

# 3D Geomatics Committee

## Work Plan Date:

January 18, 2021

## Chair and Vice Chair:

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## Link to Committee Charter:

The 3DGeomatics Charter ([https://www.mngeo.state.mn.us/committee/3dgeo/3dgeo\\_committee\\_charter.pdf](https://www.mngeo.state.mn.us/committee/3dgeo/3dgeo_committee_charter.pdf))

## ACCOMPLISHMENTS FROM 2020

### Accomplishments

#### Executive Steering Team Accomplishments

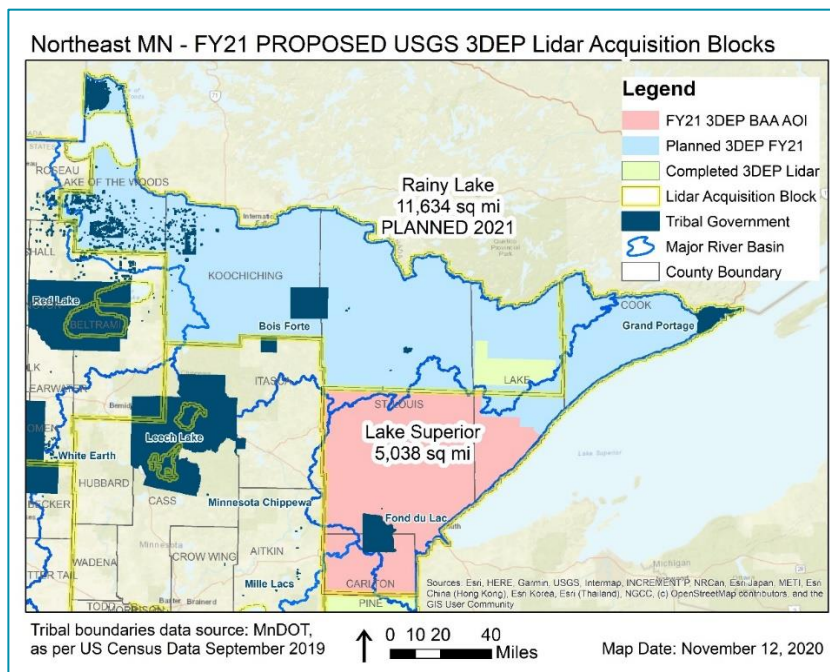
1. Continued to meet monthly
2. Continued to work with Workgroups on progress and updating each group's website presence.
3. Fully implemented a Sharepoint site for committee collaboration, including creation of contact list, libraries for workgroups, hosted by MnGeo and administered by MnGeo Staff
4. Established 3-ranked GAC priorities for 2021
  - 1.) Priority #13 | Accurate hydro-DEMs (hDEM) that serve modern flood modeling and hydro-terrain analysis tools, and the development of more accurate watercourses and watersheds
  - 2.) Priority #8 | New LiDAR data acquisition across Minnesota for use in developing new derived products guided by committee developed standards
  - 3.) Priority # 11 | Development of a culvert data standard for data sharing across the geospatial and infrastructure asset management

