

Minnesota Geospatial Advisory Council Meeting Minutes

September 29, 2021

Online via Webex

10:00 a.m. – 12:00 noon

Members Present: Heather Albrecht, Hennepin County; Ryan Bonney, Shakopee Mdewakanton Sioux Community; David Brandt, Washington County; Kari Geurts, MNIT Department of Natural Resources; Leanne Knott, City of Red Wing; Britta Maddox, Anoka County; Chris Mavis, Hennepin County; Matt McGuire, Metropolitan Council; Victoria Reinhardt, Ramsey County; Cory Richter, City of Blaine; Dan Ross, MnGeo; Kendis Scharenbroich, Pro-West & Associates Inc.; Gerry Sjerven, Minnesota Power; Stacey Stark, University of Minnesota; Alex Steele, Minnehaha Watershed District; Shawn Strong, City of Brainerd; Benjamin Timerson, Minnesota Department of Transportation; Karen Tuerk, Monarch Joint Venture; Patrick Veraguth, Douglas County

Members Absent: Jeff Bloomquist, USDA Risk Management Agency; Len Kne, University of Minnesota

Non-Members Present: Brad Anderson, City of Moorhead; Tracey Anderson, 4-H Program, UMN Extension; Andrea Bergman, MNIT Department of Natural Resources; Zach Bodenner, City of Eden Prairie; Curt Carlson, MnGeo; Will Craig, retired; Tim Dayhuff, Aerial Services, Inc.; Mike Dolbow, MNIT Department of Education; Brad Henry, University of Minnesota; Colin Lee, Minnesota Department of Transportation; Randy Knippel, Dakota County; David Kratz, Minnesota Department of Transportation; Karen Majewicz, University of Minnesota; Andra Mathews, Minnesota Department of Transportation; Tyler McAlear, St. Louis County; Akiko Nakamura, DPS; Elise MacPherson [no org known]; Ryan Mattke, University of Minnesota; Rick Moore, MNIT Department of Natural Resources; Pamela Jo Peters [no org known]; Michael Petesch, Minnesota Department of Transportation; Nancy Rader, MnGeo; Jesse Reinhardt, Hennepin County; Mike Robinson, Minnesota Department of Transportation; Catherine Rowley, City of Minneapolis; Alison Slaats, MnGeo; Ryan Stovern, St. Louis County; Molly Swanson, City of Eden Prairie; Steve Swazee, SharedGeo; Jacob Thiel, Dewberry; Tarek Tomes, MNIT; Sean Vaughn, MNIT Department of Natural Resources; Sally Wakefield, Minnesota Department of Revenue; Hal Watson, MNIT Department of Natural Resources; Sandra Yassin, Minnesota Department of Transportation.

1. Call to Order

[Meeting presentation slides](#)

Richter welcomed GAC members and guests. She then introduced Minnesota IT Services (MNIT) Commissioner Tarek Tomes.

Commissioner Tomes welcomed new and returning GAC members, highlighting the diversity of voices represented on the Council. Tomes shared that the work done by the GAC and the geospatial community in

Minnesota is of key importance to improving people's lives. He emphasized that geospatial data, analysis and data visualization can be used to support the work of government and provide great government services effectively to taxpayers. Commissioner Tomes said, "Thank you for all the work you do."

Richter thanked Commissioner Tomes for his support.

Richter reminded GAC members about three remaining GAC member vacancies (federal; Greater Minnesota regional organization; K-12), and Ross encouraged members to reach out to people they know who could represent these sectors.

- **Motion:** Approve today's agenda and meeting minutes from 5/26/2021 (Sjerven/Brandt) – Motion passed.

2. Review and Accept Committee Summaries (All)

Richter noted that a substantial amount of work is done by GAC committees. She thanked the committees for their work and for sharing their accomplishments through their summaries.

- **Motion:** Accept the committee summaries (Steele/Reinhardt) – Motion passed.

3. GAC overview and welcome to new members (Ross, Richter)

Ross provided a high-level overview of the GAC, explaining that the GAC helps guide the work that MnGeo does. The GAC's mission:

"The Council acts as a coordinating body for the Minnesota geospatial community and an advisory body for MnGeo. It represents a cross-section of organizations that include counties, cities, universities, business, nonprofit organizations, federal and state agencies, tribal government, surveyors and other stakeholder groups that benefit from geospatial technology."

