

President's Message

We hope to see you soon at GIS in the Rockies!

Jeff Young

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ASPRS Rocky Mountain Region President

Outstanding University Achievement in LiDAR Award

Nominate a University, Student or Group by
October 15!

[International LiDAR Mapping Forum \(ILMF\)](#)
and [Lidar Magazine](#) are excited to announce the
second annual Lidar Leader Awards, which will be
presented at ILMF, taking place January 28-30, 2019
in Denver. This is an exciting opportunity for the
geospatial community to recognize the amazing
work being done every day by university
students like you.

The joint effort between ILMF and Lidar Magazine
will honor some of the people working with lidar
technology who have made a significant impact on
the industry. New this year, we have added a
University Award and invite you to nominate a
university, student, or group for this award. It is an
excellent opportunity to showcase innovative
strategies and gain recognition among fellow lidar
professionals for some outstanding work.

Selected nominees in this category will take part in a
lightning round presentation in front of a panel of
experts and conference attendees at ILMF, and will
be evaluated for the following awards:

-) Outstanding University Achievement in Lidar
 - o Most Commercially Feasible
 - o Most Innovative Use of Lidar
 - o People's Choice

If you know of a university, student or team within
the university that should be considered for the
Outstanding University Achievement in Lidar award,
take a moment to review our submission criteria and
nominate them at:

www.lidarmap.org/lidar-leader-awards

The winners will be recognized and presented with
their award during an awards ceremony at ILMF
2019.

Nominations must be received by October
15th, 2018 in order to be considered. Please don't
hesitate to contact us if you have any questions or
recommendations.

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GIS in the Rockies Conference

31st Annual "GIS in the Rockies" Conference
September 19-20, 2018
(Workshops will be held on September 18)
Denver, Colorado
Hilton Denver Inverness (Denver Tech Center)
[Conference Website](#)

Join ASPRS Rocky Mountain Region, GIS Colorado, Professional Land Surveyors of Colorado, and Rocky Mountain URISA September 19 & 20, 2018 at the [Hilton Denver Inverness](#) for [GIS in the Rockies](#) - the Rocky Mountain West's premier geospatial information and technology conference.

The 31st annual GIS in the Rockies promises to be the best ever, offering an exceptional, content-rich conference.

2018 CONFERENCE HIGHLIGHTS INCLUDE:

- FULL PROGRAM OF EVENTS with outstanding SESSIONS & POSTERS

- EDUCATIONAL & ENTERTAINING EVENTS:

- J Mobile and Aerial Imagery Fast Data Collection Demos
- J Drone Demos and Drone Giveaway
- J National Geographic's Giant Map of Colorado

- 2 DYNAMIC KEYNOTES:

- [Saila Hanninen](#), who leads partnership efforts for [Waze](#) in the Rocky Mountain region. She has been with Waze since 2016, where she is excited to be a part of a brand that is deeply invested and innovating in the transportation industry and the future of driving. Saila recently moved to Denver from NYC. Prior to joining Waze, she spent 13 years as a marketing and advertising executive with Fox Sports Net, Turner Broadcasting, and Google.

- [Cory Reppenhagen](#), meteorologist and journalist at [9News](#) Colorado (KUSA-TV). A native Coloradan, Cory got hooked on severe weather and storm chasing, leading to a career first as a video journalist, and then forecasting and reporting on the weather as a meteorologist. At 9NEWS, Cory is the "utility infielder" of the weather department, chasing severe weather and storms in Colorado's mountains and out on the plains.

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- CAREER DEVELOPMENT ACADEMY -

Mock Interviews, Resume Review, Career Topic Roundtables. Join us at the Career Development Academy (CDA) on Thursday afternoon, September 20, 2018!

This year's CDA will offer presentations by Richard Serby of Geosearch, Inc. followed by mock interviews with GIS Professionals (timeslots are limited).

The interactive session is designed for any individual seeking to, or anticipating, transition from one stage of their career to another. Students, early career professionals, and seasoned GIS specialists are all invited to participate. Attendance is complimentary and conference registration is not required to participate in CDA.

