Tom (Sylvester): In bylaws, can a non-PLS be on a committee? Would hate to lose them.

Brian: Could be participating members but non-voting.

JB: We went through a lot to change the bylaws to form the CSRN.

Roger: Brian, Kayce, suggest that you take one year to reinvigorate the CSRN as a chapter. If strides are not made, look at converting to a committee.

Dave (Kuxhausen): I'm in favor of a committee, for education purposes. As a member of the CSRN, not interested because it's not going anywhere.

Brian: Most directors of CSRN are on other chapter boards too, limited time.

Tom: For another year, if it looks like it will end, look at the transition process.

Kayce: We need a president who is focused to keep it going.



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Todd: I will help with GPS Day. Need a leadership group now. Cub Scouts are looking to get survey badges, for example.

Brian: I will take the reins now. With only two board members, can be made decisions? No quorum.

Roger: I can appoint interim board members, to get a quorum.

Steve (Parker): Will do orienteering course, as we always do.

Laine: I will be on the board to get a quorum.

JB: We still need a vehicle for unlicensed people to be involved, losing this chapter will be difficult. We are now about halfway through.

Roger: I would need a letter of resignation from elected board members before I can appoint anyone. I appoint you (Brian) as President. He can then appoint additional board members.

JB: Agenda item #3, improvement of communications. A topic from last year's Chapter Summit was the idea of using videoconferencing between the chapters.

Roger: The 2013 budget is still rough, but looks favorable. If true, I am all for purchasing portable videoconferencing equipment. Even a laptop and camera might be sufficient.

Todd: Would this be for chapter to chapter, or chapters to the PLSC meetings? Must decide.

JB: Primarily for links to board meetings.

Patrick (Green): As a remote user on the western slope, it adds a lot to do meetings via a computer, where one can pull up documents, etc. Flexible, we can be at the office, at work, etc. Video relates us to being in one spot.

Tom: We discussed taping the refresher courses two years ago.

Becky: We are making DVDs of the courses now. Cost is \$55 per course, or \$300 for the full set including homework.

JB: Let's move to Agenda item #4, Scholarships.

Roger: We passed a motion, each chapter will fund 1 full scholarship for the CFedS program, \$1,200 each year.

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Terry: That's \$16,000 total for all chapters.

Todd: Not sure of that total.

Patrick: Will award our scholarship to a local surveyor.

Steve: In the Northern Chapter, we have recipients fund the courses themselves, then reimburse.

Patrick: We didn't stipulate that timing this year, but may next year.

Steve: We will be putting this out to our chapter membership on March 18th, a month behind.

Todd: The chapters must take up the flag on this, and make it happen, glad to see it.

Chris (Raml): We didn't have any high school students apply for scholarships for the past three years. We even broadened it to higher mathematics, but still no response.

Mike (Bouchard): If chapters reimburse for CFedS when completed, the PLSC still needs to disburse funds to chapters right away.

Patrick: I would suggest going to college kids; we found more interest there.

JB: Agenda #5, issues with the website. There have been extraordinary advances this year.

Roger: Becky and her contractor worked on it. We need current, fresh and good content! Need to feel like going to the website often is worthwhile. Rapid turnover of content is my vision.

Becky: Alan did some training to update chapter materials on the site. We can time "news" items to time out. The site is not yet where we want it to be, especially for membership renewals and chapter selections. An automatic roster is another goal. Ideas for members-only portal are welcome, only a directory now. I want to know about any website problems you find.

JB: We owe Becky a lot of thanks.

Chris: Job postings for members only would be welcome.

Brian: I've been busy, job board requires a lot of effort, and has not been used much in the past. Will to it again if wanted.

Kevin (Kucharczyk): Another suggestion would be to offer contract and other templates in PDF form in the members section, for use by small firms.

Todd: If timely and updated, can provide value. A place to start.

Brian: Could show non-members how many job postings there are but offer no access to them, an incentive to join to gain access.

Kayce: If you need a job and are broke, not a good idea. Job postings should be free. Restricting scholarships or committee memberships to members only is OK.

Brian: I agree. We don't want a "Good Ol' Boy" image. Perhaps it would be good for updated board rule changes, or those could be made public also.

Roger: Templates for affidavits of correction would be good, contracts, etc.

JB: I would like feedback for future agenda items for this meeting. This has been a very good discussion.

Roger: It seems the consensus is to leave the job board open to non-members.

JB: Now for #6, finances.

Terry: In 2013 we had an \$8,000 surplus. For 2014 a projected \$6,000 surplus. Last month, there was \$200k in Wells Fargo, \$65k in scholarship funds, \$120k in checking dollars available. The PLSC is not hurting at all.

Todd: The Stollard house sale is in addition to that.

