

November 2018

SIDE SHOTS

Professional Land Surveyors of Colorado

Volume 49, Issue 4



BYRON JOHNSON
Headline Speaker



CORY BIDDLE



TOM BREITNAUR



PAM FROMHERTZ



WENDY LATHROP
Headline Speaker



JOHN HUNTER



MARY KEITH



JOEY STONE

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OFFICERS (2018)

TODD BEERS
President
todd.beers@merrick.com
O: 303-353-3528

STEVE PARKER
Vice President
land_surveyist@hotmail.com
M: 719-641-3355

ALAN BLAIR
Secretary/Treasurer
aland207@gmail.com
O: 303-808-0981

BECKY ROLAND
Executive Director
PO Box 441069, Aurora, CO 80044 • broland@plsc.net
Phoenix AMC O: (303) 551-3266 F: (720) 230-4846

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SIDE SHOTS

NOVEMBER JOURNAL 2018

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*Side Shots is the official publication of the Professional Land Surveyors of Colorado, Inc.
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Todd Beers
President

Steve Parker
Vice President

For Editorial Correspondence, contact:

John B. Guyton

Editor: Side Shots

5385 Centennial Trail, Boulder, CO 80303
303-443-7001 • jguyton@flatironsinc.com

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**Deadlines for editorials, articles, pictures and advertising are January 1, April 1,
July 1 and October 1. All material received after the current deadline will appear
in the next issue of Side Shots.**

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OFFICERS (2017-2018)

STEVE PARKER
VICE PRESIDENT
M: (719) 641-3355
land_surveist@hotmail.com

ROGER NELSON
PAST PRESIDENT
O: (303) 589-1875
nelson@bhinc.com

TODD BEERS
PRESIDENT
O: (303) 353-3528
todd.beers@merrick.com

BECKY ROLAND
EXECUTIVE DIRECTOR
O: (303) 551-3266
broland@plsc.net

ALAN BLAIR
SECRETARY-
TREASURER
O: (303) 808-0981
aland207@gmail.com

DIRECTORS (2017-2020)

BRIAN DENNIS
O: (719) 337-1262

LEIF JOY
O: (970) 878-5292

TOM SYLVESTER
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Dear Fellow Members of PLSC:

Happy Fall to all our members! The cooler temperatures and changing colors are happening this time of year with winter on the horizon! This year has seemed to just fly by.

The 2019 Rocky Mountain Surveyors Summit (RMSS) program is highlighted in this edition of *Side Shots* and once again I believe that a very strong and diverse program has been put together by the planning committee led by Steve Parker, the Education Committee Chair. As a reminder, the RMSS will be presented once again at the Arvada Center on February 6-8, 2019 and I hope to see you all there.



PLSC members were involved in the GIS in the Rockies Conference that was held September 19-20, 2018. Participants in the PLSC track at the conference included Steve Parker, Pam Fromhertz, John Hunter, Tom Breitnauer, Josh Nimitz, Peggy Streicher, Becky Roland and me. Thanks to Pam Fromhertz for coordinating and taking on the track chair position and to Steve Parker who served on the BOD. Upcoming outreach programs will include the conference of Colorado State School Guidance Counselors in October, the NSPS Fall meeting in October, Adams County Middle School student conference in November, the WFPS meeting in October as well as multiple career day programs in high schools.

Many thanks to the participants in the GPS on benchmarks program coordinated by the NGS, the Colorado Geospatial Advisor working group and Pam Fromhertz. Several key benchmarks in Colorado were able to be observed for input into the 2022 hybrid geoid.

PLSC BOD elections for most of the positions on the PLSC Board including President, Vice President, Secretary-Treasurer and four director positions are open for nominations at this time. If you have an interest for any position, please contact the PLSC.net email address.

Please remember that there may be someone who has gone above and beyond in assisting the surveying community or advancing our mission and can be recognized with an award at the RMSS. Please consult the web site for nominations and award categories.

Have a safe, healthy and profitable Autumn.

Sincerely, Todd Beers, PLS-PLSC President

FROM THE EDITOR



It already that time again – time to make plans to attend the next Rocky Mountain Surveyors Summit for instruction, displays, events and comradery. If you haven't noticed yet, the 2019 Summit is a full month earlier than it was last year, starting on February 6th. That is why it is being

featured in this issue. Check out the full schedule that appears here, and register on line at www.plsc.net

If you flip to the middle of this issue, you will see something very unusual for *Side Shots* – an article in full color. B. John Hunter of Denver Water, and the new Colorado NGS Geomatics Coordinator, provided us with an article on the 2022 modernization of the National Spatial Reference System. It is important information, and the graphics were too detailed to show in the usual black and white. Be sure to meet with the NGS coordinators at the Surveyors Summit.

Tom Sylvester has an informative article on the latest news from the Land Surveying and Geomatics Degree Program at Colorado Mesa University and Western Colorado Community College. This is worthwhile information to share with anyone interested in pursuing a surveying degree from this PLSC-backed academic program. I noticed that Tom has increased the number of enrolled students from 4 a year ago to 17 now, an impressive percentage increase.

Pam Fromhertz has contributed a detailed update on the Colorado State Geomatics Coordinators, and described the PLSC support for this effort. The new listing of the 2019 Land Surveying Refresher Courses appears in this issue, to be held in Golden beginning on January 9, 2019. There will be online recordings of these courses for the first time, allowing a distance learning option for those too far away to attend.

Brian Dennis sent an update on his impressive career outreach efforts, including plans for three more events, and some photos of the new augmented reality sandbox being demonstrated at a scouting show at the National Western Complex. Earl Henderson's Rule of the Month is a thorough discussion of the important details of the monumentation of corners. Todd Beers provided state highlights from the 13 western states in the Western Federation of Professional Surveyors (WFPS) and other information as well. Becky Roland provided minutes from the PLSC Board of Directors meeting held on August 22, 2018. As always, the "best is saved for last," the news from all of the regional chapters.

Be sure to spread the word of the Surveyors Summit to others you know who may not read *Side Shots*, and please encourage them to attend.

JB Guyton, Editor

Treasurer's Report November 2018

Bank Accounts

Key Savings	\$106,599.57
Key Checking	\$8,597.89

Investments

Equity	\$250,223.3
Cash	\$7,144.76

PLSC Total Assets	\$372,565.52
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Last minute addition to RMSS course lineup:

Thursday Technical Track 1:00 – 5:30 P.M.

Connecting your Surveys to the Future

John Hunter and Pam Fromhertz will discuss the Coordinators and the working group, NSRS Modernization, GPS on BM and SPCS2022. It will be an opportunity to meet the Coordinator working group and hear of their efforts. In addition, City and County of Denver, Denver International Airport, Denver Water, USGS (invited), and private surveyors will each discuss the impact of the modernization of the National Spatial Reference System to be implemented in 2022; specifically, how they are preparing, advantages and challenges as well as what needs they have.

Rocky Mountain Surveyors Summit

February 6-8, 2019 ~ ArvadaCenter

PLSC is pleased to announce Byron E. Johnson, PLS as our Headline Speaker



Byron is an Army veteran from 1975-1979, a graduate in Civil engineering and Surveying from Texas State Technical College with over 40 years experience in land surveying to include Metes & Bounds and PLSS states, boundary control and research of lands both private and public, GPS control surveys and aerial mapping. He is licensed in Arizona, Idaho, Nevada, Washington, former Certified Federal Surveyor (CFed) and a former certified BLM training instructor. He has worked privately and maintained his own surveying business from 1995 to 2010 specializing in GPS surveys, land description issues, retracement of historical and/or contract surveys. He has worked at and/or with local city and county governments. He was formerly employed federally with the Forest Service (2007) and the Bureau of Land Management (2007-2010 on contract, 2010-2015 FTE) in Reno, Nevada. He has instructed at the college level as an adjunct instructor for surveying courses since 1993, founded the 2 year surveying program at the Southern Nevada Community College (1998), Las Vegas, NV (program terminated in 2007 due to economy), instructed at the University of Nevada Las Vegas (1998-2002) and University of Nevada Reno (2005-2008) and currently instruct the "Land Description", "GIS for Surveyors" and the "Public Land Survey System" courses for Great Basin College, Elko, NV (since 2008) via the internet nationwide from his home office.

