

Montana Elevation Working Group: State LiDAR Plan

Friday, November 2, 10:00am-12:00pm MTN

Montana State Library, Grizzly Conference Room and Online via GoToMeeting
<https://global.gotomeeting.com/join/312108461>

United States: [+1 \(872\) 240-3412](tel:+18722403412)

Access Code: 312-108-461

AGENDA

10:00 - Welcome

10:10 – 10:20 – LiDAR Inventory Map (Troy Blandford)

- DNRC acquisition update (Steve Story)
- NRCS acquisition update (Catherine Maynard)

10:20 – 10:45 - NRCS perspective (Collin McCormick)

- Questions and discussion

10:45 – 11:00 - Finalize draft Charter (Troy Blandford and Jamie Ellis)

11:00 – 11:40 - LiDAR Plan outline and project management (Troy and Jamie)

11:40 – 12:00 – Project updates, discussion, and parking lot items

- NSGIC pilot project– Workshop follow-up (Erin Fashoway)
- 3D Nation Benefits and Requirements Study (Troy, Erin, Steve Shivers)
- LiDAR repository and delivery system pilot (Troy, Catherine)
- Elevation workshop/track at a future conference?

MONTANA ELEVATION WORKING GROUP

CHARTER

DRAFT v. 1.2 – Nov. 2, 2018

PURPOSE AND SCOPE:

The Montana Elevation Working Group (MEWG) meets regularly to communicate, plan, and execute initiatives aimed at improving efficiencies and standardizing procedures related to the collection, maintenance, and dissemination of high resolution elevation data.

The MEWG recognizes as a first task the need to develop a *Montana LiDAR Plan* that sets the path for statewide LiDAR acquisition and coordination. The MEWG further recognizes that statewide LiDAR is a long-term goal (5-10 years) with significant challenges to address regarding consistency (e.g. year of acquisition, quality level) and reacquiring on a regular basis. For these reasons, the group identifies itself with “elevation,” as opposed to “LiDAR,” and will identify future tasks accordingly to meet the elevation needs of Montana’s stakeholders and partners.

MEETING FREQUENCY:

Meetings will occur approximately monthly (2 hours each) through February 2019 to develop the *Montana LiDAR Plan*. Meeting frequency going forward will vary based on identified tasks but is expected to be approximately quarterly. The frequency and duration of meetings will be reevaluated regularly.

RESOURCES:

Resources required for the functioning of the MEWG will be volunteered time of its membership for meetings, research, documentation, and the execution of project tasks.

MEMBERS & ROLES:

All meetings are open to anyone who has an interest.

Membership is generally grouped into Active Participants and Recipients:

1. Active participants (see Table): actively attend meetings, provide guidance and input on state elevation needs, develop content, review documents, identify objectives, and execute tasks, among other duties. Active Participants sign this Charter, indicating a larger time commitment than Recipients.
2. Recipients: want to be kept informed and receive all meeting invites and notes but generally do not guide decisions or execute tasks.

LEADERSHIP STRUCTURE:

The Montana Elevation Working Group is led by the Montana State Library:

Chair

Troy Blandford, Water Information System Manager

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Co-Chair

Erin Fashoway, State GIS Coordinator

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ACTIVE PARTICIPANTS

Name*	Organization	Major Roles	Email:
Troy Blandford Erin Fashoway Evan Hammer	Montana State Library	<ul style="list-style-type: none"> ○ The steward of Montana’s elevation data. ○ Primary State coordinating body ○ Lead agency for the <u>Montana LiDAR Plan</u>. ○ Owns & manages the application that shows what data exists and what data might be collected (ESRI web app, <u>Montana LiDAR Inventory</u>). ○ Houses and distributes elevation data and derived products 	tblandford@mt.gov efashoway@mt.gov ehammer@mt.gov
Catherine Maynard Josh Robino	Natural Resources and Conservation Service (NRCS)	<ul style="list-style-type: none"> ○ Acquires LiDAR data (large areas) ○ Develops derived products as needed ○ Leads pilot project with State Library for storage and distribution platform 	cmaynard@mt.gov joshua.robino@mt.usda.gov
Steve Story Jamie Ellis	MT Department of Natural Resources and Conservation (DNRC)	<ul style="list-style-type: none"> ○ Acquires LiDAR data (small to countywide) ○ Develops derived products as needed ○ Assists with the overall Project Management Plan and meeting coordination/communications (liaison) 	sestory@mt.gov jellis@mt.gov
Rob Ahl Steve Brown	U.S Forest Service	<ul style="list-style-type: none"> ○ Acquires LiDAR data (small to large areas) ○ Develops derived products as needed 	rahl@fs.fed.us stevebrown@fs.fed.us
Jeremy Crowley Mike Stickney	Montana Bureau of Mines and Geology at Montana Tech (MBMG)	<ul style="list-style-type: none"> ○ Acquires LiDAR data (small areas, project specific) ○ Develops derived products as neededs ○ UAV 	jcrowley2@mtech.edu mstickney@mtech.edu
Jessica Mitchell	University of Montana, Natural Heritage Program	<ul style="list-style-type: none"> ○ Derived Products ○ Vegetation and land cover mapping 	jessica.mitchell@mso.umt.edu
Steve Shivers	USGS	<ul style="list-style-type: none"> ○ 3D Nation Program, Federal grants ○ Federal – State Liaison 	spshivers@usgs.gov
Wallace Gladstone	NEIC, Inc.	<ul style="list-style-type: none"> ○ Tribal coordination ○ Survey Control 	wallace.gladstone@neciusa.com