Terry: Yes, \$118,000 cleared, also in bank.

Pat: This is a phenomenal recovery compared to recent years.

Terry: Much is due to the success of Todd and this Summit conference (applause...).

Roger: As an initial thought, the board did away with conducting remote board meetings in other parts of the state, I would like to resume that, budget permitting.

JB: Onto #7, by-laws and needed changes.

Roger: Becky found things in the by-laws that might be better as policies.

Becky: There is nothing there for forming or dissolving chapters. Also nothing about membership categories and the voting status of each.

Roger: Could be in constitution or articles of incorporation.

Becky: Voting vs. affiliate member definition, input is needed.

Terry: Definition does exist somewhere.

JB: The process of change is more facile; will work on this during the year. Now onto #8, membership drives.

Roger: A couple of chapters have done membership drives. No data on outcomes.

Kayce: We got one email from a retired "old dude" wanting to join, for our efforts.

Laine: We sent out letters to all non-member surveyors in our region, with only the one response. But it had the benefit of serving as a reminder that we exist.

JB: Controversy is what worked in the past. "What have you done for us lately?"

Laine: Message should be, don't you want to grow? Join, learn, etc.?

JB: Having one out of three licensed surveyors as state members is typical for most states.

Mike: 14 years ago, I got busy, didn't see any benefit to joining. I got pressure from JB to join. Peer pressure is a major factor. People are busy making a living. Talk to people you know, invite them.

Chris: Who here paid for membership out of pocket?

Becky: There were 412 members at the end of last year.

David: 1,700 licensed in Colorado.

JJ (Rihaneck): 1,800 living in the state, not just registered.

Todd: 800 to 850 is the most we ever had as members.

Kayce: Consider lowering the price to see if membership goes up.

Brian: I got hooked with the first year free after licensure offer.

JB: There are many disgruntled ex-members who could come back.

Brian: We would have to explain why the PLSC is not the same as it was when they left. Rebranding is a big focal point. NSPS is part of that.

Roger: I don't believe in the "Good Ol' Boy" network image, I have worked hard to dispel that.

Brian: Not you personally, but the group.

Terry: Suggest keeping rate at \$110, \$70 + \$40 for NSPS.

Becky: There is an incredible audience here at the Summit, paid \$100 more as non-members. Can we offer them something more?

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Tom: I got involved in the PLSC during desperate financial times, when Art Hipp passed away. I am not ready to give money back yet, it's too soon.

Todd: I got pissed hearing about the good ol' boys, nothing changing, etc. When people say that to you, stop them, tell them how we are communicating big changes, etc. It has changed.

JB: It is now 8:45 P.M.

Paul (Bacus): The northern chapter had an idea for the past four years to offer a reference book as a viable resource tool, with the PLSC featured on the front of the book.

JB: The northern chapter used to be very comparatively dormant in the past, but there is a renewed energy there now.

Laine: Our chapter is much more dynamic but was never dormant. It never used to participate in Denver activities before, that has changed.

Kayce: We have tried to open doors to other chapters, buddies and cooperation. Having mandatory PDH's would increase membership.

Dennis: Group has turned around. Central chapter used to run everything ten years ago, at least that was the perception. No longer true.

JB: Warren Ward would like to speak.

Warren: As NSPS Governor, I went to every chapter but the CSRN. The NW, N, SW and Central chapters volunteer for TrigStar. I learned that it is not working the way that it should, two chapters are doing the footwork.

CST program used more. There is unfinished business. The railroad abandonment bill is still floating around Washington. The NSPS lobbyist has the bill, looking for a sponsor. If passed, all railroads would be surveyed before abandonment. I've been an officer for 20 years, have observed the exact opposite of the good ol' boys network. Please email me with any NSPS questions.

JB: Any other topics we missed?

Mark: Good, productive meeting. I would like to see more than one of these each year.

JB: There have now been three good years in a row, good exchange of ideas across the geography.

Tom: A second meeting would be difficult for those far away. The Summit is convenient because we are already here.

JB: Any comments about Side Shots? Do people still like it and read it?

Laine: I would like to complement Side Shots. My issues sit on my kitchen table. My son reads it.

JB: I have received good feedback on Dean Glorso's recent article. People read it on line.

Patrick: I keep Side Shots on my desk. Just seeing the cover says a lot to those who see it.

Roger: I would like to thank Terry and Mike for wearing their blue PLSC shirts. Perhaps red shirts for newly elected members, etc.

JB: Thank you all for coming and for contributing to another successful meeting.

Ron Paolucci

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How often have I, as a teacher, asked students, “What did you do last summer?” Seldom have I, as a teacher, been asked the same question. Last summer was so special for me that I want to answer just that question.

