

3D Geomatics Committee - Data Acquisition Workgroup Work Plan

Work Plan Date:

January 21, 2021

Chair and Vice Chair:

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Link to Committee Charter:

The 3D Geomatics Committee Charter

https://www.mngeo.state.mn.us/committee/3dgeo/3dgeo_committee_charter.pdf

2020 Accomplishments

The Data Acquisition Workgroup has been actively working as a dedicated subgroup since early 2019. While 2020 goals were not documented in an official workplan, 2020 accomplishments included:

- Met weekly to manage lidar data acquisition and outreach in support of the Minnesota Lidar Plan
- Representatives attended monthly 3DGeo Steering Team meetings
- Representatives attended monthly National States Geographic Information Council (NSGIC) meetings related to 3D Elevation Program (3DEP)
- Continued with significant Lidar acquisition outreach, meetings, emails and communications with stakeholders and partners from State Agencies, Federal Agencies, Counties, Cities, Non-Profits, private companies, and other partners. Highlights include:

- Prepared surveys and sent them to attendees and potential partners in both Northeast and Southern Minnesota and conducted meetings to gauge interest in a USGS grant submission (submission date was October 2020)
- Hosted an online outreach meeting on November 17 with members of the Central Mississippi (Metro) area to discuss a 2022 lidar acquisition. Meeting had over 60 participants.
- Hosted an outreach/update online meeting with Southern Minnesota geospatial and local partners on October 7 to discuss possible USGS grant submission for lidar acquisition in 2021. Meeting had over 90 participants.
- Hosted outreach/update online meeting on August 21 with Southern Minnesota geospatial and local partners to discuss possible USGS grant submission for lidar acquisition in 2021. Meeting had over 100 participants.
- Hosted outreach/update online meeting on July 9, 2020 with Northeast Minnesota geospatial and local partners meeting to NE partners. Meeting had over 80 participants.
- Submitted two USGS 3DEP Broad Agency Announcement (BAA) grant request for spring 2021 lidar acquisition in November 2020.
- Team outlined contents for lidar Communications Plan that will be created in 2021.
- The USGS indicated that our initial collect in the Rainy Lake Block would not be possible in the spring of 2020. They notified the Acquisition group that the acquisition may occur in the fall. Through additional discussion between USGS and the acquisition group, the collect was postponed until the spring of 2021.
- The planned lidar acquisition planned for spring 2021 in Rainy Lake Lidar Acquisition Block was extended into the Lake Superior Block with guidance and input from the data acquisition workgroup team, and with generous additional funding from both USGS and NRCS. (\$870,000).
- The Acquisition Team completed a proposal to the Environment and Natural Resources Trust Fund (ENTRF) Legislative-Citizen Commission on Minnesota Resources (LCCMR) MNIT LCCMR proposal that strives to:
 - Conduct forestry fieldwork, produce lidar-derived statistical data layers, develop empirical forest inventory models, and create comprehensive all-lands forest inventory dataset
 - Develop hydro-modified DEMs and derived products to support integrated land-water-vegetation resource management and decision making at the watershed scale.
 - Design, develop and deploy an education program for understanding and effectively using lidar data and lidar derivative products.
 - Design, develop and deploy lidar data and derivative product storage and dissemination system.
- The LCCMR proposal did not move forward for funding. The acquisition group discussed next steps for resubmittal.

- Team worked on content for Minnesota’s USGS 3DEP factsheet & 3D Nation narrative.
- Lidar Acquisition Blocks statewide were added to Sea Sketch (USGS collaboration tool) on behalf of Minnesota & 3D Geo Committee
- Team members met with other states to discuss how they are managing lidar funding and the sources of funds. Team met and/or corresponded with North Carolina, Oregon, South Carolina, Utah, Kentucky, and Wisconsin.
- Using local funds the Acquisition Team leveraged over \$6,000,000 in additional federal funding towards Minnesota lidar interests from the 3DEP Program, through 4 successful BAA’s.

WORK PLAN FOR 2021

Planned Activities and Deliverables:

Workgroup and Workplan activities

- Ensure harmonization between workgroup planned activities, other 3DGeo Workgroups, the Minnesota Lidar Plan, and sector visions for data acquisition 5 to 10 years out.
- Develop a subgroup or ad-hoc committee to discuss Return on Investment (ROI)
- Meet weekly to plan and make progress on work plan activities