Sign-ups for mock interview slots will begin Wednesday morning at the conference. CDA will begin at 2pm in the Aspen room.

- EXCEPTIONAL SLATE OF EXHIBITORS

- PRE-CONFERENCE PROFESSIONAL WORKSHOPS (TUE, 9/18) – Stay on top of evolving technology!

- OUTSTANDING CONFERENCE SOCIAL EVENT (WED, 9/19) - Networking, Geo Quiz, etc.

- POST-CONFERENCE TOURS (FRI, 9/21)

[Join us](#) September 19 & 20 for the 31st Annual GIS in the Rockies Conference - the Rocky Mountain West's premier geospatial information and technology conference. (Pre-Conference Workshops 9/18)

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Pre-Conference WORKSHOPS

GIS in the Rockies is pleased to offer pre-conference workshops related to important topics in the GIS industry on Tuesday, September 18, 2018. There are a limited number of openings for each workshop, so please sign up for a workshop during the registration process. If you have already registered for the conference, you can modify your existing registration to add a workshop.

Introduction to Landsat Data Collections

Time: 1:00 pm – 4:30 pm

Instructor: Ramesh Sivanpillai, University of Wyoming

Cost: \$25 [NOTE: we will donate the fees to ASPRS-RMR (50%) and GISITR Student Scholarships(50%)]

Location: Room 1

Landsat series of satellites (<http://landsat.usgs.gov>) provide invaluable Earth Observation data for monitoring and mapping natural and man-made resources. These data are available to users from the US Geological Survey (USGS) at no-cost since 2008. Starting in 2016, USGS started organizing Landsat data in a tiered collection structure based on data quality and level of processing. Users interested in time-series analyses will be able to evaluate and select Landsat images base on this tiered structure. This lecture and demonstration-style workshop will introduce remote sensing concepts and characteristics of Landsat data and products such as vegetation indices, burn severity products etc. Participants will also learn on how to search and download these data and products from USGS archives. Upon successful completion participants will receive a completion certificate.

Intended Audience: GIS practitioners and others familiar with spatial (raster and vector) data. Tech requirements: Participants must provide their own laptops.

Presenter Bio: Ramesh Sivanpillai is a research scientist at the University of Wyoming. He has more than 29 years of experience in working with remotely sensed and related geospatial data in the US and abroad. He manages the WyomingView program (www.uwyo.edu/wyview) at UW, whose primary goal is to promote remote sensing science and applications through education and applied research.

Learning Objectives: At the end of this workshop, students will be familiar with the following topics: raster data characteristics (spatial, spectral, temporal and radiometric) – unique characteristics of Landsat data – derived products (vegetation indices) – terminology of Landsat data archive – searching USGS data archives.

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Working with SQL Spatial in PostGIS with QGIS Visualization

Time: 8:00 a.m. – 12:00 p.m.

Instructor: Matthew Baker and Dave Murray (Denver Public Schools)

Cost: \$125

Location: Room 1

This workshop will give an overview of a PostgreSQL database hosted in the Amazon cloud, how to write basic queries against non-spatial relational data using DataGrip, then introducing the PostGIS spatial data and functions to spatially enable data and queries. From there, the basics of creating and managing data using SQL, and how to visualize the results using QGIS. Topics and workflows include counts, grouping, and filter operations, basic geometry operations and coordinate system transformations, exporting results to a spreadsheet, calculating area, spatial intersects, point-in-polygon, geometry transformations with lines and centroids, creating tables of results, accessing and styling PostGIS layers in QGIS, and creating static map images.

Intended Audience: Users of QGIS looking to integrate PostGIS into their workflows; ArcGIS users looking to learn about spatially-enabled relational databases; Database analysts looking to learn about spatial data.

Tech requirements: Basic understanding of spatial data and database concepts. Participants must provide their own laptops (Windows, Mac, or Linux) with Java 8 installed.