Last spring I received an offer from the Colorado Professional Land Surveyors to attend a TwiST (Teaching with Spatial Technology) class in Vancouver, Washington. The class was sponsored by WFPS and NCEES. It was held at Clark College. The purpose of the class was to draw teachers closer to the jobs in the surveying field in an effort to pass job knowledge on to high school students. Since the field is “graying”, it is essential to entice young people into a career field that is looking for bright and motivated students to carry on great traditions. I jumped at the opportunity to learn more about Civil Engineering related careers and professional development that could transfer directly to my classroom.

I teach both Geometry and Precalculus/Trigonometry. Seldom does one have the opportunity to teach his two favorite subjects from high school. I have been hungry to find ways to answer the high school students’ favorite question, “When will I ever need this in the future?” TwiST provided me with many answers.

TwiST also gave me the chance to meet other educators from around the west. They came from many states and taught at many grade levels. All shared a passion to share knowledge with kids and apply classroom knowledge to the world around them. All also enjoyed summertime, the chance to meet new people, and the opportunity to share ideas of how to make learning in the classroom more fun and effective.

TwiST reinforced my love for my favorite shape. The triangle is the key to understanding so much of the world around us. It gave me some great ideas about how to get students to interact with triangles both inside the classroom and outside on school grounds. As a result of my extracurricular relationship with an integral member of WFPS (we play in a summer church golf league together), I also acquired two steel tape measures to aid students in measuring the sides of triangles outside the classroom. I am still looking for a better way for the average student to measure angles other than the handheld compass. It works, but many measurements by multiple sets of eyes are necessary to estimate a fairly accurate angle. The mathematics of the triangle continue to amaze me, even given the rudimentary measurements attained from pacing and compass derived angles.

The course also spent time teaching us about many different GIS related web applications. It did a great job of showing ways to use free technology in the public school classroom at all grade levels. Looking at a map in a 4th grade Geography class is one thing, but to peek into the knowledge of the GIS database and learn about the trees, streetlights, fire hydrants, etc. adds so much more to the learning experience. To study the laws of sines and cosines with generic triangles, or even contrived word problems, does not compare to interaction with real triangles outdoors. When a child can connect personal interests and physical activity to the subject matter of the lesson, learning skyrockets.

WFPS and NCEES are offering TwiST again this summer at Clark College. I highly recommend it to other teachers seeking ways to bring the allure of the great outdoors into the classroom.

Western Federation of Professional Surveyors

Board of Directors Meeting, Portland, Oregon, January 11, 2014

By J.B. Guyton, WFPS Colorado Delegate

Attendees:

Richard Heieren, Chairman
Nancy Almanzan, Chair-Elect
Matt Gingerich, Secretary/Treasurer

Alaska - Richard Heieren
Arizona - Chris McDonald
California - Ray Mathe
Colorado - JB Guyton
Idaho - Glenn Bennett
Montana - Dick Smith
Nevada - Nancy Almanzan, Matt Gingerich
New Mexico - Earl Burkholder, Chris Medina
Oregon - John Thatcher
Utah - Ken Hamblin, Michael Nadeau
Washington - Carla Meritt, Mike McEvilly
Wyoming - Paul Reid
States Absent: Hawaii

GUESTS

Gary Anderson, PLSO
Greg Crites, PLSO
Tim Kent, PLSO
Patrick Smith, NSPS President-Elect

Chairman Richard Heieren reported:

NCEES has confirmed they will be providing matching funds for the TwiST program.

NCEES computer-based testing is moving forward. WFPS should consider how they can become involved potentially as an exam question bank. This will be discussed during strategic planning

A presentation should be developed to provide information regarding WFPS to the state associations.

TEACHING WITH SPATIAL TECHNOLOGY (TwiST)

TwiST Chair Dick Smith reported holding a committee meeting. TwiST will be held June 23-27, 2014 at Clark College. Special thanks to Tim Kent for securing Clark College and teaching the program.

Registration for TwiST will increase to \$600 to help cover the costs of an icebreaker BBQ. It was noted that there were teachers from kindergarten to junior college represented at TwiST. The goal is to provide students with in-

formation about a potential career in land surveying. With this in mind, the criteria for teachers is being changed to include grades 6-12 only.

The Committee is requesting the following **action items**:

- Each state contact the teachers they sponsored and obtain written testimonials. In particular, request how they have implemented the information they received in their class this year.
- Confirm two teachers (grades 6-12). A minimum of 18 teachers are needed to hold the event and there is a maximum attendance of 22. Deadline for registration is April 15th.

NSPS UPDATE

NSPS President-Elect Pat Smith reported on the activities of NSPS.

NSPS is intent to withdrawal from SaLIS journal as the other two organizations are not providing articles. Funds have been received for subscriptions and advertising and as no magazines are being published NSPS is unable to close their books.