SCHEDULE

WEDNESDAY, FEBRUARY 6

7:00AM Registration Opens

7:30AM-9:30AM
Land Descriptions—Byron Johnson

9:30AM-9:45AM Break

9:45AM-11:45AM
Land Descriptions—Byron Johnson

11:45AM-1:00PM Lunch

1:00PM-3:00PM
Master Track: *Ethics*—Wendy Lathrop
Professional Track: Symposium: *City and County of Denver/Online Survey Services*
Technical Track: *ALTA Surveys*—Jay Kay Seymour 3:00PM-3:30PM Break

3:30PM-5:30PM
Master Track: *Ethics*—Wendy Lathrop
Professional Track: *New Utility Law*—Corey Biddle and Mary Keith
Technical Track: *ALTA Surveys*—Jay Kay Seymour

5:30PM-7:00PM Exhibitor Social

7:00PM-9:00PM PLSC Chapter Summit

THURSDAY, FEBRUARY 7

7:00AM Registration Opens

7:30AM-9:30AM
Master Track: *Boundary Control*—Byron Johnson
Professional Track: *Floodplain*—Wendy Lathrop
Technical Track: *How to Start and Manage a Drone Program in a Small Business*—Daniel Katz

9:30AM-9:45AM Break

9:45AM-11:45AM
Master Track: *Boundary Control*—Byron Johnson
Professional Track: *Floodplain*—Wendy Lathrop
Technical Track: *How to Start and Manage a Drone Program in a Small Business*—Daniel Katz

11:45AM-1:00PM Lunch

1:00PM-3:00PM
Master Track: *Subdivisional Section*—Byron Johnson
Professional Track: *Real Property Descriptions*—Wendy Lathrop
Technical Track: *NGS Initiatives*—Pam Fromhertz and NGS Colorado Coordinator Group

THURSDAY, FEBRUARY 7 continued

3:00PM-3:30PM Break

3:30PM-5:30PM
Master Track: *Subdivisional Section*—Byron Johnson
Professional Track: *Real Property Descriptions*—Wendy Lathrop
Technical Track: *NGS Initiatives*—Pam Fromhertz and NGS Colorado Coordinator Group

FRIDAY, FEBRUARY 8

7:00AM Registration Opens

7:30AM-9:30AM
Master Track: *Fractional and Parentheticals (CFedS)*—Byron Johnson
Professional Track: *Trimble TBC-Interactive Presentation*—Boris Skoplijak
Technical Track: *CST Exam Prep/Sample Exam*

9:30AM-9:45AM Break

9:45AM-11:45AM
Master Track: *Fractional and Parentheticals (CFedS)*—Byron Johnson
Professional Track: *Trimble TBC-Interactive Presentation*—Boris Skoplijak
Technical Track: *CST Exam*

11:45AM-1:00PM Lunch

1:00PM-3:00PM
Master Track: *Fractional and Parentheticals (CFedS)*—Byron Johnson
Professional Track: *Trimble TBC-Interactive Presentation*—Boris Skoplijak
Technical Track: *CST Exam*

3:00PM-3:30PM Break

3:30PM-5:30PM
Master Track: *Fractional and Parentheticals (CFedS)*—Byron Johnson
Professional Track: *Trimble TBC-Interactive Presentation*—Boris Skoplijak
Technical Track: *CST Exam*

	Cost (same as 2018):		
	1-Day	2-Days	3-Days
PLSC MEMBER:	\$200	\$375	\$550
NON-MEMBER:	\$300	\$475	\$650
STUDENT:	\$ 75	\$125	\$200
EXHIBITORS (PLSC Sustaining Members Only)			\$400

PLSC Voting Member Dues are only \$150/year and include NSPS membership.

There are many sponsorship opportunities available, in addition to exhibiting. Contact us for more information (plsc@plsc.net) or go to www.plsc.net for complete Summit information and to sign up online.

Save money when you register by January 15, 2019. Catered breakfasts & lunches will be provided on all days. Online registration is available at the PLSC web site (www.plsc.net).

Silent Auction/Exhibits:

We will be holding a silent auction during the conference. If your equipment room is cluttered up by equipment you are no longer using, please consider donating an item or two to the PLSC silent auction.

In keeping with our traditional practice, our Sustaining Members have been invited to display their latest products and services. Exhibits will be in the Arvada Center entrance hall adjacent to the classrooms. Please visit their displays and show our appreciation for their continued support.

Hotel:

The Doubletree Hotel at 8773 Yates Dr., Westminster, CO, will once again be our host hotel. There will be a shuttle bus to and from the conference hotel each day. Pick up and drop off times will be announced prior to and at the conference. For reservations, call 303-427-4000 and mention PLSC for discounted rates.



Here are just some of the reasons you should attend the 2019 Rocky Mountain Surveyors Summit:

- National and Local Speakers all in one place
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- Networking time with your colleagues and PLSC leadership

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Land Surveying and Geomatics Degree Program at Colorado Mesa University and Western Colorado Community College, Grand Junction, Colorado

An Update for the Fall of 2018

By Thomas W. Sylvester, P. E. and P. L. S.

I wanted to give you all an update on our Land Surveying and Geomatics program to date. Last year at this time, we were teaching two classes on campus and one distance learning class with a total of 3 students. This semester, we have 4 on campus classes and 4 distance learning classes with a total of 17 students. Thank you all for getting the word out.

This fall semester's campus classes are (to be taught as distance learning spring semester 2019):

- SURV 100 – Introduction to Surveying and Field Lab
- SURV 102 – Survey Calculations
- SURV 206 – Boundary Law II (Boundary Evidence and State Specific Laws and Rules)
- SURV 207 – Surveying Ethics

This fall semester's distance learning classes (to be taught as campus classes spring semester 2019) are:

- SURV 200 – Advanced Surveying and Field Lab
- SURV 203 – Boundary Law I (Legal Aspects of Surveying)
- SURV 204 – Real Property Descriptions
- SURV 205 – Advanced Surveying Calculations

We are also teaching SURV 207 – Surveying Ethics as a condensed summer distance learning course.

To reach as many folks as we can, what I am teaching this fall on campus, I'll teach in the spring semester as distance learning and what I am teaching this fall as distance learning, I'll teach in the spring semester as on campus. This way, hopefully, everyone has an opportunity to complete all of our surveying classes in either venue or a combination of each.

One of the caveats is that for the SURV 100 and SURV 200, which have an associated field lab, for those taking the courses as distance learning, the student needs to find a surveying company to sponsor them to allow them to use certain of their equipment, give a very cursory introduction to the equipment, and help the student find an open field of about 3 acres or so to set up their problems. I can then communicate with the students on their specific problems and educational goals. As an alternative for those taking these classes as distance learning, I am running a lab on Saturday mornings on campus. This is working well for those who live within about a 2 hour's drive from Grand Junction.



Students who are working for surveying companies have been able to meet the lab requirement fairly successfully. However, for those who don't have a built in sponsor, I need to reach out to the professional surveyors as a whole for volunteers or volunteer companies to whom we can refer our students. Please, if any of you or your companies can participate, please contact me so that I can get you on the list. It's going to take all of us to make this program successful.

The below information was in my last article but I am including it again for those of you interested in furthering your education.

There are two programs consisting of a 2 year Associates in Applied Science Degree in Land Surveying and Geomatics for those seeking the AAS route, and a post-baccalaureate Technical Certificate for those with a minimum of a Bachelor of Science or Bachelor of Arts degree who need the required surveying curriculum in order to meet the education requirements to sit for the PLS exams.

For those seeking this education, please go on line to: <http://www.coloradomesa.edu/wccc/programs/land-surveying-geomatics.html> for details.

You can also contact Stephanie Parson, the Recruitment Specialist/Western Colorado Community College, a Division of Colorado Mesa University at: Sparsons@coloradomesa.edu (970) 255-2673 (office)

Stephanie can also answer questions regarding timing for registration, costs, available loans, scholarships, and/or work study programs.

Since I am also the advisor for the program, don't hesitate to contact me directly if you have questions or need advice at:

tsylvester@coloradomesa.edu
tomsylvester@merrittls.com
(970) 255-7386 (business office)
(970) 640-2590 (cell)

My cell is the best phone to contact me since I am in class, at my school office, at my business office, or somewhere in between. I'd love to hear from you.



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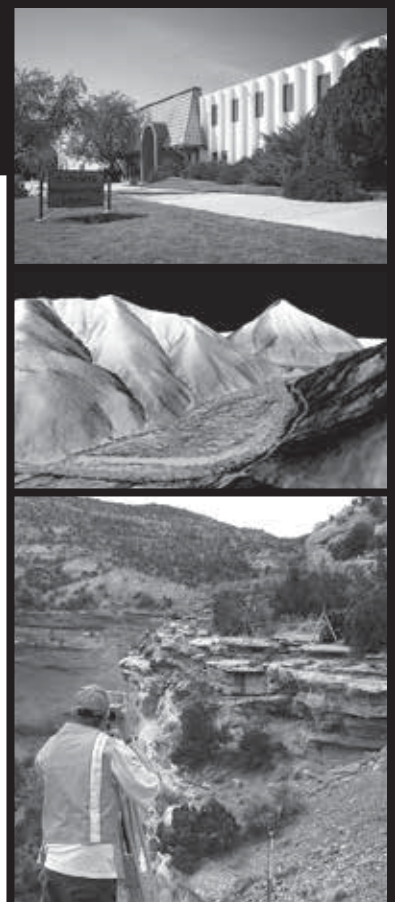
- **Associates in Applied Science Degree in Land Surveying and Geomatics** for those without prior college coursework. This program is designed to be completed within two years.
- **Post-baccalaureate Technical Certificate** for those with a minimum of a Bachelor of Science or Bachelor of Arts degree who need the required surveying curriculum to meet the education requirements to sit for the PLS exams. The Technical Certificate program is designed to be completed in one year.



