

# 9th Annual Rocky Mountain Surveyors Summit

## Speaker Biographies and Abstracts

### WEDNESDAY OPENING SESSION PRESENTER:

#### TOPIC TITLE: *LAND DESCRIPTIONS*

##### Speaker Biography:

**Byron E. Johnson, PLS**, 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. He has a broad interest in outdoor activities including motorcycles, hiking, backpacking, snow shoeing, mountaineering and anything that allows him to enjoy the outdoors with similar activities.



##### Abstract:

This session will be a lighthearted discussion on the various land descriptions prepared throughout the last hundred plus years or so. I will provide descriptions that introduce variations of terms and distance measurement. How various terms are defined by Black's Law and other references. Open discussion on terms used regionally and accepted for those areas. I will show samples of a description written in various style or methods but are all properly describing the same parcel of land.

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#### TOPIC TITLE: *ETHICS*

##### Speaker Biography:

**Wendy Lathrop**, president and owner of Cadastral Consulting, is licensed as a Professional Land Surveyor in New Jersey, Pennsylvania, Delaware, and Maryland, and as a Professional Planner in New Jersey. She holds a Master's degree in Environmental Policy, and has been involved in surveying since 1974 in projects ranging from construction to boundary to environmental land use disputes. Wendy is also a Certified Floodplain Manager through the Association of State Flood Plain Managers (ASFPM).

Wendy has been teaching seminars for surveyors since 1986 and has been writing articles for surveyors since 1983. She is a contributing editor for "The American Surveyor" magazine, and has four articles included in the American Bar Association's text, "Land Surveys: A Guide for Lawyers and Other Professionals." In 2011, she and Stephen V. Estopinal, PLS, PE co-authored a book entitled "Professional Surveyors and Real Property Descriptions: Composition, Construction, and Comprehension."

Wendy represented the American Congress on Surveying and Mapping on the first Technical Mapping Advisory Council to the Federal Emergency Management Agency and the National Society of Professional Surveyors on the current Council. She was a panel member of the National Academy of Public Administration's study of US Geographic Information resources and of the National Research Council's study of flood hazard mapping accuracy. Wendy is a past President of the New Jersey Society of Professional Land Surveyors and of the National Society of Professional Surveyors, and has served on the Board of Directors for the American Association for Geodetic Surveying.

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### **Abstract:**

We all know that a discussion about “ethics” in general addresses right and wrong behavior, sometimes abstractly philosophical and sometimes brought to earth by practical experiences. In real life, it isn’t always easy to decide between only two answers: right or wrong, yes or no. Most issues are multifaceted, and the best decisions must address multiple aspects simultaneously.

An understanding of “ethics” and “guidelines” and “standards of care” steers us when we confront difficult decisions both in our private lives and our business lives. We expand the conversation to delve more deeply into relationships with clients, with employees, and with our professional colleagues in this business-oriented program. This program includes several real life examples where choices were not easy and others in which they should have been – but weren’t. Case studies will help spur discussion and define distinctions between "ethical conduct", "misconduct", and "unlawful activity".

At the conclusion of this program, participants will be able to:

- Distinguish between “lawful” and “ethical”
- Apply the NSPS Creed and Canons to real life experiences
- Formulate sound business practices to fulfill ethical responsibilities

We’ll also address:

- Fees, pricing, and competition
- Disclosures and confidentiality
- Moonlighting
- Recommendations
- Responsible charge

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## **TOPIC TITLE: *SYMPOSIUM: CITY AND COUNTY OF DENVER/ONLINE SURVEY SERVICES***

### **Speaker Biographies:**

**Warren L. Ruby, PLS**, Land Surveyor Supervisor, City and County of Denver, received his formal surveying education at the Denver Institute of Technology in 1980 and was licensed as a Professional Land Surveyor in 1987. Warren worked in the private sector as the head of surveying for CLC Associates in the metro area and as a project surveyor for Foley Associates in Telluride before coming to the City of Denver in 2007. Since being at the City Warren has researched and attempted to answer the question “What authority does the City have to regulate surveying in Denver?” In this presentation he will present some of the results of that research.

**Ralph Pettit, PLS**, Land Surveyor Supervisor, City and County of Denver, has 30+ years of experience in the surveying profession. The first 25 years were in the private sector focused primarily on residential and commercial development. Through working in four states, holding current licenses in Colorado and North Carolina, and employing as many as 33 people, he has acquired a wide array of knowledge, skills, and experience. During Ralph’s seven years in the public sector working for the City and County of Denver, he has drawn on that private sector experience to help streamline the review process by developing and implementing policies and procedures that aid the City reviewers and developers alike.

Ralph takes great pride in our surveying profession and works relentlessly to help ensure the products we produce are of the highest quality and professional care to the benefit and betterment of our customers, ourselves, and our profession.