Richter reviewed the GAC's guiding principles:

- Promote effective investments in geospatial information
- Promote geospatial information as a shared public resource
- Support the establishment and use of geospatial standards and best practices
- Champion collaboration among geospatial practitioners and related stakeholders
- Educate and inform policymakers about the value and use of geospatial technology
- Provide a forum for ideas and issues to be shared and acted upon by the geospatial community
- Encourage all council sectors to contribute to the state geospatial infrastructure
- Encourage all council members to communicate outcomes with relevant stakeholders
- Encourage geospatial education at all levels

Richter then emphasized that an overarching principle of the GAC is that it **supports open data**. She said that GAC representatives should always be looking for ways to support and promote open data.

Richter reviewed the expectations of GAC members:

- Support the Council's mission

- Prepare for and be active in Council meetings. These quarterly meetings are typically scheduled on Wednesdays from 10 to noon.
- Be an ambassador representing your sector stakeholders and other stakeholders with whom you are connected (e.g., professional groups).
 - Speak for stakeholders at Council meetings
 - Carry Council news and proposals back to stakeholders
 - Collect stakeholder views on complex issues, either from individuals or existing umbrella organizations

Richter reviewed many opportunities for engagement at the GAC, including:

- Leadership team
- Priority projects
- GAC Hub website work

Committees and workgroups to join include:

- 3D Geomatics
- Archiving
- Awards
- Emergency Preparedness
- Image Service Sustainability
- Outreach
- Parcels and Land Records
- Standards

Richter emphasized that a **person is not required to be a GAC member to serve on a GAC committee or workgroup**. Please think about joining a group to support the GAC’s work. See the [committees and workgroups webpages](#) or contact Nancy Rader at MnGeo (gisinfo.mngeo@state.mn.us) for more information.

4. Standards Committee – Bikeways Data Standard approval (Carlson, Kotz)

Curt Carlson presented the [Bikeways Data Standard](#) on behalf of the Standards Committee.

He explained that the purpose of the Bikeways Data Standard is to have a single, commonly accepted set of attribute specifications (field name, type and length) for transferring and aggregating bikeways data.

The sources for the standard included the MetroGIS Collaborative Trails and Bikeways data specifications, the National Recreation and Parks Association standard, MnDOT and DNR subject matter experts and input from many others.

Carlson recognized the workgroup team that contributed to the work on the standard: Michael Petesch, Pedestrian & Bicyclist Data Coordinator, MnDOT; Sandra Yassin, Research Analyst, Geographic Information Mapping, MnDOT; Mark Kotz, Standards Committee chair and Curt Carlson, Standards Committee vice chair. MnDOT staff championed the standard.

Carlson explained that, initially, the committee considered a standard that included both bikeways and trails, but then decided to limit it to only bikeways due to the complexity of including both.

He then reviewed the standard’s public review process. This standard had two public review periods because so many comments were received during the first review.

The public review process:

- 90 days ending 12/23/2020
 - 119 comments
 - Many useful improvements to the standard
 - Revised scope to just bikeways instead of “trails and bikeways” (requested by many, including DNR)
- 50 days ending 5/15/2021
 - 20 comments from 4 people
 - 3 minor changes
- August 2021 - Additional feedback on industry standard terms from MnDOT experts
 - Modifications to wording in some descriptions and domain values

Carlson then asked for the GAC members to consider a motion to approve the bikeways data standard.

- **Motion:** To approve version 1.0 of the Minnesota bikeways data standard (Mavis/Timerson) – Motion passed.

Meeting chat from Sandra Yassin, MnDOT: Thank you so much to the Standards Committee for guiding Michael and I through this process!

For more information, see the [Bikeways Data Standard webpage](#).

5. PLSS legislation support letter (Veraguth, Mavis)

Chris Mavis explained that he and Pat Veraguth are asking for a letter from the GAC to support the Public Land Survey System (PLSS) legislation being moved forward.

Mavis shared several slides that described what PLSS is and how the PLSS data are foundational to many GIS datasets, such as parcels, census data, and many more, used by the geospatial community.

The PLSS provides the basis for all land descriptions and framework for over two-thirds of the United States. Almost everything digitally mapped is built on top of PLSS. Mavis noted that this relates to the topic Commissioner Tomes talked about – making people’s lives better. He also related the improvement of PLSS to many of the GAC priorities, saying that preserving and improving PLSS will support all the work we do at the GAC.

Veraguth described the Grant County pilot project for PLSS remonumentation which was a great success. The GAC had provided a letter of support for this pilot.