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.



Colorado Geomatics Coordinator and Working Group

By Pamela Fromhertz, Rocky Mountain Regional Advisor

In case you were not aware, the PLSC has been very active in having a Colorado State Geomatics Coordinator and they have been very successful. Three individuals stepped up to volunteer. John Hunter from Denver Water has taken the lead. Thomas Breitnauer, Denver International Airport and Joey Stone, Denver Water are part of the Working Group. Since then the group has expanded and includes Rick Corsi, Governor's Office of Information Technology (OIT) and Annabel Montoya, City of Wheat Ridge representing GIS CO, along with Todd Beers, Becky Roland and myself.

To provide some background when the National Geodetic Survey transitioned the state geodetic program to a regional program they encouraged states to add coordinators. (I wrote about the transition in the February 2016 Side Shots publication.) I transitioned from the Colorado State Geodetic Advisor to the Regional Program, covering Colorado, Wyoming and Montana on Jan 1, 2016. Since I now cover three states instead of one, I definitely saw the benefit of coordinators and now all three of my states have a coordinator and a working group representing the survey and GIS communities.

In Colorado, Todd Beers and Becky Roland fully supported the PLSC initiating and supporting a coordinator, spending lots of time to ensure the success. An initial working group was formed spontaneously at the October 2016 Central Chapter meeting. Many thanks to all who led and participated – Laine Landau, Alan Blair, Teresa Smithson, Shawn Clarke, Todd Beers, Becky Roland, Jack Sparks, Darren Shanks. The group assembled various documents and surveys to determine what projects a coordinator should focus on and an assessment for the need for a coordinator. The survey was provided at the Rocky Mountain Surveyor Summit in 2017. Part of that survey asked for volunteers. At some point, we realized if we have volunteers, let us start with that. Many thanks to each that volunteered. In between,

Todd, Becky and I met with various folks to explore how a coordinator could be stood up. Jon Gottsegen, State GIS Coordinator (now Chief Data Officer), Governor's Office of Information and Technology was very supportive, which led to Rick Corsi being on the working group. I have been connected with GIS Colorado for many years and recognized the significance they play in the GIS community, asked for a volunteer and Annabel stepped up. Both are tremendous assets to the working group. To represent the broader spectrum Colorado is using the term 'geomatics' but is also often interchanged with geodetic and geospatial.

The group meets regularly along with the other state coordinators and working groups. All three states have been actively involved in the GPS on BM effort and the State Plane Coordinates of 2022 (SPCS2022) efforts. Joey has built a [GIS map](#) for folks to indicate which bench marks they plan to occupy, have collected, processed data or indicate if there is an issue with the mark. The group very effectively sent a letter in response to the Federal Register Notice on the SPCS2022. John has a wonderful article in this publication providing further details and explaining the modernization efforts. Many thanks to each of the volunteers and the support of the PLSC. There is much more to do as we approach the 2022 transition of the new reference frames and datums. John and the working group will be instrumental in the transition. The PLSC website has added a Geodesy Resource Webpage (plsc.net) that contains all the activities the group is working on along with an email, COcoordinator@plsc.net.

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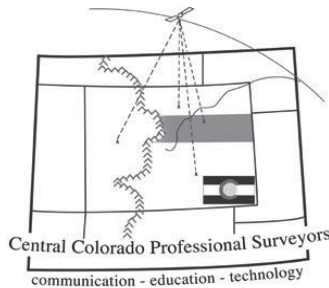
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2019 Colorado Land Surveying Refresher Course

New: Now Offered Online and in Classroom



The Professional Land Surveyors of Colorado is offering a comprehensive Land Surveying Refresher Course beginning January 9, 2019. 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. The course is designed to aid candidates in developing and expanding exam-taking proficiencies. The Wednesday evening classes will be 3 hours in length, starting promptly at 6:00 PM. Look for information about the online class at <http://www.plsc.net/>

Fundamentals of Surveying

<u>Session</u>	<u>Date</u>	<u>Topic</u>	<u>Instructor</u>
1	Wed., Jan. 9	Overview of NCEES FS and PS Examination	Alan Blair
2	Wed., Jan. 16	Survey Computations I	Lynn Patten
3	Wed., Jan. 23	Survey Computations II	Dr. Jan Van Sickle
4	Wed., Jan. 30	GIS, State Plane, Geodesy, Photogrammetry	Dr. Jan Van Sickle
	Wed., Feb. 6	Rocky Mountain Surveyors Summit, Arvada Center	
5	Wed., Feb. 13	Legal Terms and Definitions	John B. Guyton

Principles and Practice of Surveying and Colorado Specific

6	Wed., Feb. 20	Public Land Survey System	Randy Bloom
7	Wed., Feb. 27	Colorado Survey Law I	Roger Nelson
8	Wed., Mar. 6	Colorado Survey Law II	Roger Nelson
9	Wed., Mar. 13	Boundary Law/Ethics/PS Topics	Alan Blair
10	Wed. Mar. 20	Mock PS and FS Examinations	Lynn Patten

Registration, Fee, Location

The fee for the entire course is \$425 or \$75 per individual class. Registration is open beginning November 1, 2018. See <http://www.plsc.net/> for registration and online information. Classes will be held in one of the conference rooms at the Jefferson County Courts and Administration Building (Taj Mahal), 100 Jefferson County Parkway, Golden, CO. Online classes will be broadcast each night, and recordings will be available 1-2 weeks after each class. If attending in person, use the parking lot and main door on the east side of the building. Signage will lead you to the classroom. For questions, contact Becky Roland, Executive Director, PLSC, 303-551-3266, broland@plsc.net. Visit the NCEES site at <http://ncees.org/exams/> to learn more about the FS and PS examinations.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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Lakewood, Colorado 80215
www.co.blm.gov



CO-956
9650

September 24, 2018

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 May 3, 2018, through June 13, 2018, 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 <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. 32 N.	R. 5 E.	NMPM	1655	Plat & Notes	05/03/18	1
T. 4 S.	R. 73 W.	Sixth	1679	Plat Only	05/31/18	4
T. 4 S.	R. 73 W.	Sixth	1679	Plat Only	06/07/18	5
T. 42 N.	R. 1 W.	NMPM	1690	Plat & Notes	06/13/18	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

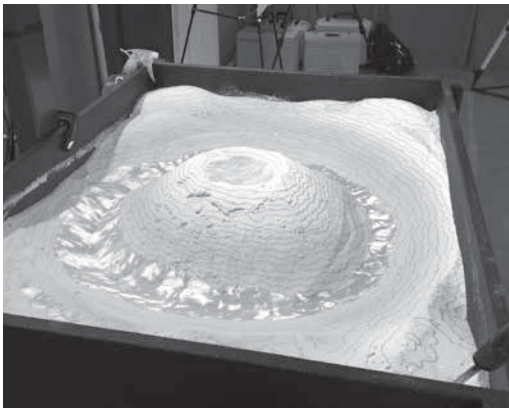
Career Outreach Update

By Brian Dennis, PLS

School is back in session and the outreach committee is gearing up for a busy fall. We will be presenting Surveyors and Surveying as a career on October 20th at the Colorado Railroad Museum in Golden. The boy scouts will be the main attendees for this event. Charlie Tucker is the staple for this annual presentation but could not make it this year and asked the PLS for representatives in his absence. Also, on October 24th we will be presenting at Columbine High School in Jefferson County for career days with the high school groups. In Keystone we will have a booth for the Colorado Career Counselors Conference on October 17-19. All events will be fun and a great opportunity to introduce career

counselors and the youth to the profession of land surveying. We are still coordinating these events to determine if the new augmented reality sandbox can be exhibited.

In addition, there are companies hosting high school career days this November in the Denver Metro area and we will be attending. We will have the opportunity to discuss land surveying with sophomores, juniors and seniors. The sandbox will be set up for those events.



PLSC Executive Director Becky Roland, with the help of Ben Beaty of GeoShack, demonstrated the new augmented reality sandbox to boy, girl and cub scouts at the Scout Show at the National Western complex in Denver on April 28, 2018. Photos by Brian Dennis

The 2022 Modernization is Coming. Are You Ready?