NSPS spring meetings will be held in conjunction with the CLSA-NALS Conference.

NSPS is in the preliminary stages of planning a Conference in the Washington DC area. NSPS does not want to compete with state association conferences. Therefore, the NSPS Conference will be organized differently and most likely be more geared toward government surveyors and vendors.

Forty states have signed MOUs for the NSPS 100% membership program. The majority of NSPS membership of NSPS is private practice, specifically small business.

NSPS Government Affairs is fighting the addition of surveyors to the Davis-Bacon Wage Law Act.

It appears this was orchestrated by the Operating Engineers union to increase union enrollment.

Each state that has signed the 100% membership MOU has a Director on the Board. NSPS is trying to determine the best way to manage such a large Board of Directors. In addition, they are trying to determine if there is still a need for a Board of Governors.

NSPS is holding their elections and this is the first year

that there was a ballot write-in/petition for Vice President. A ballot will be mailed to all voting members.

NSPS is currently reviewing their member categories and considering adding categories for other geospatial professionals (e.g., GIS).

State Report Highlights:

ALASKA

Membership: 190

Conference: March 24-28, 2014 at Westmark Hotel – Fairbanks, AK

The ASPLS Standard of Practice Manual has been adopted and is available online at www.alaskapls.org

ARIZONA

Membership: 505

Conference: April 10-12, 2014 in Tucson, AZ

The Department of Transportation funding is now being overseen by Department of Highways which now requires contracts to go to firms with at least 50 people. Most of the land surveying firms in Arizona are small businesses and no longer qualify. This means that most of the work is going to large business from out-of-state.

The Arizona Boundary Survey Minimum Standards is in final draft and will be voted on the general membership this year.

CALIFORNIA

Membership: 2150

Conference: April 12-16, 2014 at Town & Country Resort in San Diego, CA

CLSA Legislative Committee monitored 31 bills last year. They are currently discussing survey narratives and possible changes to the Public Resource Code.

CLSA has approved an annual contribution to support the California Spatial Reference Center (CSRC).

CLSA continues to work with youth soccer organizations to assist with soccer field layout. In return for laying out soccer fields, CLSA receives a complimentary booth at opening day events in order to promote the land surveying profession.

CLSA set a commemorative Center of Population monument in October at the railroad museum in Shafter, CA.

CLSA, in conjunction with CalTrans and the Board for Professional Engineers, Land Surveyors, and Geologists, hosted a Chinese Delegation of land surveying professionals.

COLORADO

Membership: 412

Conference: February 27- March 1, 2014 at the Arvada Center.

PLSC Board of Directors approved a new scholarship program to sponsor candidates for the Certified Federal Surveyor program (CFedS).

HAWAII

No report.

IDAHO

Membership: 237

Conference: March 4-7, 2014 at the Red Lion Inn in Pocatello, ID.

ISPLS is considering a joint Conference with WFPS in 2015.

ISPLS continues to review the definition of surveying. It was decided to modify the definition in the NCEES Model Law and incorporate those changes into Idaho Code.

Surveyors in Idaho are being cited by OSHA for minor things such as not wearing gloves when using a shovel. ISPLS has formed a committee to work with OSHA to prepare a safety book and program for Idaho Surveyors.

MONTANA

Membership: 226

Conference: February 19-21 in Kalispell, MT

Dick Smith reported that Linda Smith is stepping down as WFPS Delegate.

MARLS is currently monitoring a possible Department of Natural Resources rule change regarding the drilling of new wells within 1320 feet of existing wells.

Some Chapters within MARLS are questioning the need for two WFPS Delegates.

NEVADA

Membership: 158

Conference: April 12-16, 2014 at the Town and Country Resort in San Diego, CA

NALS has updated their website: www.nv-landsurveyors.org

The four-year program at Great Basin has been closed. UNLV is considering starting a four-year program. NALS plans to meet with UNLV to determine how to initiate the program.

NEW MEXICO

Membership: 206

Conference: March 14-15, 2014 at the Crowne Plaza in Albuquerque, NM.

NMPS Board of Directors discussed NSPS's request to withdrawal from publishing the SaLIS Journal. NMPS discussed the importance of continued support of a peer-reviewed publication by NSPS, the "national voice for surveying."

OREGON

Conference: January 22-24, 2014 in Salem, OR

PLSO continues to have financial concerns and is working to build membership.

PLSO was successful in working with Oregon Utilities Notification Center to modify requirements so that surveyor pins set 12 inches and shallower are excluded from notification requirements.

UTAH

Conference: February 19-21 in St. George, UT.

UCLS is currently monitoring a bill that apparently clears up confusion regarding vacation plats.

UCLS has approved the 100% NSPS membership program and is modifying the MOU prior to signing.

