

Issue 1

Spring 2015

Issued Quarterly

Newsletter of the Rocky Mountain Region of ASPRS, serving Montana, Wyoming, Colorado, and New Mexico

President's Message

Dear Rocky Mountain Region members of ASPRS,

This year is flying by with great speed. The Rocky Mountain Region (RMR) is gearing up for an exciting season of events. On the 27th of April from 10:00 AM – 2:00 PM at Pike's Peak Community College (PPCC) in Colorado Springs, there will be a **GIS Information Fair**. **Devin Johnson**, the PPCC GIS Department Chair, has asked for RMR representatives to attend their GIS Information Fair and discuss how membership in ASPRS can benefit their students. **Harold Schuch** and **Michael Tuffly** will be attending this event. An ASPRS-RMR booth will also be present at the GIS Information Fair, so please attend if you can.

On May 4 – 8 in Tampa, Florida the **ASPRS Annual Conference** will occur. The Joint Agency Commercial Evaluation (JACIE) Workshop will be held concurrently with the conference in Tampa. Several of the Board of Directors from RMR will be attending this exciting event.

The 28th annual **GIS in the Rockies Conference** (September 23-24) at the Cable Center in Denver is building momentum and should be a fantastic event. Please stay tuned for other events throughout the year.

This year the Region Board is strong with respect to academics and a New Mexico presence. That is, RMR has two new board members from New Mexico. These new board members are **Dr. Chris Lippitt** (University of New Mexico, Albuquerque) and **Dr. Ahmed Elaksher** (New Mexico State University, Las Cruces). In addition, I would like to welcome **Harold Schuch** from GeoCounsel Inc. as a new RMR Board member. Moreover, I would also like to welcome all the returning RMR Board members.

Our annual dinner meeting had to be postponed due to inclement weather and other circumstances. Stay tuned for news of the revised date for this event. In the meantime, all the Region scholarship awards have been distributed to the winners and the Board members have been sworn in via teleconference by **Sheila Pelczarski**, RMR Communications Coordinator.

In closing, I would also like to announce that the Rocky Mountain Region has won **Second Place** for the **National ASPRS Region Website of the Year** award for 2014. This award will be presented at the ASPRS Annual Conference in Tampa, Florida on May 5th. This award could not have been achieved without the assistance of all the RMR Board of Directors. However, I would like to identify the key person in the website management who is none other than Sheila Pelczarski. Without Sheila, the RMR would not be receiving this award. So thank you very much Sheila for all your efforts. Please take the time to visit the award winning [RMR website](#).

Thank you,
Dr. Michael Tuffly
Rocky Mountain Region President

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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 News & Events page). Here's the best part: ***This offer from the Region is good for every year you are a full-time student!***

National Director's Report

State Transportation Authorities (STAs) and ASPRS Relationship: A Road Well Traveled

STAs and ASPRS have had a long, complimentary history. MAPPS, as a contracting stakeholder, circulated a recent survey conducted by the Federal Highway Administration (FHWA). I found the survey quite insightful regarding use of public and private sector resources state by state. The survey is publically available [here](#) and [here](#).

Below is a survey summary table provided in FHWA memoranda. This table very much describes activities of many of our members. For those working for, or contracting with STA's, this survey is a very informative resource that provides great detail, state by state.

SERVICE	STAs with in-house capabilities
Aerial photography	14
Aerial digital data collection	8
Airborne GPS services	5
Boundary (cadastral) surveying	40
Cartographic services	27
Charting	2

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SERVICE	STAs with in-house capabilities
Digitizing	18
Engineering surveying	40
GIS consulting and implementation	23
GPS surveying	42
Geodetic surveying	38
Hydrography	15
Image processing	17
Orthophoto production (digital and conventional)	26
Photogrammetric mapping	27
Photo processing	9
Planimetric mapping	32
Remote sensing	11
Right-of-way surveying	42
Terrestrial or close-range photogrammetry	5
Topographic mapping	40
Scanning	26

Jeffrey M. Young, RMR National Director

Rethinking the ASPRS Annual Conference

If you have not been to an ASPRS conference in a while, come to this one -- you will be surprised! IGTF is more than a mere rebranding – it is a rethinking and reengineering of the ASPRS annual meeting into a more modern and energized conference format. The venue is tasteful and business-friendly, and we are continuing with the changes that were so well received at the recent UAS Mapping 2014 and Pecora 19/ISPRS meetings. IGTF features fewer simultaneous sessions, two exciting plenary sessions, more networking time, and more exhibitor contact. Special attention has been given to ensure high quality of the technical presentations – both oral and poster. Whether you work in industry, government, or academia; whether your interests are in remote sensing, UAS, photogrammetry, GIS, LiDAR, machine vision, cartography, or geodesy; whether your applications are in transportation, energy, environmental science, defense, disaster response, education, resource management, or land use planning, there will be something for you at this conference.