By B John Hunter, PLS

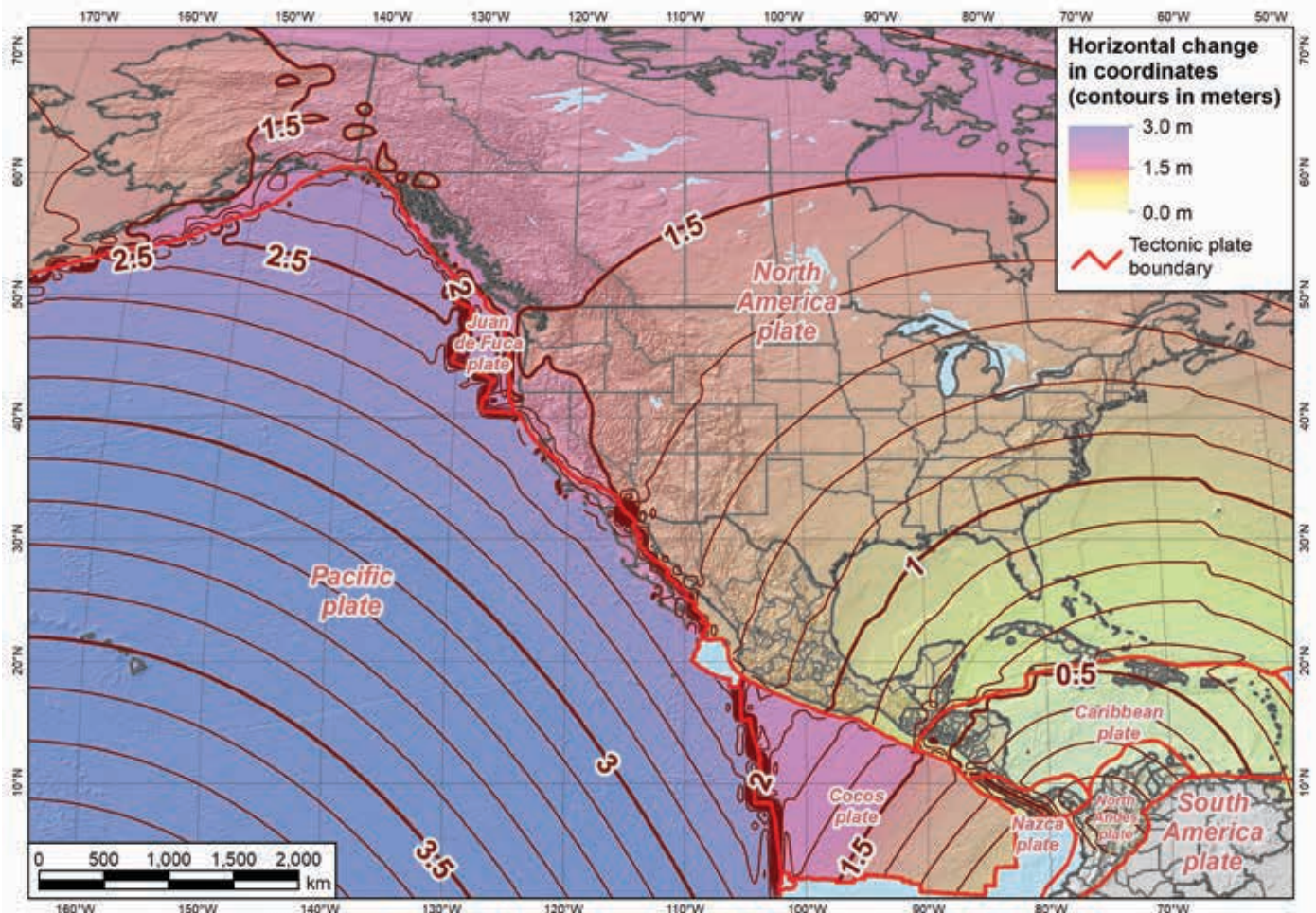
Colorado NGS Geomatics Coordinator

The National Geodetic Survey (NGS), responsible for designing, maintaining, and administering the National Spatial Reference System (NSRS), is in the process of modernizing the NSRS. A very brief overview of what this modernization entails:

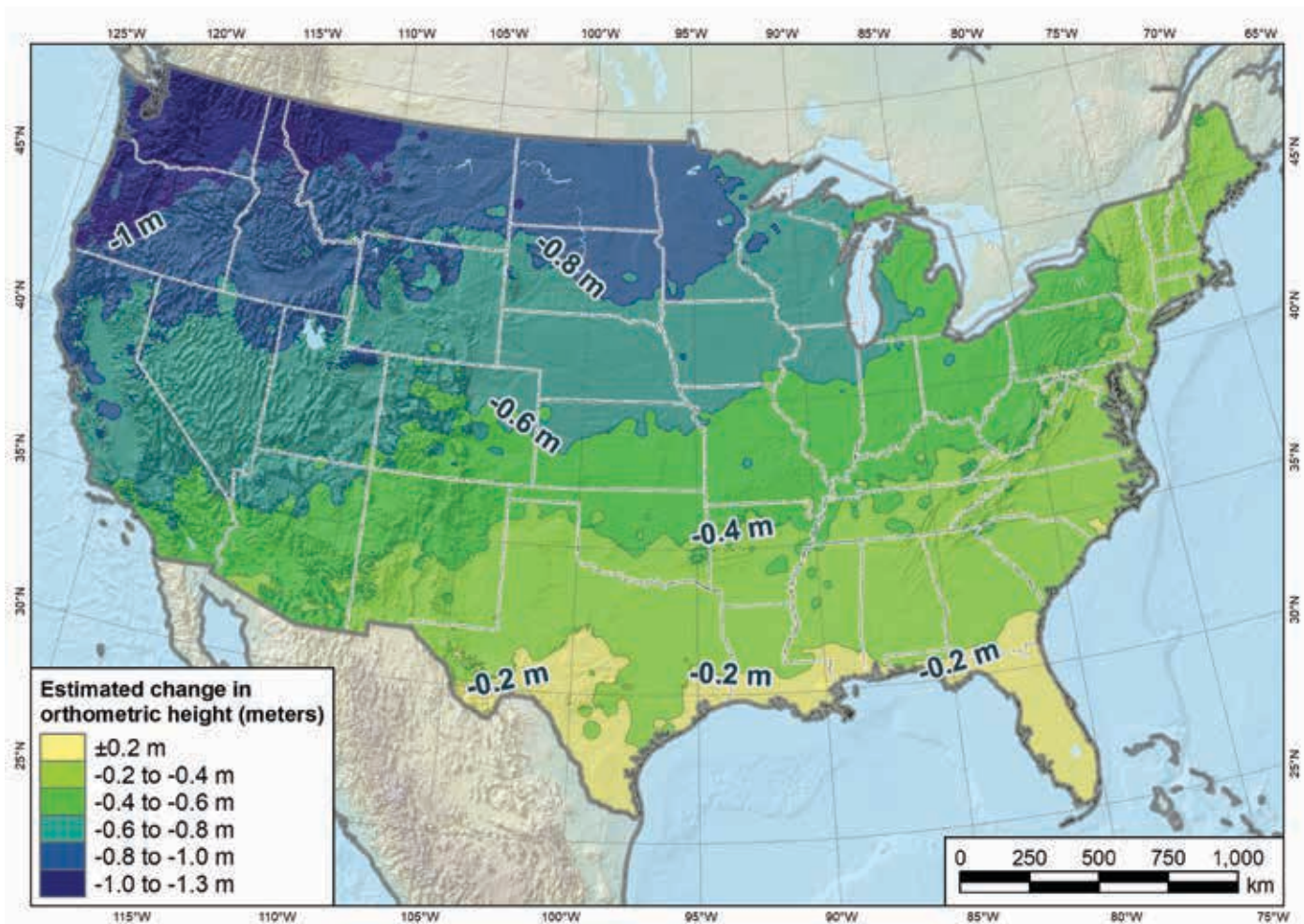
- North American Datum of 1983 (NAD83) will be replaced with the North American Terrestrial Reference Frame of 2022 (NATRF2022) along with terrestrial reference frames for the Pacific, Northern Mariana and Caribbean tectonic plates.
- North American Vertical Datum of 1988 (NAVD88) will be replaced with North American Pacific Geopotential Datum of 2022 (NAPGD2022)

- Like other states, Colorado will see redesigned State Plane Coordinate Systems (SPCS2022).

The changes sum up to three bullet points, but do not let that fool you. There are significant changes heading our way. This modernization is far more impactful than the typical realization updates that have become somewhat commonplace over the past several decades. The modernization, both in terms of ideology and magnitude is the most significant change in the NSRS since the change from the North American Datum of



NGS, Approximate Horizontal Displacement NAD83 to NATRF2022 (2018).