Outreach/Communication Plan

- Continue committee outreach and education to engage and inform GIS, remote sensing, 3D geospatial communities to determine needs for lidar data standards and derived products.
- Collaborate and partner with the Geospatial Advisory Council’s (GAC) Outreach Committee.
- Continue and increase committee outreach to decision makers about the need for lidar data and derivative products and the benefits of funding acquisition.
- Create new website, or expand content on MnGeo website, for the distribution of educational materials and to serve as a clearinghouse of 3D technology information.
- Additional outreach/communications deliverables include (not in order of importance):
 - Developing a communication plan
 - Developing a collection of standardized outreach materials and/or fact sheets for various stakeholders and audiences, particularly for local governments (e.g., County, City)
 - Review previous surveys to identify potential needs and areas of focus
 - Review and update the existing Minnesota Lidar Plan and StoryMap through a review committee made up of members from each workgroup and meetings of the steering committee

- Participate in NSGIC 3DEP Workgroup
- Workgroup chairs/co-chairs or Champions present updates to GAC in person
- Hold informational webinars and in-person and/or online meetings regarding the Minnesota Lidar Plan
 - Rotate outreach throughout the state on a block by block basis

Funding/Acquisition Work

- Recruit funding champion at the executive level
- Coordinate with USGS on the lidar acquisition in 3 areas of Minnesota including reviewing work orders, attending check-in meetings with USGS and the vendor(s).
- Coordinating funding contracts with local partners, assisting in tracking ground conditions for mission lift off, and communicating about acquisition as needed.
- Coordinate the creation of a tool (or identify a set of existing tools) to track conditions on the ground (and over water) in advance of the lidar acquisitions going on in three large areas of the state.
- Present with NSGIC and other states at the International Lidar Mapping Forum (ILMF) (rescheduled from 2020 cancelation)
 - Line up presentations at other user group, conferences, and association meetings.
- Continue legislative and grant funding search and proposal development for acquisition and derived products, LCCMR grant, other federal grant resources (e.g., FEMA, NOAA, USFS, NRCS)
- Strategic planning and outreach for 2022
 - Through continued engagement with potential partners throughout MN, in an effort to determine the AOI(s) for a BAA proposal in fall 2021 for a potential spring 2022 collect
 - Continue PR/Outreach, about the Lidar Plan, funding, and for a new Lidar Acquisition Block (LAB) or two – MN River East, MN River West, Central Mississippi River (Metro), and Upper Mississippi River (NC Lakes) stakeholders were engaged in 2020
 - Create a timeline for new LABs in 2022 and start deciding LABs for 2023
 - Plan for and submit USGS BAA grant proposals in Fall 2021 for acquisition in 2022

Roles and Responsibilities:

- Develop timeline for prioritized planned activities
- Committee guidance and management is provided by the 3DGeo Executive Steering Team.
- Workgroup representation on the Steering Team is accomplished by having at least one champion and/or chair/co-chair(s) added to the Steering Team. Some listed will be on a workgroup.

- Membership will continue to expand for the workgroup overtime and in response to attrition

Data Acquisition Workgroup Team Membership

Name	Agency	Email
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Resources:

The Data Acquisition Workgroup will work with the 3DGeo Executive Steering Team and use the work and accomplishments of other 3DGeo Workgroups to assist in the procurement of 3D data for Minnesota.

Past Committees

Digital Elevation Committee:

<https://www.mngeo.state.mn.us/committee/elevation/index.html>

LiDAR Research and Education Subcommittee:

https://www.mngeo.state.mn.us/committee/elevation/research_education/index.html

Hydrography Committee: <https://www.mngeo.state.mn.us/committee/hydro/>

Data Resources

Elevation Data for Minnesota

<https://www.mngeo.state.mn.us/chouse/elevation/index.html>

LiDAR Elevation Data for Minnesota

<https://www.mngeo.state.mn.us/chouse/elevation/lidar.html>

November 4th, 2015 LiDAR Committee Scoping Meetings Materials

Committee/Workgroup Needs:

The Data Acquisition Workgroup will work with other 3DGeo Workgroups for outreach, membership, and crosswalk of expertise related to the acquisition of unique data like lidar.

Dependencies and Interrelationships:

Steering Team

- The Data Acquisition Workgroup will depend on guidance from the 3D Geomatics Steering Team.
- MnGeo hosts and designs 3DGeo Data Acquisition Workgroup webpages with Executive Steering Team collaboration.
- MnGeo hosts 3DGeo SharePoint site with content provided by the Data Acquisition Workgroup

Workgroups

Workgroups depend on the Data Acquisition Workgroup for guidance related to procurement of data and standards supporting 3D data.

Risks:

Available Time:

Taking on too much responsibility and underestimating the amount of commitment to the workgroup and action items.

Without the Data Acquisition Workgroup:

- Lack of coordination leads to inefficiencies and unnecessary expenses.
- Lack of standardization in Lidar and other 3D data procurements results in misinformation.
- Inaccuracies will be incorporated into future derived elevation data.
- Lack of standards for derived data development and data application of 3D data derived products creates inaccuracies.
- Projects utilizing state funding will produce data not suitable for distribution and application in other projects.

Additional Comments:

Date approved by the 3D Geomatics Steering Committee: