

## MARLS 2018 CONFERENCE SESSIONS - ABSTRACTS AND SPEAKER BIO'S

### MARLS PRE-CONFERENCE - FEBRUARY 21, 2018

### MARLS CONFERENCE – FEBRUARY 22 – 23, 2018

- **PRE-CONFERENCE – February 21, 2018 presented by George Southard – PDH = 8**

Abstracts for Educational Sessions by GSKS Associates LLC, George Southard

**FAA Regulations for UAS (drone) Operations (2 hours)** - In August 2016 the Federal Aviation Administration (FAA) issued a set of rules allowing commercial operations using Unmanned Aircraft Systems (UAS) for the first time. These rules are designed to allow for the safe integration of UAS into the National Airspace System. Until the release of these new rules, using UAS for any type of commercial activity severely restricted to those who were able to get a special waiver from the FAA. Now with the implementation of 14CFR Part 107 - FAA regulations are in place allowing professionals from Agriculture to Land Surveying and hundreds of other to use this exciting new tool in their work. This session will provide detailed information helping the Surveying and Mapping professional safely and legally use their UAS as a survey tool.

**Unmanned Aircraft Systems (UAS) (drones) as a Tool for Land Surveyors (4 hours)** - This session will introduce the implementation of UAS a tool for the Surveying and Mapping professional. As with all new and different technologies, at first there is a lot of excitement and hope, but early enthusiasm often quickly dampens as unforeseen and sometimes costly pitfalls crash the party. In this session we will explore the business opportunities for using UAS as a tool for surveying and mapping. But we will also look into the pitfalls and expose the wide-ranging costs of owning and operating UAS field survey activities. Successful use of this exciting new technology also demands the integration of new disciplines, procedures and processes not common in most land survey operations. This session will introduce the concepts of photogrammetry, handling of massive amounts of digital data, logistics and planning associated with UAS operations.

**Becoming a Certified UAS (drone) Pilot (2 Hours)** This presentation is detailed review of the steps needed to qualify for an FAA Remote Pilot Certificate (sometimes referred to a drone pilot's license). In the FAA regulations authorizing the use of Unmanned Aerial Systems (UAS) for commercial (non-recreational) use, provision is made for the certification of UAS operators. This certification includes studying for and passing a Knowledge Test for remote pilots, filing an application for the remote pilot certificate and getting security clearance through the TSA. The objective of this course is to help potential remote pilots negotiate through the many documents, regulations and study materials provided by the FAA.

#### **George Southard – Biographical Summary**

Mr. Southard's professional career in the photogrammetry profession began in 1977. He has served in numerous positions in the geospatial profession, including: Director of Business Operations at Analytical Surveys, International Sales Manager at Leica Geosystems, Director of Programs for Trimble, Inc. In 2012 George founded GSKS Associates LLC a private consulting firm specializing in advocacy and education in the geospatial profession. George has a Master's Degree in Geography with emphasis in cartography and photogrammetry from Brigham Young University.

George Southard  
1-720-273-9141

- **MARLS CONFERENCE – February 22 – 23, 2018 – Total Available PDH's = 15**

**Ethics and the Surveyor's Role (2 PDH) - John Matonich** - As professionals, surveyors are held to a higher standard and are expected to follow a code of ethical conduct and operation. This presentation will examine the elements of this code and how they fit in the surveyor's conduct. It will also examine real ethical case situations and discuss why they were or weren't violations of an ethical code.

**The Land Surveyor as an Expert Witness (2 PDH) – John Matonich** - The Professional Surveyor carries a special set of expertise that is used to protect the health safety and welfare of the public. In the practice of boundary surveying, the PLS must consider not only the exact sciences of measurement, but in the inexact art of boundaries. Many times this work must be presented in a court of law to help determine the boundaries of a parcel. This seminar will provide some insight into what may be expected if a surveyor finds him or herself in having to explain their position on a boundary question and how to give their ultimate opinion on that location of said boundaries and why they believe their conclusion to be correct.