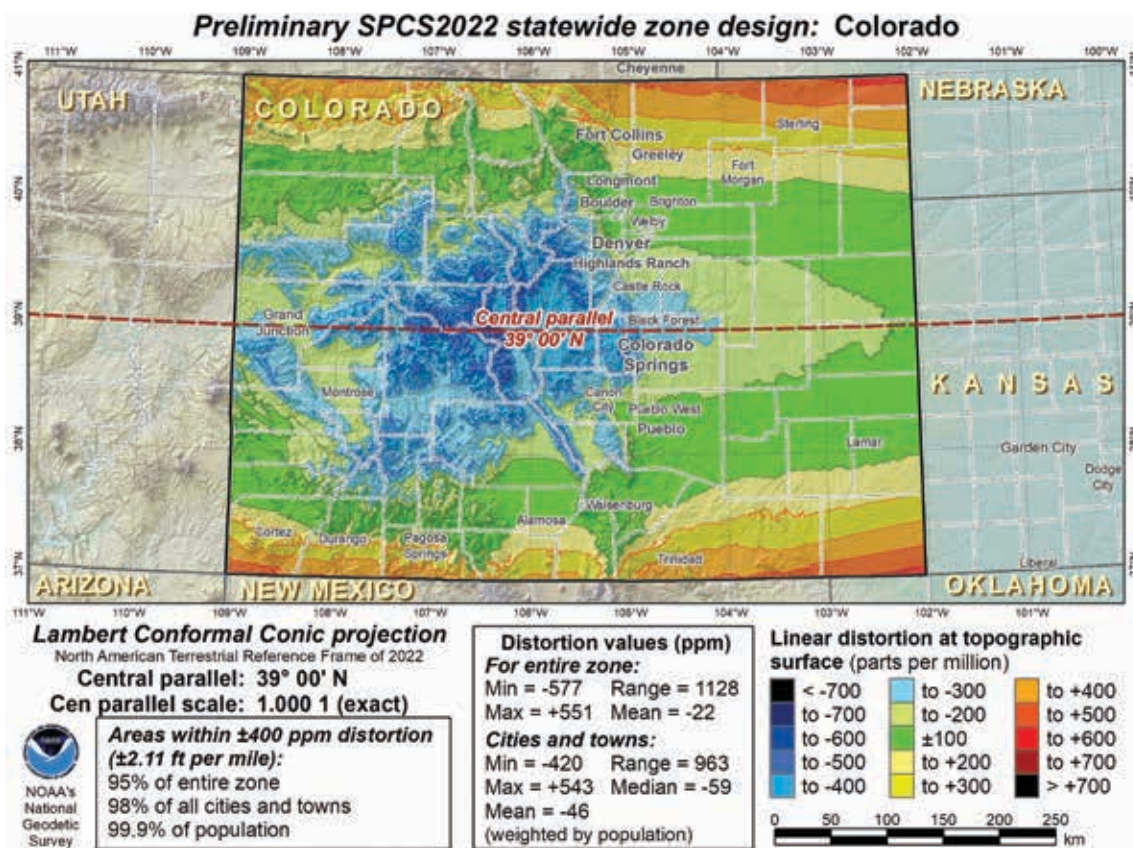
NGS, Approximate Orthometric Height Displacement NAVD88 to NAPGD2022 (2018).

1927 (NAD27) to NAD83, yet it pales in comparison. Surveyors will need to be versed in geodesy and geodetic concepts more than ever. The new reference system will be time-dependent, include a geopotential datum, and capture crustal motions through Euler and Intra-Frame Velocity Model values.

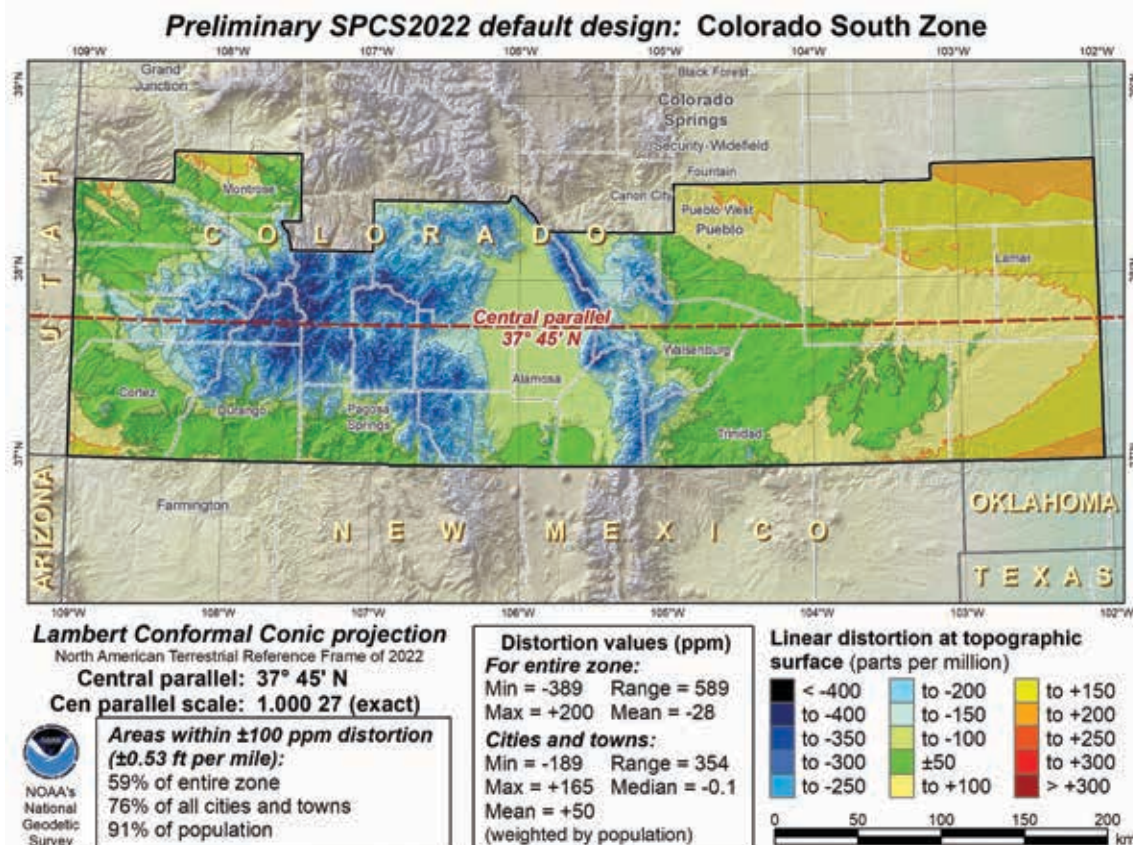
I mentioned there will be a redesigned SPCS for Colorado. This time, Colorado can have significant influence of that design. Information on default designs, as well as other allowable options such as Low Distortion Projections (LDP), can be found in the draft SPCS2022 Policy and Procedure documents on the NGS Website (<https://geodesy.noaa.gov/SPCS/draft-policy.shtml>). I urge you to become very familiar with these documents to enhance your understanding of the SPCS 2022 and how it will be designed. (the documents will be finalized by January 2019). Here are some important topics to consider included in those documents:

- By default, zones will be designed at the topographic surface rather than the ellipsoid (this reduces linear distortion but may not be sufficient for higher accuracy work).
- LDP zones will be allowed (designed by NGS for a minimum design criterion of 50 ppm; lower distortion LDP systems must be designed by contributing partners and are reviewed and approved by NGS).
- Limits establish a maximum of two layers for zone construction. Example: If the default designs are chosen, LDP's would not be allowed because one layer must be a single state-wide projection. For one state-wide zone, the existing default zones and LDPs three layers would have to be allowed. It has not yet been decided whether a 3-layer system will be allowed for SPCS2022, although it is under consideration.

continued on page 20



NGS, Preliminary SPCS2022 State-Wide Zone Design Linear Distortion Model (2018).



NGS, Preliminary SPCS2022 Default Zone Design with Linear Distortion Model (2018).

The Colorado NGS Geomatics team reached out to the geospatial community and made a response to the NGS Federal Register Notice with respect to these Draft SPCS2022 Policy and Procedure documents in August. We asked that the final Policy and Procedure documents be changed to allow three layers, as well as the case for special zones. By asking for these changes, Colorado would then have more flexibility in deciding what we would ultimately want for SPCS. To clarify, a layer is a set of zones or LDPs with similar parameters and linear distortion. For example, a multitude of LDP across the state would be considered a single layer, and our current three zones would be another layer. The NGS' draft Policy and Procedures only allow for two layers of zones, and since a single statewide projection is required for multiple layers we, as a state, would have to decide upon the current three zones (or some variation of) or LDPs, based on the current draft policy and procedures.