WASHINGTON

LSAW is currently negotiating a contract for management services.

LSAW is discussing how to create a sustainable plan to fund NSPS dues without raising LSAW dues. No viable plan has been put forth yet.

LSAW continues to pursue changes to the prevailing wage requirements



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and has hired an attorney to obtain the un-redacted copies of the 2010 salary survey that was used to support prevailing wage calculations.

WYOMING

Paul Reid reported PLSW has signed the MOU with NSPS for 100% membership and has raised dues \$45 to cover NSPS dues and the additional administration costs of managing the program.

EDUCATION COMMITTEE

Earl Burkholder discussed the importance of maintaining a peer-reviewed journal and that, as the national voice of land surveyors, it makes sense for NSPS to remain involved in the publication of the SaLIS Journal. It was discussed that if NSPS decides not to continue offering a peer-reviewed publication, and SaLIS fails, that WFPS should consider discussions on starting a peer-reviewed publication.

STRATEGIC PLANNING

The Officers discussed the current mission of WFPS and what WFPS does to accomplish that mission. It was noted that when WFPS coordinates programs that are common to all states it not only helps to promote the profession but also offers assistance to the state associations. An example of this working well is the TwiST program. Without the coordination of WFPS in bringing all the western states together, the program would probably not continue.

CONFERENCE

It was discussed, should Idaho decide to move forward with WFPS for a 2015 joint conference, Idaho will lead the conference and WFPS will be as involved as they would like. In some cases, states have requested a lot of support from WFPS in the planning and execution of the conference and in other cases the state has requested that WFPS handle only select areas of the conference. It was also noted that WFPS can provide speakers for the program.

MANDATORY EDUCATION

At the September 2013 Board of Directors meeting, WFPS took a position favoring mandatory continuing education and requested a resolution be considered for adoption. A draft resolution was included in the agenda, which was edited by Ray Mathe and JB Guyton during the meeting.

The resolution was amended to read:

WHEREAS, the Western Federation of Professional Surveyors (WFPS) is a regional Association representing Land Surveyors in the 13 western states, and

WHEREAS, the vast majority of WFPS states have a mandatory continuing education requirement for license renewal, and

WHEREAS, WFPS is committed to the protection of the public, which is accomplished by Land Surveyors maintaining an up-to-date knowledge and understanding of current laws, rules, and regulations related to the practice of land surveying, and

WHEREAS, WFPS is committed to keeping Land Surveyors up-to-date, expanding their outlook and ensuring that they are provided the professional resources, outlets and educational advantages needed to succeed; respond rapidly to the ever-evolving professional requirements and,

WHEREAS, continuing education is a proven method of enhancing skills and resources, providing information concerning new technology, developments and issues relating to land surveying; and,

WHEREAS, continuing education is a method of ensuring that the Land Surveyor has formal opportunities to upgrade and update professional knowledge and skills; encouraging the Land Surveyor to learn from other professionals; and assisting the professional to expand his/her professional resource network; NOW, THEREFORE BE IT

RESOLVED, that WFPS supports a requirement of mandatory continuing education for Land Surveyors.

MOVED by Glenn Bennett and **SECONDED** to adopt Resolution 2014-01 supporting a requirement for mandatory continuing education. **MOTION CARRIED.**

SCHOLARSHIPS

LSAW reported that, as they do not have a four-year degree program in Washington, they are requesting the scholarship criteria be expanded so their two-year certificate students can be considered for WFPS scholarships.

Scholarship Chair Paul Reid to review criteria and provide suggested amendments to include students enrolled in a 2-year survey curriculum program.

WEBSITE

Mike McEvilly provided a template form for each state to complete so that more detailed information on each state can be provided on the WFPS website.

NEXT MEETING

The next WFPS Board of Directors meeting will be held May 3rd in Albuquerque, New Mexico.

In Memorium

Fredrick L. Easton April 7, 1945 – March 18, 2014

Fred, Sr. passed away near his home and business in Jasper Alabama. Fred provided members of the PLSC with ground-based and photogrammetric topographic maps for over 35 years. He was highly respected among our community for his knowledge, hard work, and commitment to providing the best possible quality maps in the shortest time possible.

He was born in Placerville in 1945. One of his first jobs was learning how to take measurements with an AGA Geodimeter NASM-2A. He worked for VTN for many years in CA and CO on some of their most high-profile projects, including projects in Panama, the Apollo space program, and the original survey of Disney World, Florida. He moved to Denver in 1974 and shortly thereafter started Benchmark Mapping. He was a self-taught aerial photogrammetric mapper and worked on key projects throughout the west, including many highways, pipelines, several city-wide mapping projects, the Aurora Reservoir, and others. He and his beloved wife, Carolyn, moved the business to Alabama in 2002 but continued to provide services in CO as recently as a few weeks before his passing.