Veraguth explained that the solution to improving the PLSS is to have a methodical program to perpetuate and support the PLSS. The Parcels and Land Records Committee’s Remonumentation Subcommittee is introducing legislation to establish such a program. The subcommittee asks GAC members and meeting attendees to promote this topic and legislative request to legislators, and to visit this hub website for more information: <https://mnpplss-umn.hub.arcgis.com/>

Veraguth and Mavis asked for a motion for the GAC to send a letter of support for remonumentation legislation. Veraguth and Mavis said that everyone they've talked to – the Association of Minnesota Counties (AMC), Minnesota Society of Professional Surveyors (MSPS), and many other organizations – has supported this effort.

Reinhardt stated that this legislation is so important to counties that AMC has made this a priority.

- **Motion:** To approve sending a letter from the GAC in support of the PLSS and remonumentation legislation (Reinhardt/Brandt) – Motion passed.

Veraguth and Mavis thanked GAC members.

Geurts in meeting chat: Great work and very important!

6. Underground Utilities Mapping Project (Swazee, Cederberg)

- Swazee provided an update on the work of the Emergency Preparedness Committee (EPC)'s Underground Utilities Mapping Project Team.
- There are many types of infrastructure underground, and more and more new items are being put underground alongside the legacy infrastructure.
- In Minnesota, and in other parts of the U.S., we are using late 1970s, early 1980s technology to share information about what is underground. This is complicated in Minnesota by snow on the ground. Often underground infrastructure can be damaged as digging goes on.
- Swazee says that we are not using the state of the art now, and there is a strong need to update our processes. It's a recognized problem: the technology exists but the problem is institutional inertia.
- He shared information about the goals of the team:
 - **Planning**
 - Create access and share data for job planning and design
 - **Managing**
 - Plan for systems that will keep data current
 - Deploy technologies that facilitate data sharing, easy connections and translation of existing databases
 - Create standards for data accuracy and currency
 - Anticipate needing GIS cooperatives for smaller entities
 - Select a common base map
 - Create a repository of utility data for historic and defunct businesses
 - **Locating**
 - Enable a universal view of data in the field
 - Leverage technologies which facilitate upload of collected data
 - Develop incentives for reporting unknown/abandoned lines
 - End the need for physical white-lining as an outcome of the total effort
 - **Security/Legal**
 - Ensure access is limited to only those with need and authorization
 - Work to achieve voluntary sharing of data
 - Develop the legal framework to codify and protect data sharing
- The collaborative project team:
 - Gopher State One Call - Barbara Cederberg (operational control)

- GAC's Emergency Preparedness Committee – Steve Swazee (administrative control)
- The three ultimate goals are:
 - More accurate maps
 - Ability to share data
 - Safer execution
- The plan
 - Research – Europe is way ahead of us in this subject area
 - Presentations – Swazee noted that Reinhardt has championed efforts at the Clean Water Council:
 - Clean Water Council Policy Committee: February 26
 - Common Ground Alliance Conference: Orlando, October 13
 - Clean Water Council: October 18/November 15?
 - MN GIS/LIS: October 24?
 - Global Excavation Safety Conference: Phoenix, March 1-3
 - UUMPT Improvement Plan Framework
 - Goal to make a prototype at Gopher State One Call (data coming from utilities)
 - Ultimately, effort is to have augmented reality in the field based on GIS data
- Reinhardt – appreciates work done by Swazee and Barb Cederberg. The Clean Water Council will be acting on legislation to get data from utilities to support the efforts. This resolution will also be taken to AMC. Also, the National Association of Counties (NACo) has elevated the importance of mapping by adopting a mapping equity platform change – this is critical to moving forward.
- **Motion:** To approve a letter of support for the GAC committee work on underground mapping as a legislative position to be shared with the senate and house representative chairs (Reinhardt/Mavis) – Motion passed.

Swazee will send information to Ross about letter content.

7. Lidar Update (Sjerven, Vaughn)

- Sjerven described the 3DGeo Committee, emphasizing that it is a collaborative effort, and noted that lidar has been on the GAC priority list for a number of years.
- Vaughn provided an update (see slides for maps) about the lidar collect in northeast Minnesota in Spring 2021. In southern Minnesota, lidar was partially collected in the southeast in 2021 and is planned for acquisition in southeast and southwest Minnesota in Spring 2022.
- The team is applying for funding grants (USGS BAAs) in the Central and Upper Mississippi lidar acquisition blocks (LABs). Vaughn shared a calendar of upcoming stages for Central and Upper Mississippi LABs. The funding applications are due on October 8.
- Vaughn shared several photos of a field visit to Goodhue County to compare the lidar data and the real world in representing the measurement and visualization of shrubs.
- Vaughn asked GAC members to please help support/communicate about lidar and its acquisition.
- Vaughn shared that the ultimate goal is to have enhanced statewide, seamless, lidar 3D point cloud and derived products publicly available by the end of 2025.