Presenter Bio: Matthew manages the spatial data infrastructure for Denver Public Schools under the Department of Planning and Analysis. Working as a mini-urban planning firm, the team supports the analysis used by the District to plan for new schools and boundary changes, analyzing demographic changes, mapping, analysis, reporting, data maintenance and delivery to the enterprise.

Learning Objectives: Users will have a clear understanding of the use of the various parts of the PostGIS/QGIS system, and how the two interact with one another through the use of SQL and the relational database.

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Advanced OpenStreetMap

Time: 1:00 pm – 3:00 pm

Instructors: Mike Thompson
(Humanitarian OpenStreetMap Team)

Fee: \$25

Location: Room 3

This is an enhanced and updated version of the workshop of the same title from the 2016 GISITR. OpenStreetMap (OSM) is the collaborative project to create a free editable map of the world. Among many other uses, OSM is being used to support humanitarian missions around the World. Many GIS professionals, academics and students have been introduced to OSM through humanitarian mapathons where an easy to use, in-browser editor called iD is usually used. During this workshop participants will discover through hands on exercises how to access the power of the more advanced JOSM (Java OpenStreetMap) editor. Participants will explore JOSM's building tool, extrude mode, way accuracy mode, support for topology, validation function, search function, filtering, and support for OSM "relations." Participants will first gain an understanding of the unique and flexible OSM data structure that has allowed the project to evolve over its 13-year existence to cover not only its namesake streets, but points of interest, buildings, land cover, land use, trails, aeronautical features, maritime features and 100's of other types of map features.

Understanding of the OSM data structure will enable the participant to quickly grasp the concepts of JOSM. The knowledge attained will enable more efficient contributions to OSM and enable them to make more effective use of OSM data in their professional / academic careers.

Intended Audience: GIS professionals, academics and students who wish to learn more about OpenStreetMap.

Tech requirements: Participants must provide their own laptops (Windows, Mac, or Linux) with Java 8 installed.

Presenter Bio: Mike Thompson has been involved with OpenStreetMap (OSM) since 2009, during which time he has added or edited tens of thousands of OSM map features as a volunteer. These map features range from hiking trails in Colorado, to yurts (locally called "gers") in Mongolia. Mike has hosted humanitarian "mapathons" at many locations in Northern Colorado and Southern Wyoming including at Colorado State University, the University of Northern Colorado,

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Front Range Community College, and the University of Wyoming. Earlier this year Mike was formally elected as a voting member of the Humanitarian OpenStreetMap Team (HOT). Mike has a degree in Computer Science from Baldwin Wallace University, and has been employed in the geospatial industry since 2000. Mike is currently with CACI in Fort Collins where he does geospatial research and development.

Learning Objectives: After participating in this workshop attendees will be able to: Compare the OpenStreetMap data structure to the structure of traditional GIS data; Efficiently edit OpenStreetMap data to support humanitarian projects; Effectively validate the work of other OpenStreetMap editors; Modify the topological relationships between OpenStreetMap geometry elements; Obtain and translate OSM data to a GIS format.

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Introduction to Developing Mapping Apps with JavaScript

Time: 1:00 pm – 4:00 pm

Instructors: Andy Gup

Fee: \$25 –

[NOTE: we will donate the fees to GIS Colorado]

Location: Room 2

This is a great opportunity to expand or kickstart your geospatial coding skills. Learn how to convert simple datasets into web-enabled services, and then integrate the services into custom mapping applications built with the ArcGIS API for JavaScript. We'll also explore basic concepts of application architecture, you'll get hands-on debugging experience, which is a critical skillset for all developers, and discuss ways of getting help from the community.

Intended Audience: GIS users or students who are looking to expand their coding knowledge.

Tech requirements: Laptop with the latest version of Chrome desktop browser and sign up for a free [ArcGIS Developers](#) account.

Presenter Bio: Andy Gup is a technical product manager for the ArcGIS API for JavaScript. He has been involved with web mapping APIs since their inception.

Learning Objectives: You'll learn the basics of converting data into web-enabled services and building cool web mapping applications that use them.