communities and to support development of a future statewide culvert inventory

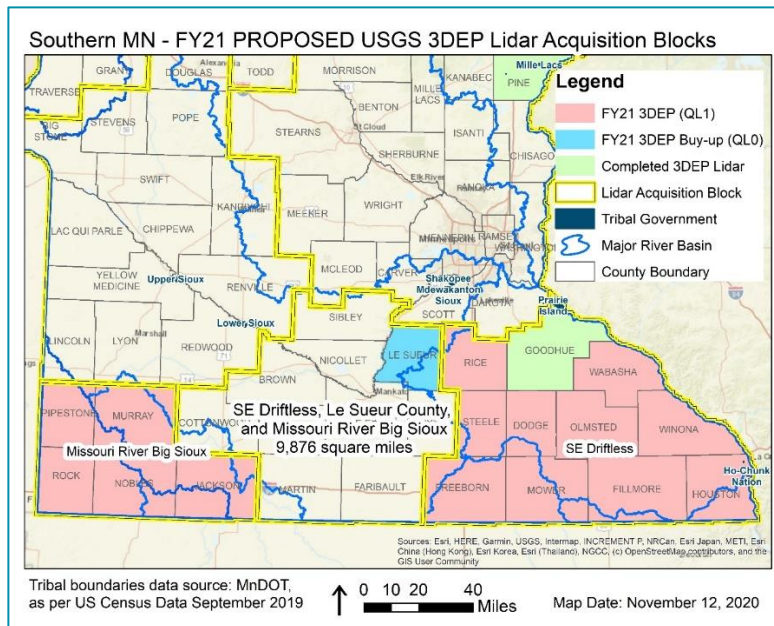
## Workgroup Accomplishments

### 5. Data Acquisition Workgroup

- Continued with significant Lidar acquisition outreach, meetings, emails and communications with stakeholder and partners from State agencies, Counties, Non-Profits, private companies and other partners.
- Met weekly to manage lidar data acquisition and outreach in support of the Minnesota Lidar Plan
- Representatives attended monthly 3DGeo Steering Team meetings
- Representative attended monthly National States Geographic Information Council (NSGIC) 3DEP Group Meetings
- 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 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.
- Submitted two USGS 3DEP Broad Agency Announcement (BAA) grant request for Spring 2021 lidar acquisition.



- If this BAA grant proposal is successful it will complete the Northeast Lidar Acquisition Area (LAA) illustrated with peach shading in the image below.



- The Southern Minnesota BAA proposal is comprised of two full 3D Geomatics Committee - Lidar Plan Lidar Acquisition Blocks. The peach shaded regions of the map below illustrate the Southeast Driftless LAB covering the entire southeast corner of Minnesota and the Missouri River Big Sioux LAB covering watersheds and counties in the southwest

**6. Infrastructure Workgroup**

- The Infrastructure Workgroup has established a Cultural Resources subgroup within its organization. A full membership meeting was held on November 12, 2020
- Working on developing membership list
- Develop 2021 workplans for the Infrastructure Workgroup and Cultural Resources Subgroup
- Representatives attended monthly 3DGeo Steering Team meetings

**7. Vegetation Workgroup**

- Vegetation Workgroup continues to meet on the second Tuesday, every other month.
- Representatives attended monthly 3DGeo Steering Team meetings
- Continue to work on the workplan.

**8. Hydrogeomorphology Workgroup**

- See attached

**9. Education Workgroup**

- Education Workgroup continues to meet each first Tuesday of the month
- Education Workgroup continues to find agency liaisons and education partners throughout the state

- Education Workgroup continues to catalog and inventory existing Lidar education resources
- Representatives attended monthly 3DGeo Steering Team meetings
- Education Workgroup continues to update workplan for 2021

## **WORK PLAN FOR 2021**

### **Planned Activities and Deliverables:**

- Meetings will continue to convene from 10:00 – 11:30am on the third Tuesday of the month no less than eight times per year.
- Continue committee outreach and education to engage and inform GIS, remote sensing, and 3D geospatial communities to determine needs for specific data standards, products, and to generate interest in shared funding of lidar acquisition.
  - a. This will be accomplished by:
    - i. Developing a communication plan
    - ii. Developing a collect of standardized outreach materials for various stakeholders and audiences
    - iii. Expanding content on MnGeo website for the distribution of 3D Geomatics Committee educational materials and serve as a clearinghouse of 3D technology information
    - iv. Review methods to engage stakeholders to gauge user needs
    - v. Reviewing previous surveys to identify potential needs and areas of focus
    - vi. Collaborating and partnering with the Geospatial Advisory Council's (GAC) Outreach Committee
- Continue to update the existing Minnesota State Lidar Plan and Story Map through the development of a review committee
- Continue to support existing 3DGeo Committee Workgroups and explore the need for any additional workgroups
- Expand and support the Infrastructure, Vegetation, Education, Hydrogeomorphology and Data Acquisition Workgroups.
  - a. Continue solicitation of membership
  - b. Assist with the development of Workgroup work plans.
  - c. Identify and update workgroup champions to lead formation of workgroups.
    - i. Each Workgroup will be encouraged to have a chair or co-chairs.
    - ii. Each workgroup will have at least one member serving on the 3DGeo Executive Steering Team
    - iii. Each Workgroup will strive to represent a wide range of expertise with active participation, minimum 6 meetings a year
    - iv. Chair or Co-Chair will be available for 3D Geomatics Committee panel at the annual MN GIS/LIS Consortium Conference

- v. Encourage workgroups to publish an agenda of topics covered in their meetings
- d. Steer development of Workgroup mission statements, goals, work plans, and timelines
- Establish timelines for Workgroups.
  - a. Workgroups will develop drafts of work plans for 2021 for the January 2021 GAC meeting
- Work with GAC Chair to have 3DGeo Workgroup chairs/co-chairs or Champions present updates to GAC in person.