He was a sailor, airplane and helicopter pilot, RC enthusiast, and collector of sports cars, especially small British ones. He often surveyed by helicopter in the 1970s and 80s.

He is survived by his wife Carolyn, four children, including one PLS and member of PLSC. He is also survived by 11 grandchildren.

He would often take his children on road trips for projects and put those to work that seemed interested. Because of him, Fred Jr. PLS learned to level a rod before riding a bike, operate a Geodimeter before learning to drive and has been a successful surveyor for over 20 years because of his father. He instilled this same can-do attitude in each of his children.

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Published by the Colorado Professional Land Surveyors Educational Foundation, Inc., a non-profit foundation, Initial Points of the Rectangular Survey System is undertaken in the spirit of, and dedication to, Mr. White's remarkable contributions to his field. Net proceeds from its sale will be returned to the Professional Land Surveyors of Colorado Inc. Scholarship Fund.

CSRN

Last year was quiet for the CSRN, although we did host GPS Day with success for a third year in a row. Due to unforeseen circumstances, the CSRN did not have an election at the end of 2013 to instate a 2014 Board. This was addressed at the recent February PLSC membership meeting. The PLSC Board appointed Brian Dennis as the 2014 acting President. Kayce Keane volunteered to be the acting Vice President and Terry Maw volunteered as the acting Treasurer/Secretary.

We have decided to spend 2014 as a rebranding/refocusing year for the CSRN to discover additional ways to add value to the membership. We will not be hosting GPS Day this year and instead will spend a large portion of this year to plan and advertise GPS Day for 2015 to create a better and refreshing event. We will be looking for a new venue location and talking with the membership for ideas towards activities the CSRN can incorporate into GPS Day and other events. Our focus this year is to brainstorm and engage the membership in an effort to maintain a high interest and participation within the group.

The CSRN has been focused on education and outreach for several years. The education is GPS/GNSS specific and the outreach has been to surveyors, non-surveyors and the youth. This effort has included hosting GPS Day, speaking at other association meetings, meetings with city/county survey and GIS departments, presentations at the PLSC annual conference and other chapter meetings, presenting at GIS in the Rockies as well as other events.

What can the CSRN do, moving forward, that would be different,

fresh, interesting and of value to the membership? This is a question I pose to all of the readers and PLSC membership. Give us ideas to keep this chapter refreshing and inviting.

I look forward to hearing all of the great ideas everyone has. Have a great and productive 2014.

Brian Dennis, PLS
Acting President, CSRN
brian@titancon.net

CCPS

The 2014 Rocky Mountain Surveyor Summit was a success! The conference was well attended and feedback from participants was very positive. The CCPS would personally like to thank Todd Beers and the conference committee for all of their efforts.

The CCPS scholarship committee has not been able to offer any scholarships for the last few years. The issue is not a lack of funds but a lack of applicants. If you know of anyone pursuing an education in land surveying or a related field please advise them to review the application on our website or contact David Kuxhausen at 303.925.1400 for more information.

We are currently offering the "Colorado Land Surveying Laws – 2014 Sunset" booklet to our membership. This booklet is an invaluable reference and can be purchased at our general membership meetings for \$20

We started out the year with our first General membership meeting on Thursday, January 23rd, with a very interesting presentation given by Boulder's own Jason Emery. The topic covered surveying and boundary issues related to the effects of the recent Boulder County flooding and items to consider when

dealing with riparian boundaries that are defined by a thread of a stream, creek, or river. The discussion included various concepts by "Brown's Boundary Control and Legal Principles", "Clark on Surveying and Boundaries", "Evidence and Procedures For Boundary Location" and examples of court cases.

The upcoming CCPS general meeting will be held at the Aurora Doubletree Hotel on Thursday, April 24th. This month's speaker will be retired BLM surveyor Mr. Paul Lukacovic. During his 32 years at the BLM, Mr. Lukacovic conducted dependent resurveys and mineral resurveys in four western states but most of his time was with the BLM Colorado State Office. Paul spent his last years as the Office Section Chief and Geographic Coordinate Data Base (GCDB) Manager where he successfully integrated the GCDB data into a GIS and started automating the Cadastral records and making the original survey plats electronically available.

The general meeting topic will be a recapitulation of Paul's 2,650 mile adventure on the Pacific Crest Trail from the Mexican border to Canada. Along the way he encountered desert heat, miles without water, snow covered mountain passes, treacherous stream crossings, bone soaking rain, snow storms, beautiful views, and amazing people. Come join this fellow surveyor as he talks about his experience and shares his photos from a once in a lifetime adventure.