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Hands On: Building Effective Web Apps Using ArcGIS

Time: 8:30am – 11:30am
Instructors: David Vaillancourt
Fee: \$25 –
[NOTE: we will donate the fees to GIS Colorado]
Location: Room 2

It can be a challenge keeping up with the options for creating web applications using ArcGIS. During this hands-on workshop, we'll create and deploy beautifully stunning web mapping apps using the operations dashboard and the web app builder.

Intended Audience: Learn how to configure apps using the Web App Builder and the Operations Dashboard

Tech requirements: Basic understanding of ArcGIS online recommended, but not required. A bonus would be to have an idea of a project you want to work on during the exercise. Laptops are required for exercises.

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Going Paperless with Survey123 for Data Collection and Inspections

Time: 8:00am – 12:00am
Instructors: Karissa Giles, Frontier Precision
Fee: Free
Location: Room 3

Survey123 is a form-centric data collection software for real-time or offline data collection that is incorporated with the ArcGIS Online or Enterprise platform. This will be a hands-on learning experience for creating a mobile deployable survey through Survey123 Web Designer and Connect. We will cover the XLSForm basics to design and automate the survey to create a data-driven form.

Intended Audience: GIS users or individuals interested in turning paper forms into electronic forms.

Tech requirements: Laptop with Survey123 Connect installed and an ArcGIS online account. Participants must provide their own laptops.

Presenter Bio: Karissa has an Associates of Arts in Agriculture, which included GIS and GPS course work, from the College of Southern Idaho. She started in the geospatial technology industry in 2012. Karissa is a GPS/GIS Services Specialist at Frontier Precision, which includes creation, management and deployment of maps, apps, geodatabases and training for our GIS professional services as well as support on Trimble, Esri, Juniper and other GPS/GIS hardware and software.

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Coordinate Systems and Projections: Grid vs. Ground

Time: 8:00am – 12:00am
Instructors: John Hunter, PLS
Fee: \$50
Location: Room 4

Why are coordinate systems and projections important for GIS? Spatially derived, analytics are dependent upon how well the data is projected onto a flat surface. The amount of distortion in a projection, commonly referred to as Grid V. Ground, is an important consideration that plays a vital role in the accuracy of the GIS and especially spatially derived analytics.

This workshop will take a comprehensive approach starting with geocentric reference frames, geodetic (global) coordinate systems such as Latitude and Longitude, state plane projections, and finally localized ground projections. This workshop will also cover the role that elevation (altitude) plays in increasing the amount of distortion in a projected coordinate system as well as the impact on the accuracy of spatially derived analytics in a GIS. The workshop will conclude with a study of the future of State Plane Coordinate Systems and how they will differ from previous definitions.

Intended Audience: Beginner to Advanced GIS User.

Tech requirements: None

Presenter Bio: John Hunter, PLS. 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, and Geodetic Surveys.

John holds a B.S. in Business Management from Colorado State University, he is the Colorado Geomatics Coordinator for NOAA NGS, and a Project Surveyor at Denver Water, which has allowed him to manage surveying and geomatics projects that align with his areas of expertise.

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Finding the Hidden Asset: GIS / AR Hands-on Workshop

Time: 1:00 pm – 4:00 pm

Instructor: Brian Collison and Paul Hoemke

Cost: Free

Location: Room 4

Many municipalities have open spaces and natural land features with hidden assets. Augmented Reality simplifies the documentation of these assets into data sets. In this workshop we will explore current GIS trends for locating these hard to find assets. It will include practical demonstrations that show how to equip field crews with the technology they need to overcome the limitations of 2D maps in the field.

Intended Audience: GISP, GIS Managers, Field Technicians, Municipal Water or Public Works Technicians.

Tech requirements: Optional – laptops

Presenter Bio: Brian Collison, VP of Sales

Brian Collison is a VP of Sales who helps his clients and prospective business partners fashion solutions that address concerns and fill needs. Brian believes in earning the trust and business of my clients and partnering with them will make them successful. This has led to measurable results of increased sales through year-over-year growth for existing clients and in new account acquisition. His clients, in turn, have experienced higher profits, leading to long-term relationships that are based on mutual benefit and trust. Brian holds a B.S in Marketing and Accounting from Colorado State University.