### **Abstract:**

Need a property survey? – There’s an App for that.

We will discuss some of the online research tools and robust data sets available to the public through the City of Denver’s Open Data Catalogue. From there we will discuss some of the potential uses of that data in the future and some uses of public data that are already occurring. We hope for a lively, participatory discussion of the implications of Big Data for the survey profession in the future. When anyone can google their property lines, what’s left for the practicing professional?

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### TOPIC TITLE: *ALTA/NSPS LAND TITLE SURVEYS*

#### **Speaker Biography:**

**Jay Kay Seymour, PLS** is entering his 50th year as a practicing land surveyor and his 42nd year as a professional land surveyor, holding licenses of registration in Kansas-701 since RLS-1978, Colorado-16421 since PLS-1979, and California-6551 since LLS-1991.

He has surveyed in Kansas, Nebraska, Missouri, Oklahoma, Colorado, Wyoming, Utah, Arizona, Alaska, and California. He has prepared in excess of 11,000 legal descriptions, performed 2,000 full Sectionalized-Land-Boundary-Surveys in multiple states, and has supervised and prepared over 3,000 ALTA/ACSM Land Title Surveys in his career. Mr. Seymour has been an Expert Witness in Boundary Disputes in both Colorado and California. He came out of retirement last year and is currently working with the Orange County Surveyor in the Record-of-Surveys mapping section.

#### **Abstract:**

The purpose of this presentation is to provide an overview of the history of ALTA Surveys since its inception in 1962. A vast majority of the presentation will cover the 2016 Standards and specifications. This presentation is detailed in nature and is usually best suited for a full day (eight-hour) presentation. All lesser hour(s) presentations can only touch on the highlights of the 2016 standards.

This is an excellent workshop to develop a new revenue stream for the professional. The workshop develops excellent marketing and business development skills for the surveyor as the ever-changing-paradigm moves toward to reducing the surveyors presence in today's market place.

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**THURSDAY, FEBRUARY 7**

### TOPIC TITLE: *BOUNDARY CONTROL*

#### **Speaker Biography:**

**Byron E. Johnson, PLS**, 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.

He has a broad interest in outdoor activities including motorcycles, hiking, backpacking, snow shoeing, mountaineering and anything that allows him to enjoy the outdoors with similar activities.

#### **Abstract:**

This session will focus on boundary control primarily involved with "Simultaneous Conveyances" or how I prefer to refer to them as "Simultaneous Creations". It will focus on the reestablishment and boundary control of these creations primarily created in the late 1800's to the 1950's. This will entail the preferred methods of reestablishing corner monuments as reference from Curtiss Brown texts. We will also discuss the preferred way of describing lots with Metes and Bounds to minimize ambiguity.

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### **TOPIC TITLE: A BRIEF GUIDE TO SUCCESSFUL NAVIGATION THROUGH THE NATIONAL FLOOD INSURANCE PROGRAM**

#### **Speaker Biography:**

#### **Speaker Biography:**

**Wendy Lathrop**, president and owner of Cadastral Consulting, is licensed as a Professional Land Surveyor in New Jersey, Pennsylvania, Delaware, and Maryland, and as a Professional Planner in New Jersey. She holds a Master's degree in Environmental Policy, and has been involved in surveying since 1974 in projects ranging from construction to boundary to environmental land use disputes. Wendy is also a Certified Floodplain Manager through the Association of State Flood Plain Managers (ASFPM).

Wendy has been teaching seminars for surveyors since 1986 and has been writing articles for surveyors since 1983. She is a contributing editor for "The American Surveyor" magazine, and has four articles included in the American Bar Association's text, "Land Surveys: A Guide for Lawyers and Other Professionals." In 2011, she and Stephen V. Estopinal, PLS, PE co-authored a book entitled "Professional Surveyors and Real Property Descriptions: Composition, Construction, and Comprehension."

Wendy represented the American Congress on Surveying and Mapping on the first Technical Mapping Advisory Council to the Federal Emergency Management Agency and the National Society of Professional Surveyors on the current Council. She was a panel member of the National Academy of Public Administration's study of US Geographic Information resources and of the National Research Council's study of flood hazard mapping accuracy. Wendy is a past President of the New Jersey Society of Professional Land Surveyors and of the National Society of Professional Surveyors, and has served on the Board of Directors for the American Association for Geodetic Surveying.

#### **Abstract:**

Floodplain management, regulations, mapping, and elevations – how do they fulfill the objectives of the National Flood Insurance Program (NFIP)? With an eye to successful applications for floodplain mapping corrections and updates, this practical course examines how the NFIP functions and what surveyors need to know about its processes. After distinguishing between the various types of Letters of Map Change and how to pursue them, we'll also briefly address Elevation Certificate purposes and pitfalls and where to find flood elevation data.

