

Minnesota Geospatial Advisory Council 3D Geomatics Committee Work Plan

Work Plan Date:

January 28, 2020

Chairs:

Sean Vaughn, Co-Chair
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Link to Committee Charter:

The 3DGeomatics Charter
(https://www.mngeo.state.mn.us/committee/3dgeo/3dgeo_committee_charter.pdf)

ACCOMPLISHMENTS FROM 2018

Accomplishments

Executive Steering Team Accomplishments

1. Continued to meet monthly
2. Developed the '*Draft Minnesota State Lidar Plan*' in October 2019
 - Presented at the MN GIS/LIS Consortium Conference, 'Let's Talk About Bringing New and Enhanced Lidar Data to Minnesota.'
 - Developed a Draft Story Map to support the draft Lidar Plan
 - Held a meeting in Duluth, MN to discuss NE Forested Area Acquisition
3. Submitted Lidar Funding Proposal for the Rainy Lake Acquisition Block (see page 21 of the Draft Lidar Plan) to USGS through their 3D Elevation Program (3DEP) using the Broad Agency Announcement (BAA) process. The BAA is a federal funding mechanism that guides partnerships between the US Geological Survey (USGS) and other Federal agencies

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- with other public and private entities seeking high-quality 3D lidar Elevation data acquisition.
4. Discussion and formation of the Data Acquisition Workgroup in progress, Workplan almost completed
 5. Sharepoint site for committee collaboration, including creation of contact list, libraries for workgroups, hosted by MnGeo and administered by MnGeo Staff
 6. Re-established 2-ranked GAC priorities for 2020
 - 1.) Priority #6 | 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
 7. Guided the early discussions and foundation for the Data Acquisition and Education Workgroup
 8. Changed the name of the Hydrography Workgroup to Hydro-Geomorphology Workgroup

Workgroup Accomplishments

9. **Infrastructure Workgroup**
 - Supported the development of the Minnesota State Lidar Plan and Story Map
10. **Vegetation Workgroup**
 - Supported the development of the Minnesota State Lidar Plan and Story Map
11. **Hydrogeomorphology Workgroup**
 - Renamed workgroup(old name was Hydrologic Landforms and Hydrography Workgroup)
 - Hosted monthly meetings
 - Breachline subgroup continued to meet monthly
 - Foundational Hydrography Data Stewards met in July, October and January
 - Intent was to gather key data stewards at State agencies quarterly to discuss any news, issues, development, needs
 - Proposal was made to establish this group as a subgroup of the Hydrogeomorphology workgroup rather than a stand-alone group

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- Established workgroup SharePoint site
 - Included calendar of relevant upcoming events, conference, training opportunities (moved to 3D Geo SharePoint site)
 - Uploaded workgroup documents including work plans, agendas, minutes, presentations, funding opportunities, and meeting recordings
 - Assigned permissions to all members based on participation role and invited them to access the SharePoint site
- Digital Dam Breachline Subgroup
 - Built a foundation for statewide standardized breachline database
 - The next phase required to move this foundation from plan to implementation of the functional database will require additional commitment of time, labor and funding.
 - Created a centralized authoritative map of current breachline datasets
 - Will be published on Breachline Subgroup webpage in December
 - Identified non-member breachline datasets for inclusion in authoritative database
 - Continued to promote the need for a Digital Dam Breachline (burn line) QA/QC Project
 - Funding for this effort is yet to be established
 - Explored the role of the DNR Culvert Inventory App in digital dam breachline mapping and dissemination
 - Gathered member consensus on requirements for standalone App in future
- Data Catalog Subgroup
 - Cataloged and updated references to authoritative data sources
- 4 new members added
- 12. Education Workgroup**
 - Education Workgroup inaugural meeting on 12/3/2019
 - Introduced 3D Geomatics Committee and state structure
 - Introduced Workplan and discussed membership
 - Established workgroup SharePoint site
 - Updated workplan
 - Established 3D Geo Education Workgroup web-page through MNIT and Nancy Rader
 - Workplan listed

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- LiDAR Education Resource links listed
- Workplan Updated from original drafts
 - Identified need to:
 - Inventory more existing LiDAR education and training resources
 - Determine audience and skill level assessment
 - Develop curricular objectives
 - Explore idea of 3D Geomatics Training website
 - Onestop for existing resources
 - Onestop for all LiDAR training activities in state
- 2020 work plan has been drafted and will be circulated and approved by workgroup members at January meeting

WORK PLAN FOR 2020

Planned Activities and Deliverables:

- 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.
 - This will be accomplished by:
 - Developing a communication plan
 - Developing a collect of standardized outreach materials for various stakeholders and audiences
 - Expanding content on MnGeo website for the distribution of 3D Geomatics Committee educational materials and serve as a clearinghouse of 3D technology information
 - Review methods to engage stakeholders to gauge user needs
 - Reviewing previous surveys to identify potential needs and areas of focus
 - Collaborating and partnering with the Geospatial Advisory Council's (GAC) - Outreach Committee to use the Minnesota Geospatial Advisory Council meeting summary (GAC Yak publication) for Conducting surveys of other sectors of the state using
- Continue to update the existing Minnesota State Lidar Plan and Story Map
- Continue to support existing 3DGeo Committee Workgroups and explore the need for any additional workgroups (Wildlife)

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- Establish and expand the Infrastructure, Vegetation, and Data Acquisition Workgroups.
 - Continue solicitation of membership
 - Assist with the development of Workgroup work plans.
 - Identify workgroup champions to lead formation of workgroups.
 - Each Workgroup will have a chair or co-chairs.
 - Each workgroup will have at least one member serving on the 3DGeo Executive Steering Team
 - Each Workgroup will strive to represent a wide range of expertise with active participation, minimum 6 meetings a year
 - Chair or Co-Chair will be available for 3D Geomatics Committee panel at the annual MN GIS/LIS Consortium Conference
 - Steer development of Workgroup mission statements, goals, work plans, and timelines
- Establish timelines for Workgroups.
 - Workgroups will develop drafts of work plans for 2020 for the June 2020 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

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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 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

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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	gsjerven@mnpower.com
Sean Vaughn	Hydro/State (Co-Chair)	MNIT@DNR	sean.vaughn@state.mn.us
Dan Ross	At Large	MnGeo	dan.ross@state.mn.us
Clinton Little	Stakeholder/ Manager	DNR Costal Program	clinton.little@state.mn.us
Jennifer Corcoran	Vegetation/ State	DNR Forestry	jennifer.corcoran@state.mn.us
Joel Nelson	Hydro/Education	U of MN	nels1945@umn.edu
Mark Reineke	Hydro/Private	WSN	mark.reineke@wsn.us.com
Chris Sanocki	Hydro/Federal	USGS	sanocki@usgs.gov
Andrea Bergman	Hydro/State	MNIT@DNR	andrea.bergman@state.mn.us
Rick Moore	Hydro/State	MNIT@DNR	rick.moore@state.mn.us
Colin Lee	Infrastructure/ State	DOT	colin.lee@state.mn.us

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Name	Workgroup/ Sector	Agency	Email
Jack Kluempke	Infrastructure/ State	Commerce	jack.kluempke@state.mn.us
Alison Slaats	Acquisitions / State	MnGeo	alison.slaats@state.mn.us
Jim Krumrie	Acquisitions / State	SHPO	Jim.Krumrie@state.mn.us

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)

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:

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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.

Additional Comments:

Date approved by the Geospatial Advisory Council:

March 11, 2020