Co-Presenter: Paul Hoemke, Director of Operations

Paul Hoemke is Director of Operations, and works with GIS professionals to provide smooth

integrations of the Argis Lens with existing processes within organizations. Paul advocates for continuous product improvement through quality testing and the power of swift feedback loops. Paul has guided numerous organizations as they have transitioned into using the Argis Lens, including both public and private enterprise accounts with strict security protocols. Paul is trained for technical leadership, enterprise Software-as-a-Service support, and security and compliance. In addition to his Professional Scrum Master credential, he also holds the Lean IT Kaizen certification, focused on problem-solving and continual improvement.

Learning Objectives: Understand what AR has to offer to improve location of assets in the field. Hands on training for using AR to document in the field assets. Documenting hidden assets within ArcGIS using Collector.

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Post-Conference Tours

GIS in the Rockies is excited to offer post-conference tours on Friday, September 21, 2018. There are three outings offered this year which are designed to provide a variety of entertaining and educational experiences related to GIS, Geology, History, and even Chemistry! Tours are spaced apart throughout the day so that if you so desire, you can easily attend them all. Check out the descriptions below for more information.

Tours are located in Boulder, Nederland, and Denver, Colorado (in respective order). Attendees are responsible for transportation to and from the locations. There are a limited number of openings for each tour, so please sign up during the registration process. If you have already registered for the conference, you can modify your existing registration to reserve your spot for the post-conference tour of your choice.

National Oceanic and Atmospheric Administration (NOAA)

Located in Boulder, Colorado, NOAA supports a powerful array of research, data collection and dissemination programs. The excursion will begin with a brief sightsee of the building. Following this will be a discussion with some of NOAA's Digital Elevation Model (DEM) developers, customized for the GISITR group! These developers generate

seamless bathymetric – topographic DEMs that are used for coastal inundation modelling. The tour will finish at the “Science on a Sphere” (SOS), a giant animated globe that is must see for all. Projected images on the SOS will continue to focus on the topic of the DEM, and will also include “eye-candy” images picked especially for our crew that will undoubtedly blow your mind.

Tour Director: Chuck Anderson
Maximum Capacity: 40 people
Time: 10:00 am (Security Screening);
10:30 to 12:00 pm (Tour)
Cost: Free
Meeting Location: David Skaggs Research Center
325 Broadway Boulder, CO 80305
Additional Information: Visitor Center Security will no longer be able to accept IDs from some US states for site access. Please see [security procedures](#) for details. Parking recommendations and other transportation options to follow. [National Oceanic and Atmospheric Administration \(NOAA\)](#)

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Hard Rock Mining Tour

Mining is a vital part of Boulder County's history. Three hundred million years ago, the Ancestral Front Range uplifted about 30 miles west of where the current Front Range is today. Weathering and erosion wore those ancient peaks away and buried them in sediment and debris thousands of feet thick. Dinosaurs evolved and went extinct. Shallow seas advanced and retreated. Then uplift activity happened again 65 million years ago, which set the stage for hard rock mining heritage. Hard rock mining was Boulder County's leading industry, attracting the majority of new residents to the mineral-rich mountains during the boom of the late 1800s. Gold, silver, lead, zinc, and tungsten have all been part of Boulder County's colorful mining history.

The tour will begin at the [Nederland Mining Museum](#), which is an educational delight in itself. From there, vans will be ready to drive our group to a couple of relic mine sites on Boulder County Parks and Open Space properties. You will learn about the rich history of each site as you stand on the same ground and see the remnants of structures and tools which are fundamental pieces to the stories you'll hear. You can take a [virtual tour](#) to get a glimpse of what you'll learn about.

Tour Director: Sheryl Kippen
Maximum Capacity: 20 people
Time: 2:00 – 4:00 pm
Cost: Free
Meeting Location: Nederland Mining Museum, 200 N. Bridge Street, Nederland, CO 80466.
Additional Information: Van transportation will be provided and will leave from and return to the Nederland Mining Museum. Recommendations for fun lunch options in Nederland to follow.