**Easements and What the Surveyor Should Know (3 PDH) – John Matonich** - Easement agreements are necessary for temporary trespass onto another's land, waterway or airspace. Although rights of way are the most common, you may need to draft an easement for utilities, encroachment or telephonic communications. There are critical legal issues and practical considerations involved. Whether you are assessing the impact of the easement on property use or finding the most strategic way of obtaining access, this presentation will help. This presentation will cover a number of objectives giving up-to-date information on creating easements, locating and defining their course, preparation of easement descriptions, easement kinds and purpose along with easement reversion. The Professional Surveyor carries a special set of expertise that is used to protect the health safety and welfare of the public. In the practice of boundary surveying, the PLS must consider not only the exact sciences of measurement, but in the inexact art of boundaries. Many times this work must be presented in a court of law to help determine the boundaries of a parcel. This seminar will provide some insight into what may be expected if a surveyor finds him or herself in having to explain their position on a boundary question and how to give their ultimate opinion on that location of said boundaries and why they believe their conclusion to be correct.

**John Matonich, PS**, is the Chairman of the Board of ROWE Professional Services Company, a firm specializing in consulting engineering, surveying, planning, landscape architecture, aerial photogrammetry in the Midwest and across the country. John joined ROWE in 1981. He was named a principal in 1992, promoted to president in 1997, and to chief executive officer in 2001 as well as Chairmen in 2006. John retired from management of the firm in 2016, but remains Chairman. John is licensed as a professional surveyor in Michigan, Ohio, and Wisconsin. He served as president of the National Society of Professional Surveyors, (NSPS) in 2009-2010, and currently serves as the treasurer of the Board of the Wisconsin Society of Land Surveyors. John is a past president of the Michigan Society of Professional Surveyors (MSPS). He also served as

chairman of the Government Affairs Committee for the National Society of Professional Surveyors (NSPS) headquartered in Washington, D.C for over 20 years until 2015. John was voted as a Fellow Member of the NSPS, ACSM and MSPS organizations.

### **Changes Are Coming- And we Have the Tools to Help (2 PDH) – Pam Fromhertz**

The new datums are coming! Changes are significant – 5 feet horizontally and nearly 3 feet vertically. In this session Pam will discuss the magnitude of changes and why the new datums. She will provide information on the tools NGS has developed to make your job easier using GNSS, CORS and OPUS. Pam will share details of an extensive field project NGS embarked on during the summer of 2017 in southern Colorado to assist in validating the new vertical datum to be released around 2022. Lots to learn and an opportunity to make sure Montana is getting prepared.

**Pamela Fromhertz** is NOAA's National Geodetic Survey Rocky Mountain Regional Advisor, covering CO, WY and MT, 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.

**Presentation 1. ESSENTIALS OF THE MONTANA QUIET TITLE ACTION** (or, the mechanics of the Action; issues for the surveyor; assessing the judgment's impact on title; and expecting the unexpected) (1 PDH) – **Gregory G. Schultz**

**Presentation 2. HEIRS PROPERTY PARTITION** (including, the mechanics of traditional partition; why breaking up is hard to do -- and expensive; and the Heirs Property Act saves the farm) (1 PDH) – **Gregory Schultz**

**GREGORY G. SCHULTZ.** Greg is Senior Counsel with Crowley Fleck PLLP in the firm's Missoula office. He has practiced for 34 years and in Montana since 1995. Before joining Crowley, he administered his own practice for nearly 20 years. His legal concentration is real property, with particular expertise in land titles, real property secured lending, easements, title insurance, purchase and sale transactions, foreclosure, and survey matters. He has authored and published Developments in Montana Title Law since 1999.

### **Mentoring in the Workplace (2 PDH) – Jennifer Anderson**

What every manager needs to know about mentoring and what every employee needs to know about mentoring.

### **Recruiting Strategies: Techniques to Attract the Right Employees (2PDH) – Jennifer Anderson**

How to attract the right people to your company and leveraging online and in-person techniques to connect with the right candidates.

