

**MINUTES OF MEETING OF THE  
ARIZONA GEOGRAPHIC INFORMATION COUNCIL  
LIDAR WORKGROUP**

**DRAFT**

A public meeting of the Arizona Geographic Information Council was convened April 27, 2021 at 2:00 PM on Webex. Present at the meeting were the following members or designees of the AGIC Data Committee - LiDAR Work Group:

**Table 1: Committee Voting Members**

<b>Member</b>	<b>Agency/Organization</b>	<b>In Attendance</b>
Mark Christiano, Co-chair	US Forest Service	Yes, Phone
Jenna Leveille, Co-chair	AZ State Land Department	Yes, Phone
Kevin Blake	Yavapai County	Yes, Phone
Mary Darling	Darling Geomatics	Yes, Phone
Kimberley Denney	Atlantic	Yes, Phone
Craig Erdman	Geo Engineers	Yes, Phone
Benjamin Hickson	Pima Association of Governments	Yes, Phone
Keith Larson	USDA NRCS	Yes, Phone
Arron Lee	Merrick & Company	Yes, Phone
Roses Lockwood	Campbell Global	No, without notice
Jason Nyberg	Quantum Spatial	Yes, Phone
Eric Shreve	ADOA - 911	No, without notice
Nikolas Smilovsky	ASU/Bad Elf	No, without notice
Travis Woolley	The Nature Conservancy	Yes, Phone

**Table 2: Public At-Large**

<b>Name</b>	<b>Agency/Organization</b>	<b>In Attendance</b>
Brandon Barnett	AZ State Land Department	Yes
Chris Bertrand	Tohono O'Odham Nation	Yes
Ron Birks	Greater Phoenix Orienteering	Yes
Tim Burrows	AeroTech Mapping	Yes
Jason Caldwell	Sanborn	Yes
Joe Cook	AZGS	Yes
Virgil Coxon	AZ Dept of Transportation	Yes
Drew Decker	USGS	Yes
Ralph Falsetto	US Forest Service	Yes
David Holm	Fugro	Yes
Ariel Leonard	US Forest Service	Yes
Phillip Leveille	ASU	Yes

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<b>Name</b>	<b>Agency/Organization</b>	<b>In Attendance</b>
Jared Martin	Sanborn	Yes
Tom Mellin	US Forest Service	Yes
Mark Nigrelli	US Forest Service	Yes
Mariah Modson	AZ State Land Department	Yes
Keith Owens	Fugro	Yes
Chelsea Scott	Open Topography	Yes
Mike Shelton	AZ Dept of Water Resources	Yes
Kristin Straka	National Park Service	Yes
Brandon Van Horn	Yavapai County	Yes

- I. **Call to order:** Meeting was called to order at 2:03 pm; Introductions were made by the committee; ensuring attendance list was managed and quorum established.
  
- II. **Approval of March Meeting Minutes:** March meeting minutes were distributed prior to the meeting via email. Jenna asked for a motion to approve the minutes as written. Ben motioned and Craig seconded the motion. Motion passed unanimously without discussion.
  
- III. **Announcements:** Jenna provided the following announcements:
  - AGIC Education and Training Symposium
  - [AGIC Natural Resources Presentation Series](#) – April 28, 2021 1-4PM
  - [AGIC/Esri Hands-on Training](#) – May 5, 2021 9AM-12PM
  - [AGIC Council Meeting](#) – May 6, 2021
  - Esri Imagery and Remote Sensing Educators Summit – April 28 & 29, 2021; [Free event – Registration required; Agenda](#)
  
- IV. **2021 Work Plan Approval:** The LiDAR Work Plan was developed at the last meeting in March. The team had a chance to review and bring up any changes. With no discussion, Jenna asked for a motion to approve the work plan. Mark motioned and Mary seconded the motion. Motion passed unanimously without discussion.
  
- V. **3DEP/3D Nation Program Update:** Drew Decker shared the latest and greatest coverage map of where imagery has been flown across the state. The Colorado River was recently covered and will be made available online soon.
  
- VI. **BAA Awards Update/Discussion:** Pima County’s project is moving forward. There were some delays in funding approvals, but they will be covering 8,500sq miles of Pima County, the Tohono O’odham Reservation, and NRCS watershed at QL1. Yavapai County’s project will cover the entirety of the county, part of Gila County, and the Safford Valley watershed. Keith Larson added that they have some additional

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funding to also fill in gaps between the Coconino and Kaibab National Forests, as well as an area north and west of Flagstaff. Various participants of this workgroup gave advisement to others beginning their journey with flying LiDAR to start planning early. USGS offers money to cover roughly 30-50% of a project and doing the BAA process can get coverage for a continuous area to group together any outlying slivers. Having partners and funding together earlier on in the process is encouraged, before the grant application opens in November. Then it can take anywhere from six months to two years for a delivery turnaround.

- VII. 2021 Spring LiDAR Symposium:** The planning team had a meeting last week and decided to have a virtual half-day session on May 26<sup>th</sup>. It will be focused on the BAA process and getting together partnerships for LiDAR acquisition. The agenda includes an overview of the BAA process from Drew Decker, an overview of the PAG award by Ben Hickson, then the panel discussion will be on the PAG award and how that acquisition went. The Symposium will end with public participation portion. Topics for this were opened to the group: what the BAA process looks like in the end, what to do once you have collected your data, what web applications are being used with LiDAR, storage ideas, tips for efficient processing, elevation derived hydrography. For those with interest in contributing to the symposium structure, they are welcome to join the planning committee.
- VIII. Lidar Website on AZGeo – Update:** Danny has worked on updating the pictures on the website and has included a story map of the acquisition plan as well as the coverage progress map that Drew Decker from USGS shares with the group. On the ‘Getting Started’ tab there are links to hardware, software, and FAQs. On the ‘Use Cases’ tab, examples were pulled directly from the acquisition plan. Further progress of this page will include story maps and papers. The ‘Resources’ tab isn’t quite complete, but the plan is to roll out the website as it is now, with ongoing changes being made.
- IX. 2021 Goals & Future Workgroup Direction Continued:** This group was originally created to bring attention to, collect, create, and share LiDAR imagery across the state. Now that the group has made tremendous progress on that, the discussion is what the group will now grow into. It is proposed, starting in 2022, to turn our attention to 3-D modeling. A list of possible topics to cover will go out to the group to figure out which ones are more of a priority.
- X. Sanborn Presentation (Customized Adaptations of 3DEP Lidar Data for Broader Use Cases):** Jason Caldwell and Jared Martin spoke. Sanborn was one of the first companies to start flying LiDAR for customers that were looking for digital elevation datasets. Sanborn has a device with a LiDAR based system that can do indoor mapping. Jared broke down some of the specifics when dealing with LiDAR collection.

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Projects aim to be flown at QL 1 for the best resolution, which doesn't come with just having a higher density dataset, it needs to work with the relative and absolute vertical accuracies. For certain acquisition projects, a customized application would produce a better product. For example, to better capture forest related land cover you can increase your swath overlap, reduce your laser footprint, or the illumination size of the physical pulse for greater foliage penetration.

- XI. Discussion and call for future presentation: n/a**
- XII. Information or Topics for Future Meetings: n/a**
- XIII. Adjourn: Meeting adjourned at 3:24pm.**