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### **TOPIC TITLE: LEGAL MINES: HOW TO SUCCESSFULLY NAVIGATE 2019'S PERILOUS WATERS**

#### **Speaker Biography:**

Attorney **Justin Vaughn** is a strategic problem-solver, an ability that has served him well since he began his legal career in 1994. Justin's clients range from entrepreneurial innovators to late-stage middle market companies, from small retailers to multi-national corporations. He establishes corporate structures, advises for growth and expansion, places appropriate legal protections, and engages in the sale and acquisition of closely held business interests. Justin brings this knowledge to his outside general counsel work, providing flexible and practical perspectives that enable companies to operate successfully.

#### **Abstract:**

Current estimates suggest that hundreds of WWII sea mines remain in the ocean, occasionally causing destructive damage to ships to this day. They are largely unseen, and once the devastating impact occurs, it is too late.

As business owners and contract administrators know well, the legal and administrative fields create similar perils. This presentation will provide helpful legal guidance for business owners, managers, and anyone handling governance and con-

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tract matters, to identify the mines and better navigate the business field. The materials and instruction will address the following:

- Avoiding traps in contract negotiations and drafting
- Maneuvering DORA regulatory investigations
- Strongest currents in corporate legal structure and governance
- The big wave: 2019 employee updates
- Avoiding the whirlpool through effective litigation avoidance strategies

There will be time set aside for questions and answers from an experienced corporate attorney.

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**FRIDAY, FEBRUARY 8**

### **TOPIC TITLE: *SUBDIVISION OF SECTIONS***

#### **Speaker Biography:**

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#### **Abstract:**

This session will focus on the basics of sectional subdivision to the more intricate of subdivision when resurveyed adjoining water bodies, completion surveys, lots, tracts and subdivision around special surveys that may not have been segregated. I will provide reasons for these special surveys and potentially why they were not segregated in the original surveys.

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### **TOPIC TITLE: *THE ART AND SCIENCE OF THE REAL PROPERTY DESCRIPTION: SITUATIONAL AWARENESS***

#### **Speaker Biography:**

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### **Abstract:**

As readers of documents that address every aspect of land – its location, its character, its physical dimensions – surveyors, title examiners, and attorneys must all be intimately familiar with the variety of possible interpretations and misinterpretations. Strange and unusual things happen when language is not clear and the law is therefore misapplied.

Real property boundary descriptions must be clear, concise, and preserve all the evidence pertaining to the location of real property interests. When these documents are missing, incomplete, or ambiguously written, we play a losing game of forensics in locating limited and full ownership interests on, above, or below the earth's surface.

This course examines the real property description in the context of time and custom, illustrated with case law examples of the effects of regional language and surveying practice. Our objective is to improve the documents we write and to better understand existing documents we encounter.

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## **TOPIC TITLE: *CONNECTING YOUR SURVEYS TO THE FUTURE***

### **Speaker Biographies:**

**Pamela Fromhertz** is NOAA's National Geodetic Survey Rocky Mountain Regional Advisor, covering Colorado, Wyoming and Montana, since 2016. As a regional advisor, she interacts with the geospatial community at the local, state and federal levels, as well as with private industry, to educate and advise on the benefits of the National Spatial Reference System (NSRS) and how its datums, models, and tools may be utilized for user's programs and projects. Pam organizes numerous workshops and training opportunities, including training in Continuously Operating Reference Stations (CORS), NGS' Online Positioning User Service (OPUS), DS-World, precision digital leveling and heights. She has her M.S. in geodesy, photogrammetry, and GIS from the Ohio State University and a B.S. in geology with a math minor from Long Island. She has worked for the federal government for over 30 years.

**John Hunter, PLS**, is a Professional Land Surveyor with more than 20 years of public and private sector experience in Surveying and Geomatics disciplines including:

- Deformation and Monitoring.
- Boundary and PLSS Retracements.
- Control Network Design.
- Localized Coordinate Systems and Projections.

He has a B.S. in Business Management and Small Business Management from Colorado State University. He has been a Project Surveyor at Denver Water for the past 4 years which has allowed him to manage surveying and geomatics projects that align with his areas of expertise.

### **Abstract:**

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.



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### TOPIC TITLE: *FRACTIONAL SECTIONS AND PARENTHETICAL DISTANCES (CFEDS)*

#### Speaker Biography:

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He has a broad interest in outdoor activities including motorcycles, hiking, backpacking, snow shoeing, mountaineering and anything that allows him to enjoy the outdoors with similar activities.