As far as deadlines, the most important (and rapidly approaching) date is August 31, 2019. This is the date in which the Colorado geospatial community must reach a consensus as to what they would like to have as the State Plane Coordinate System in 2022. The Colorado NGS Geomatics Coordinator team must communicate that information to the NGS by December 2019. Look for us to present on SPCS2022 at the Rocky Mountain Surveyors Summit, where we will be seeking input from surveyors. Please look for further information on how to participate.

These are exciting times for surveyors, and profession. I encourage each of you to get involved in the several NGS supported 2022 modernization campaigns including GPS on BM's. As always, Pam Fromhertz and I are available to provide additional information, answer questions, or field comments and thoughts on all geomatic topics involving the State of Colorado at CoCoordinator@plsc.net. I also encourage you to become familiar with these topics sooner than later and help shape the future of geospatial, and geodetic positioning for Colorado.

Contact John Hunter at: CoCoordinator@plsc.net

Additional Resources:

Information on the 2022 Modernization:

<https://geodesy.noaa.gov/datums/newdatums/index.shtml>

Information on SCPS2022:

<https://geodesy.noaa.gov/SPCS/draft-policy.shtml>

Information on GPS on Bench Marks:

<https://geodesy.noaa.gov/GPSonBM/index.shtml> and https://www.plsc.net/geodetic_resources.php The PLSC website has a lot more resources specific to Colorado including how to see what has been completed, how to "sign up" to survey a GPS on BM and other resources. Please contact Pam Fromhertz or the NGS Colorado Geomatics Coordinators at CoCoordinator@plsc.net for additional information.

References:

Contributions to this article made by:

Joseph Stone, Denver Water GNSS Coordinator.

Pam Fromhertz, NGS Rocky Mountain Regional Advisor.

Michael Dennis, NGS SPCS2022 Project Manager.

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National Geodetic Survey, NGS (2018), *Approximate Orthometric Height Displacement*. Retrieved 9.21.18: <https://geodesy.noaa.gov/datums/newdatums/WhatToExpect.shtml>

National Geodetic Survey, NGS (2018), *Preliminary SPCS2022 State-Wide Zone Design Linear Distortion Model*. Retrieved 9.21.18: <https://geodesy.noaa.gov/datums/newdatums/WhatToExpect.shtml>

National Geodetic Survey, NGS (2018), *Preliminary SPCS2022 Default Zone Design with Linear Distortion Model*. Retrieved 9.21.18: <https://geodesy.noaa.gov/datums/newdatums/WhatToExpect.shtml>

Rule of the Month: 38-51-104 Monumentation of Land Surveys

By Earl Henderson, PLS

Monumentation of the corners as we determine them during the course of a Monumented Land Survey should be second nature to all of us. But the details appear to me to be getting lost. So I'd like to review some of those details.

CRS 38-51-104(1)(a) requires that we monument the corners as we determine them with "reasonably permanent markers solidly embedded in the ground." I'm hoping that we all know this already. (b) requires that a cap bearing the license number of the PLS who is responsible for setting the monument be "...affixed securely to the top of each such monument...". Notice that in reading these two statutes together it is clear that the cap is not the monument. The cap is an identifier to the monument and is securely affixed to the monument, but the cap is not the monument. Therefore, if on your plat you are describing the monuments you found or set as "aluminum cap" or "yellow plastic cap" with no more description about what the cap is attached to, you are

not describing the monument. And as we all know we are required to fully describe all monuments, both found and set, on our plats (CRS 38-51-106(1)(f)) correctly (Board Rule 6.13).

But let's think about this monumentation thing a bit more. Suppose you determine that the corner is not where you found an existing monument. We've all seen those notations "actual corner lies 0.09' North and 0.06' West". If this is noted on a plat, then that PLS has clearly determined that the corner is not where they found a monument and in addition that PLS has not monumented the corner location as they have determined it. Now we can get into a multitude of arguments about if this is the right determination to make. But that's not the purpose of this article. (Well in a way it is because I'm trying to discourage you from making that determination and being forced into setting a pincushion monument leaning over top of a found monument.) But think about that notation for a minute. It clearly states that the corner is not where

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the found monument lies. If that's the case, then that PLS must monument the corner as they've determined it. They can't set an offset punch hole in the found cap because that monument and cap was set by the earlier PLS to be in the correct corner location. They would be defacing the monument of another PLS, and that might make someone angry. And "No marker...shall bear the license number of more than one professional land surveyor"(CRS 38-51-104(6)). Yet they are required to monument the corner as determined with a monument and "durable cap bearing the license number of the professional land surveyor responsible..."(b), that being themselves. So they can't offset punch hole the existing cap and add their license number. So if you want to make such a determination, you are forced by statute to set a pincushion monument and to document why you did so based on BR 6.5.4.1 on the face of your plat. In other words, you have to be able to defend your reason for setting a pincushion monument on the face of the plat, to your client, to all of us and most importantly to the judge. Because let's face it, if you can't stand in front of a judge and make them understand why your determination of the corner landed on someone else's cap but that wasn't good enough, then you shouldn't be making that determination. Plus, this kind of determination is a result of finding reasons to disagree with prior surveyors when we should be looking for reasons to agree with them and maintain the status quo of our clients.

In my humble opinion, there's no way that such a determination can be made in any way other than it being based on the presumed ability of the PLS to better measure dimensions than the prior PLS who set the existing monument. But how could you know that? How can you know what precision the previous surveyor was able to attain? And what is your current precision? Are you using GPS? What errors are being accepted, balanced and possibly even ignored in the entire system of your survey? If you're traversing, what's your closure? Is it anywhere near the difference you're showing in the statement quoted above? And is it possible that the prior PLS was able to attain equal or better precision than you? But more importantly, if these are the criteria you're using to make the determination, your using the wrong criteria and asking the wrong questions.

1. Is the found monument the original monument? If so, it has no error. It has defined the corner by virtue of being set as the original monument regardless of any imprecision, error, or even blunder.

2. Was the found monument (not original) set within a reasonable precision for the time it was set? If so, then

accept it. Just because we are able to better measure than our forefathers from the ancient past in 1995, doesn't mean they did it wrong. They did well in most cases I've seen. Presumably our equipment and abilities are more precise than way back then, but again, that doesn't make them imprecise or incorrect for their era.

3. What are the legal implications of using the found monument or setting a new monument? Does the found monument agree with the lines of occupation? Or the testimony of the client and adjoining owners? Have you even asked?

And these are just a sampling of the many questions you should be asking yourself, not to mention the experience you should be bringing to bear when analyzing found evidence. I recently discovered that several PLS's were using a found #4 rebar that had presumably been set as a lot corner in a subdivision in 1962. But when I took a quick glance at the rebar it was obvious that it had been placed in some roots of a tree on an embankment only recently. The grading activity for the driveway had either covered up the original monument or the original monument, the #4 I found, had been picked up and set down somewhere else. But hey, it was only an 8' difference.

If you're making corner determinations based on dimensions and measurements, then you're making the wrong decisions. Our task, in retracement surveying, is to collect data on all the evidence and make determinations based on the evidence, then describe those determinations on our plats. Our task is NOT to take the dimensions and place them on the ground regardless of the ground conditions (evidence). Nor is our task to force record dimensions to fit the evidence. Our measurements of the found evidence and monumentation should be different from what's on the plat or in the description. We can count on that. Our equipment and abilities are more precise than those in whose footsteps we follow. But just because we can measure better than the PLS that was there 50 years ago or even yesterday, doesn't change the line that is well established. Our task in a retracement is to determine where that line is, not where we want it to be or where it was intended to be or where it would have been had it been originally monumented to perfection according to the record dimensions.

Enough for now. It's time for me to get off this high horse and go dig up some evidence somewhere.

Be safe out there.

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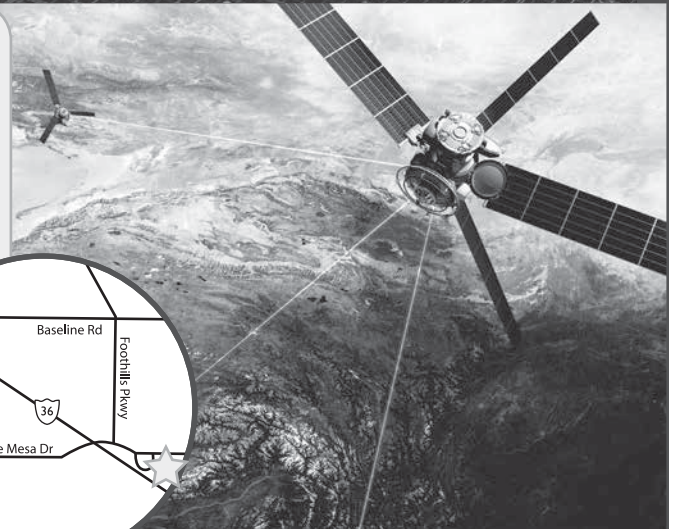
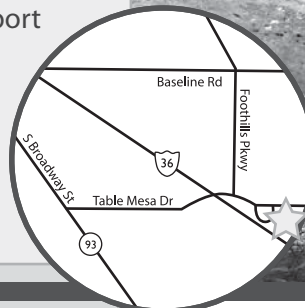
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WFPS Board of Directors Meeting Highlights

The Western Federation of Professional Surveyors (WFPS) held a Board of Directors meeting on April 28, 2018 in Albuquerque, New Mexico.