If you have a speaker in mind for a future general membership meeting please let me know. These are great venues to discuss anything regarding the land surveying profession and beyond. We have seen increased attendance at our meetings this past year and would love to see that trend continue. Free dinner, cash

CHAPTER NEWS

bar, great speakers! Come out and support your chapter.

The 2014 CCPS Board of Directors consists of:

Officers; Christopher Raml, President; David Kuxhausen, Vice President; Mark Wilson, Secretary; Aaron Willis, Treasurer. The directors are Shawn Clarke, George Robinson, Devon Arnold, Terry Pickering, Kevin Kucharczyk, Ken Baker, and Tony Perazzo. Thanks to all of you who serve on our board.

Please visit us at www.centralcosurveypro.com for contact information, meeting details, and general CCPS news.

Christopher Raml, PLS
CCPS President

NC-PLSC

The Rocky Mountain Summit conference last month was a huge hit! One of the best PLSC conferences I've ever attended. Todd Beers and Becky Roland did the majority of the planning for this annual event. Big thank you to the PLSC Board and the countless others who helped pull this together. The Northern Chapter was happy to be a part of this successful conference.

This year's symposium was concerning the use of Plot Plans for construction. After review with the panel, the consensus was to attempt to educate the Planning personnel regarding the appropriate use of survey documents. This August, our lobbyist, Peg Ackerman, is setting up a meeting where we can address the Colorado Municipal League regarding this matter. Ongoing efforts on other fronts will be made.

Laine Landau and Rob Hintz were provided an award for Distinguished

Service. Paul Bacus was awarded with the Presidential Citation. Nate Keane was awarded with a CFedS Scholarship on behalf of the Northern Chapter.

We've had a couple meetings since the last Side Shots submittal. The January meeting was a working meeting where we evaluated our projects and discussed goals. Our February meeting included a presentation by Dusty Robinson, PE with Ayres Associates talk about Floodplains, Floodplain Mapping and Modeling. Very educational presentation and well attended. Our March meeting was the summit meeting at the conference. This meeting was a good platform for us to all voice our concerns and provides the PLSC with feedback.

Our April meeting will have Earl Henderson, President of Zenith Land Surveying and Board Chair for DORA, come in and talk to us about lessons learned sitting on the State Board of Architects, Professional Engineers and Professional Land Surveyors. May meeting we'll have a presentation by Jason Emery, County Surveyor for Boulder County, on the flooding in Boulder and effects on land surveying. Per usual, we'll have our summer hiatus from June thru August, with our next meeting in September.

Paul Bacus continues to lead the charge on the legislative committee. Laine Landau is directing an effort on TrigSTAR. Larry Pepe has taken on our latest project which involves establishing a custom NGS monument at the new Student Center at CSU. If you would like to get notifications of our meetings, please send an email to me at kkeane@walshenv.com and copy Rob at rhintz@fcgov.com.

There will be email voting in the

coming months for some positions on the Board of Directors. If you are interested in holding a position, please email me. It's a great way to get involved and is a good resume builder.

Kayce D. W. Keane, PLS
Northern Chapter President

NW1/4 CLS

Hello from the NW1/4! Not a lot of news from this part of the world, land survey or otherwise. Sometimes that is how we like it up in our rural corner of the state. It's calving season, we are still shipping coal by rail, and Steamboat has weathered another spring break crowd. The snow is deep up high in spite of an unseasonably warm March, and we are still getting more, off and on, along with thunder & lightning! Spring time in the Rockies, gotta love it.

We surveyors are busy setting up for the field survey season, but are making time to meet at the BBQ restaurant in Hayden. The meeting will host an ethics/bidding roundtable led Tom Effinger & Brian Kelly. Next newsletter I will let you know how that turns out.

Jeff Gustafson, Secretary Treasurer
NW1/4 Chapter

SCPLS

SCPLS has enjoyed a busy first quarter. During our annual meeting, five board members were appointed to their new positions, including two new directors, John Sakariason and Tom Shaughnessy. Check out our new website: scpls.net to see who serves on the board, what events are scheduled for 2014, and much more. In February the southern chapter sponsored the business & general track during the Rocky Mountain

CHAPTER NEWS

Surveyors Summit, including the surveying instrument road show with Dr. Richard Elgin. In March, Jason Emery, President of Boulder Land Consultants and Boulder County Surveyor presented during a members meeting on riparian rights as they pertain to land surveyors. He gave four great examples, which led into quality discussions into the evening, and each member received their SCPLS 2014 Colorado Land Surveying Laws book. SCPLS members who have not received their book, please contact the board at scpls.bod@gmail.com, or come to the next members meeting.... On May 20th the southern chapter is playing host to the City of Colorado Springs Land Surveyor, Robert Pisciotta, who is presenting on the new city block monument recordation system, and there will be an open discussion on the professional land surveyors' role in flood plain management in the Pikes Peak region. On August 9th the 26th Annual Paul Grout Memorial Golf Outing will be held at the Hollydot Golf Course in Colorado City and, as always, the golf tournament will be followed with a barbecue and awards ceremony. Join us!