Check out the attendee-friendly organization of the [technical program](#).

To exhibit or sponsor the conference, contact Sheldon@asprs.org.

GIS in the Rockies: Abstracts Needed

ASPRS-RMR is promoting a presentation track at the GIS in the Rockies conference this year. We need your help filling the track with interesting topics in remote sensing, photogrammetry, or unmanned aerial systems. Submit your abstract at: <http://bit.ly/GISitR>

Hurry, the abstract and poster submission deadline is May 1, 2015!

GIS in the Rockies returns to The Cable Center in Denver in 2015, offering our best opportunity yet to stay abreast of industry trends and technologies, grow your knowledge base and expand your

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networking reach. The conference looks forward to hosting GIS professionals, educators, students, and those just interested in learning more about GIS.

The conference will be held September 23-24, 2015 at the Cable Center in Denver, Colorado.

If you would like to discuss potential topics and the abstract submission process, please contact RMR Regional Directors [Tillman Saylor](#) or [Mark Bowersox](#).

GIS Thriving in Montana

Montana has been home to a vibrant GIS community since the early 1980s. What began as the Montana GIS Users Group with a few dozen members grew steadily, and in 2006 became the [Montana Association of GIS Professionals \(MAGIP\)](#). A statewide GIS coordination effort in the early 2000s also led to the formation of the Montana Land Information Council (MLIAC), and to the passage of the Montana Land Information Act. MLIAC is a Governor's advisory council composed of representatives from universities, private sector businesses, Federal, State and local governments. In addition to providing oversight and direction for the Montana Spatial Data Infrastructure (MSDI), the Council administers the grant program established in the Montana Land Information Act that funds local and statewide GIS projects. More information about GIS coordination activities in Montana can be found [here](#).



The Montana Spatial Data Infrastructure is made up of fifteen "framework" geographic databases vital for making maps of Montana and understanding its geography. Seven of the databases are federally defined framework datasets and the other eight were selected as additional framework layers by the MLIAC. The most recent addition to the MSDI is the Climate dataset produced by the Montana Climate Office at the University of Montana. The climate data collection includes daily meteorological measurements, and a number of common satellite-

based terrestrial products. The inclusion of climate data into the MSDI was recognized as a step outside of the traditional concepts of “framework” layers, but after months of thoughtful discussion, the Council members decided that this suite of time-critical information warranted the MSDI designation. The MSDI datasets and a wealth of other GIS data for Montana are available from the [Montana Geographic Information Clearinghouse](#) at the Montana State Library.

To meet the needs of GIS users and professionals around our large rural state, MAGIP sponsors annual spring meetings in locations selected to reach the less populated communities in eastern Montana, where GIS professionals often have difficulty traveling to events in central and western Montana cities. This year’s spring meeting will be held May 12-14th in Miles City. The agenda includes presentations with subjects ranging from using multi-sensor precipitation data for environmental monitoring, to NextGen 9-1-1, to humanitarian GIS and the Ebola outbreak. Each year MAGIP also sponsors a fall technical session with workshops and presentations selected to address specialized information needs identified by the group’s members. Hosting of the annual Intermountain GIS conference is shared with the Idaho-based Northern Rockies URISA chapter. The 2015 conference will be held October 18-22nd in Spokane, WA and the 2016 conference is scheduled for April 7-11 in Great Falls, MT.

Education is also a primary focus of MAGIP and the organization awards K-12 curriculum grants and college scholarships every year. In 2015 these include a \$2,000 scholarship to students studying GIS at a Montana college or university and two \$1,000 grants to assist K-12 educators to support GIS-related curriculums.

The use of geospatial technology and remote sensing data in Montana continues to grow, and along with it the close-knit community of GIS professionals who won’t let the many miles between themselves and their colleagues be an obstacle to communication and innovation.

Catherine Maynard, RMR Regional Director

Upcoming ASPRS Webinars

Registration and Additional Information can be found on the [ASPRS website](#).