**Jennifer Anderson** - Jennifer Anderson has nearly 20 years as a career strategist. With a goal to "build stronger teams – one career at a time", she offers training to companies covering recruiting and employee retention, mentoring in the workplace, career management, personal branding and more. Jennifer consults with national and international companies to improve careers for employees which improves team morale and helps companies to retain their top talent. Jennifer is a regular contributor to media with guest appearances on KSL News, The Matt Townsend Show, various podcasts and Deseret News. Jennifer is published in Structure Magazine and Forbes and is ranked as a "Top 40 to Follow" on Twitter (@CareerCoachJen). For more information: [www.CareerCoachJen.com](http://www.CareerCoachJen.com)

### **Land Title Insurance Products and Research (2 PDH) - Jonathan Ries**

The materials that will be provided will help one know ways to research public records and to help in understanding the ways title insurance and title issues can be used to help with day to day business with their customers.

**Jonathan Ries** is a Professional Land Surveyor and a licensed title examiner, with over twenty years of combined Land Surveying and Land Title experience. Mr. Ries is currently employed full time with first Montana Land Title Company of Helena and owns his own surveying company, Triple R Surveying, Inc.. He has been a past chapter president on the Board of Directors for the Montana Association of Registered Land Surveyors. He has earned his surveying degree from Flathead Valley Community College. He specializes in land disputes and the limited right of use of real property.

### **Laser Scanning for Today's Surveyors (2 PDH) – Andrew Munson/Frontier Precision**

This program will go over the use of laser scanning and how that can benefit high accuracy surveys. Laser scanning provides a lot more information and much more accurate information than a traditional survey. The program will go over the proper uses of the gear and how to process the data.

**Andrew Munson/Frontier Precision** – Frontier Precision is a dealer of all things geospatial. FPI has a staff of Certified Trainers on all their products from survey gear, mapping gear, and construction gear. FPI has been a dealer in the Midwest for over 20 years.

### **2017 Land Use Law Legislative Updates – (2 PDH) – Tara DePuy and Kelly Lynch**

Participants will learn of changes to mortgage exemptions, final plat review process and the new phased developments laws to assist them in the surveying and representation of their clients.

**Tara DePuy, Attorney at Law, PLLC** was born in Livingston, Montana and graduated from Montana State University in 1984. After graduating from the University of Montana School of Law in 1987 with high honors, Tara was in private practice in Livingston before joining the Park County Attorney's Office, focusing on land use issues for the last of years of her tenure. After twenty years of service to Park County, Tara has been in private practice the last ten years, focusing on land use issues, and is also the Property and Casualty Trust Land Use Attorney for the Montana Association of Counties, providing training and land use advice to the majority of the counties in Montana. Tara also lobbies for MACo/PCT regarding land use issues each legislative session.

### **Drone Data, Photogrammetry, Point Clouds, Autodesk Survey Workflow (2 PDH) – Nick Turner and Alex Wood**

Drone data is becoming more and more prevalent. This course discusses the Autodesk Survey workflow for processing and using photogrammetry and point cloud data, from drones, using Autodesk Recap, AutoCAD Civil 3D, and Autodesk InRoads products.

**Nick Turner – Selbys** - Inspire, motivate and collaborate with fellow team members to create projects and experiences, which bring health and happiness to clients and fundamentally grow the value of the company. Trained Large General Contractors, Engineering and Architectural firms across Montana on the latest design workflows and technologies for Reality Capture, Drone and Point Cloud Data Processing, Preliminary Planning, Augmented Reality, Virtual Construction, RFI Automation, Hydraulic and Hydrology Analysis and Design, Civil Infrastructure Planning and Design as well as 5D Construction Management and intensive BIM coordination. Widely respected industry expert on engineering design workflows and software, such as Point Cloud Processing, Civil 3D, River and Flood Module, InRoads Planning, Design and Rendering, 5D Project Planning and BIM Construction Management.