HIGHLIGHTS FROM THE 13 WESTERN STATES

ARIZONA - APLS has launched a new website which provides members new resources (AzPLS.org). The Governor's move for deregulation has been a focus of APLS. The Arizona Board of Technical Registration has complied with the Governor's Executive Order to provide information and comparisons with similar boards in other states. The move to deregulate boards stemmed from the group ALEC.org which provides boilerplate legislation for states including the Occupational Board Reform Act.

CALIFORNIA - SB 2 went into effect on January 1st and requires a \$75 per parcel fee for the recording of certain documents which is being applied by most County Recorders to Record of Survey maps.

COLORADO - PLSC helps fund the website CP-DB.com which includes information on Colorado survey monuments. The legislative bill for mandatory continuing education made it through the house but not the senate. Architects already have continuing education. Engineers are not in favor of continuing education but did not oppose the bill for surveyors. PLSC has constructed a virtual sandbox as an interactive display for career fairs and other outreach events. A state lobby day was held to celebrate National Surveyors Week. This included exhibits which provided outreach to the legislators and the general public. This was very successful and will be continued on an annual basis. Legislation passed by the County Recorders that they no longer have to maintain hard copies. PLSC is working to have this reversed.

HAWAII - HLSA has invited WFPS to host the fall meeting as part of their fall gala. Immediate Past Chair Nancy Almanzan is working with HLSA to confirm the meeting.

MONTANA - Dick Smith reported that Montana is having an issue with archiving survey documents. As this seems to be an issue with several states, the Board discussed development of a resolution.

Action Item: WestFed to draft a resolution regarding hard copy vs digital maps for review at the next meeting.

NEVADA - NALS Legislative Committee is working on draft language to address the 2022 datum. Membership

continues to increase. NALS has voted to donate \$2000 to the WFPS Scholarship & Relief Fund through the NSPS Foundation.

NEW MEXICO - PNM Resource Foundation has donated \$200,000 to the NMPS/NMSU endowment fund to maintain the survey program at NMSU. The New Mexico state-specific exam is now a mailed exam instead of proctored.

OREGON - PLSO is going through a rebranding process. A new logo has been developed. One of the goals in the rebranding is to increase participation from public employees. PLSO participated in Design Professional Day which was a state lobby day event. The scholarship auction at the conference raised \$29,000. The raffle of commemorative rifle was very successful. There is a move to dismantle QBS in Oregon. PLSO and ACEC is holding a joint meeting to discuss legislation. A resolution from WFPS on the importance of QBS would be helpful.

Action Item: WestFed to draft a resolution regarding the importance of QBS.

UTAH - UCLS is working in conjunction with the County Recorders to amend legislation that was introduced by a private land surveyor outside of UCLS. UCLS has established an Education Foundation which has been named after longtime educator Walt Cunningham. The Surveys Historical Society Rendezvous will be held in Salt Lake City in 2019.

WASHINGTON - LSAW may be interested in a joint conference with WFPS in 2020. Renton Technical College is working to put their second-year program online. Prevailing wage is still a concern in Washington. The Governor is reviewing a bill that adopts CBA wages as the prevailing wages. LSAW is in the process of amending their bylaws and working to get an exemption for surveyors regarding "Call Before You Dig" law. Washington Department of Licensing is proposing an administrative code change that will require licensee to attest they have read the administrative code when they renew their license.

WESTERN REGIONAL SURVEY CONFERENCE

The 2018 Western Regional Survey Conference sponsored by APLS, NALS, UCLS, and WFPS was a great success. There were over 800 in attendance and 35 exhibitors. Net proceeds were over \$120,000 and were split with the sponsoring associations based on registration.

WFPS FOUNDATION

The Executive Committee has worked with the NSPS Education Foundation to develop an MOU that will create a charitable fund for WFPS for relief efforts and scholarships. The fund will allow WFPS to solicit charitable donations. The Board approved the MOU and made changes to the WFPS scholarship criteria. More information will be posted to the WFPS website once the fund has been fully established.

WFPS AREAS OF FOCUS

Developing and Maintaining Programs to Promote the Profession

WFPS is committed to promoting the land surveying profession. To that end, WFPS is currently developing the following programs:

- **Youth Outreach – Land Surveying as a Career**

- › WFPS has budgeted funds to develop an after school/community program. The program will include 10 hours of curriculum that can be used by state associations and their chapters to promote land surveying as a career. The initial outline of the program is complete. If you are interested in serving on the committee that is developing this program, please contact the WFPS Executive Office.

- **STEM Outreach Flyer**

- › WFPS has developed a flyer to promote the land surveying profession as part of STEM education.
- › WFPS state associations may contact the WFPS Executive Office to have the flyer customized with your association logo.

Providing Resources to Benefit State Associations

WFPS is dedicated to providing resources to state associations. Following are a few of the resources currently being developed:

1. **Speakers Bureau**
2. **Quarterly Book Reviews**
3. **Webinars**

Serving as a Regional Voice

WFPS has updated resolution 2005-01 which supports having a board of registration for land surveyors in each state. The Executive Committee reviewed the resolution and suggested minor modifications to strengthen the resolution. At the April 2018 Board of Directors meeting, the Board adopted Resolution 2018-01 to supersede resolution 2005-01. The final resolution, as adopted, is available on the WFPS website and will be sent to each State Association.

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.

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 quarterly to discuss practice issues affecting western state surveyors. For more information about WFPS and the state associations, visit WFPS.org

WFPS Executive Office

T. (707) 578-1130 F. (707) 578-4406
admin@wfps.org

PLSC Board Meeting Minutes

August 22, 2018

1. Call to Order – Beers

Name	Position	Chapter	Attending?
Todd Beers	President	Central	x
Steve Parker	Vice President	Southern	
Alan Blair	Secretary/Treasurer	Central	x
Becky Roland	Executive Director	n/a	x
Paul Bacus	Director	Northern	x
Teresa Smithson	Director	Central/Western	x
Eric Carson	Director	Central	
Brian Dennis	Director	Southern	
Leif Joy	Director	NW ¼	x
Ralph Pettit	Director	Central	x
Paul DeGraff	Director	Central	x
Tom Sylvester	Director	Western	
Parker Newby	Ex-Officio	Southwest	
Roger Nelson	Non-Voting	Past President and WFPS Delegate	x
J.B. Guyton	Non-Voting	NSPS Delegate	x
Guests:			
Pam Fromhertz		NOAA/NGS	
Don Hulsey		Southern	x
Willy Whelan		NW ¼	x

2. Determination of Quorum (6 voting) – confirmed

3. Any changes to the Agenda? – Beers

4. Approval of Minutes from previous Meeting – Beers

- a. Alan Blair corrected the price for the 6th PM plaque

MOTION: To approve the May 2018 Meeting Minutes as amended. (Joy/Blair)
Approved unanimously

5. Review of Action Items from Last Meeting – Beers

- a. Board agreed to wait until the end of the year before deciding on whether to move \$50,000 from the scholarship fund to operational funds to cover the installment payment to CMU Foundation.

6. Financial Items – Beers/Blair/Roland

- a. 2018 Financials
 - i. Board will review membership dues at next meeting.

MOTION: To approve the 2018 Financial Report as presented. (Blair/Smithson)
Approved unanimously

- b. Investment Update from Key Bank
 - i. Savings Earnings
- c. \$50,000 Endowment payment made for 2018
- d. NSPS Dues Increase
 - i. Most states support NSPS dues increase.

MOTION: For JB Guyton to vote for NSPS dues increase at the next NSPS meeting, if it is \$10 or less and if there is no additional increase in the next five years. (Pettit/Smithson)

Approved unanimously

e. Lobbyist Contract Renewal

- i. Todd Beers is waiting for the contract. There is no price increase.

MOTION: To approve renewing the Lobbyist contract for \$15,000/year. (Bacus/Pettit)

Approved unanimously

f. WFPS \$1,000 donation

- i. WSPS does not collect dues. Current financials show insolvency within 6 years.

MOTION: To approve \$1000 donation to WSPS. (Smithson/Pettit)

Approved unanimously

7. Colorado Coordinator Activities – Hunter/Fromhertz

- a. GPS on Benchmarks
- b. State Plane Coordinates
 - i. A draft letter was sent to the Board for review.
 - ii. John Hunter will provide a summary in the next Side Shots.
- c. A report was emailed to the Board.
- d. A resource page has been added to the PLSC website.