Conference Report: ILMF

The International LiDAR Mapping Forum (ILMF), held February 23-25th in Denver, has become the premier forum for sharing information on the use of LiDAR ([Laser] Light Detection and Ranging) and Unmanned Aerial Systems (UAS, aka Drones) for a growing number of earth mapping applications. LiDAR data is used primarily for developing elevation models of bare earth as well as ground cover and built structures. LiDAR technologies are expanding and improving rapidly. It is similar to radar in that it involves sending out a signal and measuring the returns back from that signal. There are airborne systems mounted on planes or drones and mobile systems mounted on trucks or vans. Older systems sent out the pulse in a sweeping back-and-forth motion; newer systems send out a circular wave of light energy. Most software is designed to analyze the resulting point cloud of data received, but more and more researchers are analyzing the full waveform for greater information extraction. For example, it is easier to discriminate various vegetation types by using the full waveform data. The numbers of conference attendees and exhibitors were up considerably over last year, reflecting both the uptick in the economy and growing interest in these new technologies.



The ASPRS Hot Topics Session consisted of a succession of speakers, and included an overview of the new manual on Photogrammetric and LiDAR mapping, current initiatives of the ASPRS LiDAR Division, new Topo-bathymetry subcommittee, best practices for Mobile Mapping System data collection and processing, and an open Q&A session. Highlights include: Project registration control is important; GNSS (Global Navigation Satellite Systems) or GPS can be used; a local base station is helpful, or a CORS (Continually Operating Reference Station) can be used instead. Standards for eye safety and for mobile LiDAR mapping are being developed. LiDAR QC is best done with a swath-based approach and planar fitting methods. For vertical accuracy testing – hard vs. soft surface – use a check-point-based approach.

The Opening Session with Keynote Speech 1 was delivered by **Dr. Ronald Segal** of Colorado State University, who spoke on "A Systems Approach to Remote Sensing and Gaining Understanding in Various Applications," and stressed the importance of integrating data from various systems to increase available information. Keynote Speech 2 was given by **Gretchen West** of DroneDeploy, who talked about "UAS and the Internet of Things," with an overview of the development of the UAS/UAV market and future trends in light of the still-being-developed FAA regulations in the US, contrasted by the less regulated international market.

Between the workshops, presentations, exhibit hall, and social events, there were plenty of opportunities for gathering information and networking with other industry professionals. One section of the exhibit hall was dedicated to UAS/UAV/Drones, and there were several different types on display, including fixed-wing and rotor-wing models. A small drone flight inside the hall one afternoon was a highlight. Complimentary copies of the following trade publications were available for the taking: *Apogeo Spatial*, *Earth Imaging Journal*, *GIM International*, *LiDAR News*, *POB/Point of Beginning*, and *xyHT: Positioning and Measurement, Elevated*. This conference is a must-see for anyone interested in these rapidly advancing LiDAR and UAS technologies.

Sheila Pelczarski, Communications Coordinator

Welcome New Members!

Holly Baker
 Matthew R. Bobo
 Brian Buechler
 Megan Kathleen Caldwell
 Steve Cabiedes
 Gino Castillo
 Joseph Clark
 Christopher Cole
 Jake Dialesandro
 Thomas Fogarty, Jr.
 Alexander Frank
 Jason Frels
 Wendy Goetz

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Kelly E. Grooms
 Brian Hadley
 Jonathan Harris
 Christina Hoberg
 Chris Huston
 Lee F. Johnson
 Emily Kachergis
 Mark Kautz
 Darcee Killpack
 Richard Kusaba
 Sarah Lamagna
 Brandon Lemire
 Jung-kuan Liu, Ph.D.
 Brian Lottman
 Susan Lowrance
 Bob B. Machus
 Neffra Matthews
 Randy A. McKinley
 Di Ana Mendiola
 Joel G. Murray
 Tommy Noble
 Sean Perry
 Steve C. Raber
 Mark Roberts
 Adrian Sanchez
 Austin O. Stevens
 Michael H. Story
 Jerry Tagestad
 Tammira Taylor
 Jennifer Turner-Valle
 James A. Valenza
 James White
 Chelsie Worth

RMR Website Awarded!

The Rocky Mountain Region has placed second in the ASPRS Region Website of the Year Award for 2014. This award includes a hand-embossed certificate. We are proud to receive this recognition!

Presentation of the Region Awards will take place during the ASPRS 2015 Annual Conference in Tampa, Florida at The Tampa Marriott Florida Hotel on Tuesday, May 5th at the Welcome Social reception at the Florida Aquarium from 6-9pm.