#### Abstract:

This session will begin with the methods for retracing and/or re-subdividing fractional sections. Once we have established the methods for Fractional Sections and the ways of computing the Parenthetical distances for them, we will move to discussing the parenthetical distances for closing sections, analyzing potential obvious errors, bearing breaks in the line being closed upon and completion surveys.

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### TOPIC TITLE: *TRIMBLE BUSINESS CENTER (TBC) V5.00*

#### Speaker Biographies:

**Joe Blecha**, has been with Trimble for almost five years and is a product manager within Trimble Geospatial's office software group overseeing Trimble Business Center, Trimble Link, and supporting desktop utilities. He started at Trimble in the Support group where he assisted with all Geospatial support products with specific focus on office software and UAV solutions. Coming from a heavy highway and construction background, Joe holds a Bachelors of Science in Civil Engineering and a Masters of Landscape Architecture from the University of Illinois at Urbana-Champaign. He happily resides in the Colorado mountains with his wife and two young kids and in his (limited) free time enjoys hiking and golf.

**Matt McLean** is a geospatial enthusiast with over 4 years field survey experience. He started in cadastral surveying in Calgary, Canada. He is also experienced with construction surveying for earthworks, underground utilities and roading. Matt is pursuing a Bachelor of Geodesy and Geomatics Engineering from the University of New Brunswick in Fredericton, Canada. Matt has joined Trimble for a 12-month internship with the Trimble Business Center Product Management team.

#### Note:

*Participants need to bring their own laptop with a version of TBC of 4.10 or later. Trimble is willing to provide a trial version of TBC Ver 5.0 for use at the conference. When registering, please note whether you will need a copy. The participant will be provided a link to download the software for installation and Trimble will provide the codes at the conference to enable the software.*

*There is no IT help available for your laptop. Trimble representatives will only assist with the codes.*

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### **Abstract:**

This session includes:

- Survey Field Data Review and QA/QC

In this initial session of the day, create the foundation to confidently deliver the highest quality information to your clients. Bring your raw survey GNSS and optical data into Trimble Business Center (TBC) v5.00 project and learn how to use TBC's tools to review and edit in this session. Set up your project in the projection of your choice or work with ground coordinates and gain experience processing GNSS baselines, reviewing baseline processing reports, and manipulating raw and processed GNSS data. Add conventional total station data to the same GNSS project and review station setups, round measurements and editing optical data to eliminate any field errors. Then, use TBC's feature coding workflows to automatically generate linework, blocks, and labels as a drafting and QA/QC step.

- Adjustments and COGO

Leverage Trimble Business Center's (TBC) powerful and accessible network and traverse routines tools to adjust and constrain your survey data. Learn the art of setting up and executing a proper least-squares network adjustment and how to make informed decisions when analyzing and processing your own data in TBC. And take your optical data through a traverse routine, enhanced in TBC's latest release (v5.00). Then, take your data through TBC's Create COGO routine to draft a survey plat.

- Legal and Boundary Work

Join a fellow survey professional to learn about Trimble Business Center's (TBC) enhanced workflows to complete cadastral deliverables. In this session, compute parcels and a map check closure report, and use the Legal Description Writer to prepare "stamp-ready" plan sheets all with TBC v5.00. New features such as single and double proportioning, label rounding enhancements, and ALTA relative position precision reports will also be discussed.

- Map Creation and Drafting

This is the flagship Trimble Business Center (TBC) session to showcase field-to-finish workflow capabilities through an overview of CAD creation and drafting workflows focused on raw field data import, processing, drafting, and deliverable creation. Additional topics will be setting up a feature coding library for drafting efficiencies, data processing tools for Trimble VISION instruments, improved CAD and CAD editing tools, and diverse deliverables like images, third-party CAD files, and custom plan sets.

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## **TOPIC TITLE: CST LEVEL 1 EXAM PREPARATION AND EXAM**

### **Speaker Biography:**

**Alan D. Blair, PLS** is a graduate of Ferris State University with a Bachelor of Science degree in Surveying. Mr. Blair has worked for several private surveying and engineering companies in Michigan and Colorado and worked for the Bureau of Land Management in Alaska and several other states. He taught Surveying at the Denver Institute of Technology for 6 years. Recently, Mr. Blair retired as the Right of Way Manager for the Central Federal Lands Highway Division of the Federal Highway Administration where he oversaw the preparation of boundary maps, right of way documents and right of way acquisition for the division's 13 states region. He has been involved with the PLSC Refresher Course for many years and has presented topics at several surveying seminars. He served on the board of the Central Colorado Professional Surveyors. Mr. Blair has been licensed in Colorado since 1986.

### **Abstract:**

PLSC is proud to host the CST Level 1 Exam. The first two-hour session will be a review of possible items on the exam, and then the exam will be delivered. Alan Blair will present material and then be available for Q&A. This session is a review, and not an in-depth instruction for future Survey Technicians.