### **AutoCAD Civil 3D Survey Workflow Introduction (2 PDH) – Alex Wood**

AutoCAD Civil 3D Settings, Styles, and Labels. This session is an introduction to the Civil 3D Tools for Surveyors. We will cover Civil 3D Settings and Styles, Importing Points, Tools for working with Surfaces, and for Creating and Labeling Linework and Parcels for Survey documentation. AutoCAD CIVIL 3D Survey Features. This session is an introduction to the Civil 3D Survey Tools. We will cover some basics of working with Survey Databases and Automated Linework. Specifically for attendees New to the AutoCAD Civil 3D Survey workflow, the handout will provide step-by-step procedures allowing the attendees to return to work with tools to immediately implement topics discussed. This includes setting up AutoCAD Civil 3D Templates, Styles, and Settings for Survey documentation, setting up for proper line work coding, and automating survey linework directly from field surveys.

**Alex Wood** – Selby's is Montana's only locally owned Autodesk Reseller and the only Montana Reseller with Local Representatives. Selby's provides Sales, Support, and Training for most Autodesk software. Selby's sells large-format plotters and plotter supplies, as well as providing large-format high volume printing services, Survey equipment and GPS, Survey and Construction lasers, and sells Survey and Construction supplies from Vests, to Lath, to flagging and marking paint, among many other services. Selby's has been serving the Big Sky since 1952.

### **BPA Right-of-Way Surveys – Retracing High Voltage Strip Descriptions (2 PDH) – Philip A. McNinch & Kelly L. Miller**

The Bonneville Power Administration (BPA) operates and maintains over 15,000 miles of high-voltage transmission lines, and BPA's Rights-of-Ways stretch across the Pacific Northwest. This presentation will explain what you need to know --- and how to get the information you need --- when surveying a BPA Right-of-Way. The session will explore land descriptions used by BPA to acquire Right-of-Way and assess survey methods used to retrace strip descriptions. This discussion will highlight some unique aspects of BPA Right-of-Way surveys and will show you how to use the records available, both by request and online, to support your survey.

**Philip A. McNinch, PLS** - Phil is a registered Professional Land Surveyor in the state of Washington, and is employed as a land surveyor for the Bonneville Power Administration. He received a BS in Civil Engineering Technology in 1996 from Southern Polytechnic State University in Marietta, Georgia, then went on to survey in New Mexico, Colorado, Alaska, and Oregon before joining BPA in 2007. Phil's current work at BPA includes right-of-way and encroachment surveys, transmission line projects, and substation control surveys.

**Kelly L. Miller, RPLS, EIT** - Kelly has been surveying for over 10 years and is licensed in Arizona and New Mexico. She received dual BS degrees in both Civil Engineering and Land Surveying and Geomatics Engineering from Purdue University in 2006. She then went on to work in the private sector for 5 years before coming to the Bonneville Power Administration in 2011. Kelly currently manages the field side of the surveying department at BPA.

### **UAV's and the Surveyor: Creating Actionable Data (2 PDH) – Bill Edmonson**

This presentation is a survey of methodology for collecting actionable geo-spatial data for a variety of industries using Unmanned Aerial Vehicles with an emphasis on the resulting data types and how they may be used commercially.

#### **Bill Edmonson - Lead Mapping Division Product Specialist**

I am experienced with a variety of military and domestic Unmanned Aerial Systems including aircraft, communication systems, automated flight systems, advanced GPS systems and national airspace rules. I have 6 years' experience in research-development, operations and instruction on UAV mapping systems as they apply to a variety of industries. As Lead Product Specialist I travel throughout the western US presenting in tradeshow and conventions as well as advising RDO account managers and their clients in a variety of survey related industries. I am an active general aviation licensed FAA Private Pilot and have extensive military style training in UAV (Drone) operations. I hold two certifications as a DHS/NATO UAV (Drone) Pilot and have extensive experience in Full Motion Video, Photogrammetry, IR, and Still Photography payloads. I have also received my Part 107 Remote Airman's Certificate and FAA Section 333 exemption to fly UAVs commercially in the U.S. I enjoy public speaking, developing curriculum, sales strategies and working with businesses of multiple industries.

**Speaker - Jim Foster 2-22-18 Title TBA (1 PDH)**