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Laws Whiskey Distillery

“A great story, like a great whiskey, is meant to be shared.” This tour is the grand finale of the conference, in the true spirit of TGIF, where you can exchange stories with your conference cohorts in a different kind of environment.

This tour consists of an in-depth educational session of the whiskey-making process at Laws Whiskey House. Each batch is milled, cooked, fermented, distilled, and aged on-site, utilizing heirloom grains from family-owned Colorado farms. You will learn exactly where the grains grow, and the entire processes of mashing, fermentation, distillation, and aging. Following your educational session, you will tour the production facility and rack house and finish with a formally-guided whiskey tasting. And so the stories go ...

Tour Director: Crystal Barrios
Maximum Capacity: 15 people
Time: 5:30 – 7:00 pm
Cost: \$10.00/person
Meeting Location: Laws Whiskey House, 1420 South Acoma Street, Denver CO 80223
Additional Information: Must be 21 or older. The \$10 admission is reimbursed in the form of Laws store credit when you check in with a valid ID. Transportation option details to follow.

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About GIS in the Rockies:

GIS in the Rockies is the Rocky Mountain West's premier geospatial information and technology conference. The conference offers opportunities for industry professionals to learn more about geospatial technology issues and business-centric strategies supporting every vertical market touched by the geospatial industry. Historically, attendees

have included representatives from local, state, and federal government, the utilities industry, environmental services, land surveying professionals, the oil and gas industry, students, educational practitioners, and retail and business marketing professionals. Whether you are a seasoned GIS professional or are new to the industry, GIS in the Rockies Conference will offer industry insights and opportunities for everyone.

Local chapters of the following member professional societies are involved in conference planning: [American Society for Photogrammetry and Remote Sensing \(ASPRS\)](#), [GIS Colorado \(GISCO\)](#), [Professional Land Surveyors of Colorado \(PLSC\)](#), and [Urban and Regional Information Systems Association \(URISA\)](#).

The conference is organized by the GIS in the Rockies Planning Committee. The planning committee generally consists of volunteer GIS professionals who currently work in the industry, although the committee is not limited to GIS professionals. If you are interested in joining the planning committee or have questions about the committee, please [contact us](#).

Social Networking Events

Let's get to know each other better! We have started holding monthly Social Networking Events (aka Happy Hours) on the Last Friday of each month from 4-7 pm. Note we are considering changing this to the Last Wednesday to avoid interfering with your weekends.

So far we have been gathering at local airports, moving around the Denver metro area and CO Front Range. We plan to include locations that have rooftop decks with expansive views – let us know if you have ideas for a good spot! We encourage those of you in other areas around Montana, Wyoming, New Mexico, and Colorado to organize your own get-togethers, either at the same date/time or whenever works best for you. Contact [Sheila](#) with ideas, suggestions, or questions. We hope to see you soon!!

Sheila Pelczarski
Communications Coordinator
ASPRS Rocky Mountain Region

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Stay tuned for upcoming Technical Tours and Social Events! Check out new professional opportunities and upcoming events on the Rocky Mountain Region [Website](#) ...

Welcome New Members!!

Steven Hartung, Ph.D.
Whit Haynes
Richard Lee
Melissa Martin
Jill Wrenn

Student Rebate Offer

ASPRS Rocky Mountain Region will reimburse \$25 of the \$50 cost of student membership, so your net cost is only \$25 for all the benefits of membership in the Society!

Download the Student Membership Rebate Form at <http://www.asprs-rmr.org> (on the Student Chapters page). Here's the best part: This offer from the Region is good for every year you are a full-time student!

GeoBytes

In addition to the ASPRS Webinars, our organization also offers free online seminars presented by ASPRS and sponsored by the ASPRS GIS Division, in cooperation with AAGS and CaGIS.

Attention those seeking ASPRS Certification: ASPRS Online Seminars are a great way to gain Professional Development Hours! [Click here to learn more](#)

[Rocky Mountain Region Website](#)

[Contact the Rocky Mountain Region](#)