*Active Participants please initial next to your name

THE MONTANA ELEVATION PLAN



DRAFT PROJECT MANAGEMENT PLAN
VOLUME: 1.0 - NOV. 2, 2018

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PREPARED FOR
The Montana Elevation Working Group

NOVEMBER 2018

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1.0 NOT LIDAR PLAN (NOT ENGAGING THIS YET...)

- 10m and 30m DEMs
 - Use for gap filling where there is a lack of higher resolution data
- New technologies
- Statewide coverages and availability of alternatives
- State solutions
- **The IFSAR Conundrum**
 - IFSAR (statewide 1-meter; for example, Intermap's NEXTMap One product)
 - What it is and what it is not
 - Why can't you just use IFSAR?
 - Use constraints?
 - We need to document where we stand on this and why
 - Document as a working group why this is not being pursued in place of LiDAR.
 - Implications advantages & disadvantages
 - Appropriate for gap filling where there is a lack of higher resolution data
 - Does it meet Montana's elevation uses/needs? perhaps it meets the majority of needs and it is available statewide right now (versus 5+ years or more out on statewide Lidar)

2.0 LIDAR PLAN

2.1 ORIENTATION

2.1.1 PROBLEM STATEMENT

- Currently few partnerships in acquiring lidar (it is cost effective to larger, shared-cost acquisitions)
- Not taking advantage of federal grants (for example the 3DEP Program)
- The benefits in 2.1.2.1 below need to be realized

- Different fiscal timelines and spending requirements
- Document why LiDAR is the solution (is it?) and why alternatives are not an option for MT (or are they?)

2.1.1.1 THE BENEFITS OF HIGH RESOLUTION ELEVATION DATA

- Better data = better understanding
- Efficient modeling
- Standardization

2.1.2 STATEMENT OF PURPOSE

- This is where we add the statement of Business objectives
- Goals and objectives

2.1.3 STAKEHOLDERS AND ROLES

Add the charter table and refer to the charter. Talk about how this is the coordination and communication foundation that will make this work. The Montana Elevation Working Group...

2.1.4 SCOPE DEFINITION

2.1.4.1 STATEMENT OF SCOPE FOR THE LIDAR PLAN

To document and memorialize and set of standard operating procedures which guide and inform the way LiDAR data and derived products are collected, maintained, and disseminated for the state of Montana.

2.1.4.2 VALUE OF LIDAR FOR MONTANA

- Use case table
- NEEA and new 3D Nation benefits and requirements study
- Plus other study

2.1.4.3 STATUS OF LIDAR HOLDINGS

- Screens table and map
- Extent
- Cost
- Quality
- Availability
- Location
- Size
- Use rights
- Products (aka derived)

2.1.4.4 PAST EFFORTS

- How has funding worked?
- No joint effort
- Map explanation and location

2.2 COLLECTION

This is the technical aspects and standard operating procedures.

2.2.1 PRIORITIZATION

- Talk about map
- Talk about talking about map at meetings
- Talk about crowd sourcing and working together to make funds go further.
- Talk about the importance of communication and working together
- Geographic area (counties vs watershed vs project area.

2.2.2 LIDAR PRODUCTS

Steal from plan document don't forget UAV

2.2.3 TECHNICAL SPECIFICATIONS & STANDARDS FOR ACQUISITIONS

- USGS
- FEMA
- Survey control
- Metadata
- Processing

2.2.4 DERIVED PRODUCT SPECIFICATIONS & STANDARDS FOR ACQUISITIONS

- ""

2.3 MAINTENANCE

This is the technical aspects and standard operating procedures.

2.4 DISSEMINATION

This is the technical aspects and standard operating procedures.

2.5 COST & FUNDING APPROACH

Just make sure that this is within scope. Why do you care? Need to start looking for acquisition funding sources for funding for ongoing maintenance & dissemination, including storage, processing, and staff time.

- Also add a table about when money opportunities are open and when agencies need to finalize by.

KISS. Timeline that shows when agencies' planning for lidar acquisition needs to happen.

- How much for statewide?
- Price per county
- Price per watershed
- How much per mile?
- Major vectors (legislation vs federal and grant or private or local)
- IFSAR???
- Include considerations for ongoing storage, maintenance, and dissemination