8. NGS Update – Fromhertz

- a. The Board would like to consider providing a plaque explaining why there are multiple markers on the Capitol steps. Becky Roland will get pricing.

9. WSPS Resolution on Digital Signature – Beers/Nelson

- a. Todd Beers will email information to the Board.

10. WCCC Requests/Update – Sylvester

11. Change Voting Member to Professional Member – Beers

- a. Board approved voting on this title change at the next meeting.

12. Membership – Beers

- a. Update on Renewal Calls
- b. 2019 Renewal Application with Endowment Promotion
 - i. Tom Sylvester is asked to write a letter summarizing the program and need for funding to include with renewals.
 - ii. The Board is open to investing through NSPS Foundation. Becky Roland will get

more information on the current return on investment.

13. NSPS YPN – Dennis

14. QBS Update – Blair

- a. There is a canned presentation available.

15. Policy/Procedure for promoting Sustaining Mbr Events – Beers/Roland

- a. The Board consensus is to add the information to the PLSC web calendar, but not send email notifications for Sustaining Member Events.

16. Reports

- a. Scholarship – Sylvester
- b. Membership Committee – Smithson/Parker/Roland
- c. Executive Director – Roland
- d. Rocky Mountain Surveyors Summit – Parker/Roland
- e. Lobbyist/Legislative Committee – Bacus
- f. Education Committee – Parker/Blair/Beers
 - i. Teresa Smithson reminded the Board that as the Endowment increases, so should the salary paid.
- g. Ethics and Fair Practices Committee – Pettit
- h. Trig Star Report – Lassner
 - i. The Board appreciates the effort that

Heather Lassner put in to the program this year.

i. GIS in the Rockies – Parker

j. NSPS Delegate's Report – Guyton

- i. Next meeting is in College Park MD in October

k. WFPS Delegates' Report – Beers/Nelson

- i. Todd Beers and Roger Nelson attended the Albuquerque Meeting.
- ii. Next meeting is in October in Hawaii.

17. Chapter Reports

a. Southern – Hulsey

- i. Met last night.
- ii. Helped with GPS on Benchmarks.
- iii. Planning the Holiday Party.

b. Central – Clarke

- i. 40 attendees for the Rockies game.

c. Northern – Parks

- i. Begin monthly meetings in September.

d. NW ¼ – no report

e. Western – no report

f. Southwestern – no report

18. Next Meeting Date and Location

- a. October/November – Becky Roland will poll for possible dates

19. Adjourn (Bacus/Blair)

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From left, Dustin Hoaglin, Tony Peal, Dan Davis and Jim Lynch. Photo: Shaun Lee

CC-PLS

We were very fortunate to have Borris from Trimble come to our June general meeting to present the new direction of Trimble Business Center and the upcoming peripherals they are working on. We are scheduled to have a general meeting on October 25th at the Table Mountain Inn in Golden; agenda is unknown at this time.

The CCPS sponsored a social event at the Rockies game on August 11th. This included a reserved "cabana" for

chapter members and their families, and a power ticket with \$20 in concessions to use throughout the park. We had a good showing, with 29 people, including family members that joined us. It was a great time and many said they would definitely come again.

Shaun Lee, PLS
Secretary, Central Chapter

NC-PLSC

After taking a break in our busy summer months from our usual monthly meetings, the Northern Chapter regrouped in September for our kickoff meeting at Old Chicago in Loveland. We enjoyed a casual dinner and discussed many options for our upcoming meetings. New officers were elected at the end of dinner. Steve Parks honorably stepped down from President position into the role of Director, along with Michael DeDecker and Pete Paulus. Heather Lassner continues to proudly hold the position of Secretary/Treasurer. Laine Landau volunteered to fill the President Elect position and Tony Fendick as the President.

For our October meeting we will have Laine Landau and Candice Hartley from Lamp Rynearson & Associates, Inc. conduct a business development program called "Got Client." This will cover topics like useful ways

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CHAPTER NEWS

to track projects, monitor team communications, and establish more efficient working routines. There will be food provided for all attendees and in-depth discussions about our professional outlook.

As always, we welcome anyone in the surveying industry to attend our meetings every month, to expand your knowledge of this great profession. The Northern Chapter strives to keep our meetings educational and fun for all experience levels in the industry. Some of our upcoming meetings will include topics covering Civil 3D field to finish work, OPUS Share, tips on properly using metal detectors, and proper calibration of field equipment. We hope to see new faces every month!

Tony Fendick, PLS
President, NC-PLSC

NW 1/4 PLSC

The NW1/4 PLSC met on August 22nd at the Dry Creek Park in Hayden, Colorado. This was perhaps our third or fourth "BBQ" type meeting – outdoors – but the first where we haven't frozen our fingers off and eaten cold burgers and hot dogs! But like most smart surveyors, we actually learned our lesson the fourth time around and scheduled an outdoor meeting in the summer months.

The major topic was election of new officers. After seven years of serving as Chapter President, I am "retiring" to the VP slot and William Whelan is now our President and Treasurer. Congratulations Willy! And then a week ago, we received the exciting news that the Luttrells out of Kremmling – Jeanette and Dennis – will be joining us at our next meeting. This is big news for the NW1/4 as we are the smallest, most isolated chapter in the State and the addition of two new members after years of the same membership group is significant. Our last addition was Mike Fraher of Craig over four years ago. I suspect on a percentage basis, we are the fastest growing chapter in the State!

We have members Willy Whelan, Tom Effinger and Walter Magill continuing to analyze the County Lidar map and the analysis is, so far, so good.

We had Bill Baker from Glenwood Springs bring his certifications to the meeting and we added this to our discussion from the spring meeting concerning certifications of different type of surveys.

We also discussed the recently passed statutes concerning surveying. We are thankful that these statutes have "slowed down" in the last few years.

There are many statutes in our society that are tough to enforce and it may not get more obscure than surveying laws. Although we consider it the center of our world, the general public does not understand much about what surveyors actually do and adding more surveying statutes that lawyers and judges have little knowledge or exposure to may create more problems than it solves.

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

SC-PLSC

It has been tradition that we take off the month of July every year and spend time with our families that 3rd Tuesday. No meetings for us in July! Our August Board of Directors meeting was held at the Gold Dust Saloon in Pueblo. This gives the southern members a chance to travel less this month. We talked about chapter business and enjoyed dinner together. Our September meeting was held at Farnsworth Group in Colorado Springs and we hosted Daniel Katz from Aerotas. Daniel presented us with his business model of the drone industry. At the end I think he landed several customers as well. Daniel explained many of the questions that we all had about drone equipment, cameras, target placement, accuracy, software, insurance, licensing, etc. You can reach Daniel at www.aerotas.com. Fall is in the air and the snow is upon us, enjoy your time in the field while it lasts. Check out our website, www.scpls.net

Don R. Hulsey, PLS
President Southern Chapter

SWC-PLSC

The SW Chapter is looking forward to completion of two new CORS stations in southwest Colorado and the two stations are beginning to show life. Both sites in Alamosa and Cortez have been installed and multi-day data sets submitted to the NGS passed as far as achieving the standard spacing requirements and broadcast capabilities. Pam Fromhertz from NGS has been very busy, but has found time to visit both of the permanent site set ups. However, we have not heard if they have reached their final approval. Thank you, Pam for supporting our efforts!

Frank Kochevar, the Mesa County RTVRN Network administrator, who has also been a great help, is currently testing the Cortez site on his network and we should hear those results very soon. The Alamosa site should be able to go online for testing on the Mesa County Network next week. So, if all goes well they should both be broadcasting online within the next few weeks.

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New Mexico chapter members have invited the SW chapter members to their upcoming meetings over the next few months. I'll be sending out additional information on the dates, time and speakers.

Parker Newby, PLS
President - SW Chapter PLSC

WCLS

The September meeting was held at Main Street Bagels from 7-8am on Wednesday September 12th with 10 members in attendance.

City of Grand Junction surveyor Peter Krick discussed an increase in the number and size of plats being submitted to the city this summer.

Mesa county surveyor Pat Green requested deposit surveys having more surveyor notes to help perpetuate any project idiosyncrasies.

CDOT surveyor Jon Kobylarz announced the professional land surveyor II position that is currently available for the Grand Junction office.

Western Colorado Community College professor Tom Sylvester gave us an update on the surveying program. The program started with 2 students and 3 classes and this year we have 17 students and 8 classes, 4 on campus and 4 distance learning. Any internship possibilities for these students would be welcome. Contact Tom Sylvester at the WCCC campus.

The final AM meeting will be held on the 14th of November, with future meetings being moved back to Wednesday evenings. We hope moving this meeting time will encourage attendance. The WCLS continues to promote additional participation and membership.

Alec Thomas, PLS
President, WCLS



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