## **Committee Structure**

### **Workgroups (sectors of expertise):**

Hydro-geomorphology  
Vegetation  
Education & Outreach  
Human Infrastructure  
Emergency Management  
Data Governance  
Data Acquisition  
Agency & Stakeholder Decision Makers

## Committee Organizational Diagram

### 3D Geomatics Committee Organization

Version 9.3.2019



#### Q: What is the 3DGeo Committee?

A: The [3D Geomatics Committee](#) (3DGeo) is committed to identifying and promoting the need for planning, training, funding, acquisition, and management of three-dimensional geomatic data and derived products. The **architecture** of 3DGeo brings dozens of stakeholders together to serve common goals under one [Geospatial Advisory Council](#) (GAC) charter. **Membership** of 3DGeo is comprised of subject matter experts organized by workgroup sectors. Each workgroup operates by the guidance of its own work plan. Workgroup members specialize in data development, management, dissemination, application, and end user business needs. An **Executive Steering Team** leads committee administration, decision making and GAC reporting. The **colored ring** connecting workgroups represents membership crossover between sectors of expertise; it illustrates the blending of roles and the knowledge base amongst the workgroups when needed (i.e., there are no barriers and some committee members serve more than one workgroup and the Executive Steering Team). **Spokes** in the diagram indicate a hub for communication with the Executive Steering Team (each workgroup has at least one member attending Executive Steering Team meetings). The **heavy arrows** represent quarterly updates and occasional presentations from the Executive Steering Team and periodic special reports from the Workgroups delivered to the GAC. In summary, the **design of this committee** allows a large and diverse membership to have 1) small, focused, and expert-led meetings that carry out unique committee action items, and 2) intricate ties with Minnesota's foundational and authoritative spatial data products like LIDAR, with decision making responsibilities.

For updates and comments contact committee co-chair: Sean Vaughn MNIT@DNR, sean.vaughn@state.mn.us

## Roles and Responsibilities:

- 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 each workgroup

## Executive Steering Team Membership

Name	Workgroup/ Sector	Agency	Email
Gerry Sjerven	Infrastructure/ Utility (Co-Chair)	MN Power	<a href="mailto:gsjerven@mnpower.com">gsjerven@mnpower.com</a>
Sean Vaughn	Hydro/State (Co-Chair)	MNIT@DNR	<a href="mailto:sean.vaughn@state.mn.us">sean.vaughn@state.mn.us</a>
Dan Ross	At Large	MnGeo	<a href="mailto:dan.ross@state.mn.us">dan.ross@state.mn.us</a>
Clinton Little	Stakeholder/ Manager	DNR Costal Program	<a href="mailto:clinton.little@state.mn.us">clinton.little@state.mn.us</a>
Jennifer Corcoran	Vegetation/ State	DNR Forestry	<a href="mailto:jennifer.corcoran@state.mn.us">jennifer.corcoran@state.mn.us</a>
Joel Nelson	Hydro/Education	U of MN	<a href="mailto:nels1945@umn.edu">nels1945@umn.edu</a>
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## Resources:

The 3DGeo Committee will use the work and accomplishments of many earlier committee efforts.

## **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](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 Executive Steering Team will be working with the GAC Outreach Committee and the MN GIS/LIS Consortium to help solicit membership for each workgroup, and identify workgroups missing from this plan.

## **Dependencies and Interrelationships:**

### **Steering Team**

- MnGeo hosts and designs 3DGeo webpages with Executive Steering Team collaboration.
- MnGeo hosts 3DGeo SharePoint site with content provided by the Executive Steering Team

### **Workgroups**

Workgroups depend on the Executive Steering Team for guidance related to committee reporting and governance.

### **Risks:**

- LiDAR and other 3D data procurements will not be standardized.
- Inaccuracies will be incorporated into future derived elevation data.
- Lack of standards for data development and data application of 3-D data derived products.
- Projects utilizing state funding will produce data not suitable for distribution and application in other projects.



- 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: March 3, 2021**