Steven Parker, PLS CFM
SCPLS President

SWC-PLSC

The SW-PLSC held our most recent chapter meeting on Tuesday, March 11 in Durango. We would like to thank Frank Kochevar, PLS for being our guest speaker. Mr. Kochevar works for Mesa County

as the GPS/Survey Supervisor and joined us to talk about the CORS stations and the new station at the La Plata County Airport. Thanks to everyone who attended the meeting.

The 2013 Colorado Land Surveying Refresher Course is now available to surveyors in the SW Chapter area. This course offers a review and self-study plan for those taking the National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Surveying (FS) and Principles and Practice of Surveying (PS) examinations. These are on DVD and being offered to the Chapters at a 25% discount. Please contact Parker Newby at pnewby@goffengineering.com with questions or to request an enrollment form.

Our seminar committee is preparing for this year's Four Corners Survey Seminar to be held Friday and Saturday, June 13 and 14, 2014 at Fort Lewis College in Durango. Speakers will include Kristopher M. Kline, Stan French, Bob Green and Jan Van Sickle.

Our next meeting is scheduled for Tuesday, May 13 here in Durango. Our meetings are the second Tuesday of every other month. Look for guest speaker information, time and location in the upcoming email. Southwest Chapter members are encouraged to show up and receive a copy of Paul Bacus' Colorado Land Surveying Laws Booklet.

Joshua J. Casselberry, PLS
President, SWC-PLSC

WCLS

Currently serving as officers for the WCLS are: President, Peter T. Krick; Vice President, Jon Kobylarz; Secretary/Treasurer, Brian Bowker; and our 7 Directors are: Richard Bullen, Chris Ransier, Kurt Shepherd, Ben Elliott, Mark Wagner, Patrick Green and Sean Mullen.

There were 18 members attending the March 12th dinner meeting of the WCLS held in the City of Grand Junction break room. Steve Smith of the City of GJ GIS Department presented a very informative presentation on the many different features of the City's GIS web site. The topics of discussion for that night's meeting included the May 16th Spring Seminar with our guest speaker, Anthony Vannozzi of the University of New Hampshire's Thompson School of Applied Science. Chris Ransier of CR Surveying was announced as the CFED Scholarship winner from WCLS. C.R.S. 18-4-515, Entry to Survey Property, was a topic of lively conversation due to the recent complaint filed by the State Board.

Peter T. Krick, PLS
President, WCLS

Professional Land Surveyors of Colorado, Inc. Membership Application



The PLSC represents land surveyors' interests in the State, proposes new legislation and changes to existing legislation as the industry's needs change, and works with the State Board of Licensure as an advocate for Land Surveyors. PLSC Chapters include: Central Colorado Professional Surveyors (CCPS), Colorado Spatial Reference Network of the PLSC (CSRN), Northern Chapter—PLSC (NCPLSC), Northwest 1/4 Colorado Land Surveyors (NW1/4CLS), Southern Colorado Professional Land Surveyors (SCPLS), Southwest Chapter PLSC (SWPLSC) and Western Colorado Land Surveyors (WCLS).

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2. Membership Information:

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(Please check.)

Included Chapter: ☐ CCPS ☐ CSRN ☐ NCPLSC ☐ NW1/4CLS ☐ SCPLS ☐ SWPLSC ☐ WCLS
(Each membership includes one free Chapter membership. Please check—see above for descriptions.)

Additional Chapter: ☐ CCPS ☐ CSRN ☐ NCPLSC ☐ NW1/4CLS ☐ SCPLS ☐ SWPLSC ☐ WCLS
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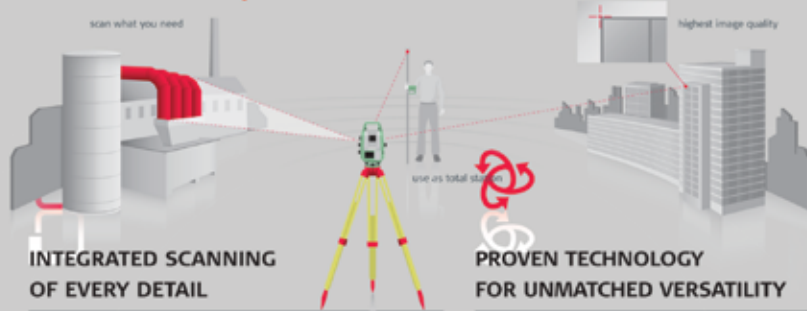
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