8. Break

9. Commons Discovery (Ross)

- Ross introduced MnGeo’s “Commons Discovery Project”. The [Minnesota Geospatial Commons](#) is a discovery place for GIS data, and includes over 900 data resources. The Commons is 7 years old, and it is time to start looking at what the next Commons will be.
- The mission of the Commons will remain the same: provide a collaborative public website where publishers can share geospatial data, metadata, maps, services and applications, and users can access these resources.
- This project will gather requirements for the next version of the Commons and is seeking broad input from the community. Meetings will be set up with the GAC, outside of the regular quarterly meeting. Ross appealed to the GAC: We’d like you to help define what the next Commons will be.

10. Raster Data Discovery (Ross)

- Ross described a second MnGeo discovery effort, the “Lidar and Aerial Imagery Data Discovery Project”.
- Ross explained that, based on the number of lidar acquisitions recently done or planned, the state will be receiving a lot of lidar data. Additionally, we already have a lot of aerial imagery. Also, the [MnTOPO site](#) needs upgrading.
- These factors have led MnGeo to conduct requirements gathering for the storage, management, and dissemination of aerial imagery, lidar and derived products and light analytic tools.
- As with the Commons discovery project, Ross said MnGeo is seeking broad input.
- On the two discovery projects Ross said, “we’d like your participation.” Look for more information to come, or reach out to Ross directly on these projects.

11. DNR Public Lands (Watson, Zieman)

- Hal Watson presented on the topic of the “Public Lands of Minnesota Map and Dataset”.
- He said that MNIT DNR developed a dataset of public lands in Minnesota, which could probably be more accurately described as “government land in Minnesota”. Creating this dataset has been an extremely difficult challenge, and the effort has been ongoing for decades.
- Minnesota and DNR have a deep tradition of public land acquisition and management with benefits to people, natural resources and local economies.
- The statewide public lands dataset is based on county parcel data. It was made possible by the existence of an aggregated parcel dataset, currently available to state government agencies.
- Data can be used for a variety of purposes:
 - Conservation Planning to Improve the Public Land Portfolio
 - Collaborative Ecosystem Planning to Advance Common Goals
 - Public Lands Decision-Making and Policy Development
 - Survey Community Considerations
- The process for creating the public lands dataset:
 - All 87 counties share parcel data with MnGeo

- County data is transformed to meet the Geospatial Advisory Council’s parcel data standard
- Standardized data is then aggregated into a statewide dataset
- MNIT and DNR partnered to research and classify all the public parcels in the aggregated dataset. Examples of the variety of terms that have been used to describe State of Minnesota owned land in county datasets:
ST MN; State of Minnesota; Dept. of Natural Resources; DNR; State Forest; Dept. of Conservation; State of MN; Highway Dept.; School Trust Fund Land
- Parcels are then grouped by owner type: federal, state, county fee, tax forfeit land, and municipal ownership categories
- Delineation below the 40-acre division and across all public types is a major step forward from existing statewide datasets
- Watson reviewed the main project outcome: Integrated public lands, with parcel-level spatial detail, across all units of government (municipal, county, state, federal) into one data layer, with annual update.
- For more information, see the Public Lands of MN StoryMap: <https://arcg.is/19b0Si>

12. Legislative update

- Ross said that the PLSS legislation discussed earlier at this meeting is being worked on.
- Ross goes to the legislature every session with the goal of obtaining ongoing sustainable financial support for open data, managing the Commons, aerial imagery and lidar data.
- Please let Ross know if there is anything that needs to be brought to the legislature.

13. Updates on MN GAC priority projects and initiatives

Richter introduced three update items that priority and initiative owners should report on:

1. What is your most recent success?
2. Are you are experiencing a barrier?
3. What is your next task?

Richter noted that although Free and Open Data is not considered a separate priority, but rather is part of everything the GAC does, she wanted to highlight an important milestone: Over 50% of counties (45 of 87) now consider themselves to have free and open data, either with or without a policy.

- Parcel Data – Slaats
 - Most recent success:
 - PLRC's Open Data Subcommittee is actively working on many items related to parcel data and sharing
 - If you are experiencing a barrier: none
 - Next task:
 - PLRC's Open Data Subcommittee’s outreach team will be reaching out from county to county to talk about benefits of sharing data and learning more about barriers.

- Updated and Aligned Boundary Data – Stovern
 - Most recent success:
 - Adopted definition of Boundary Alignment. Transferred data to MnGeo for the PLSS Status Map.
 - If you are experiencing a barrier: Volunteer time
 - Next task:
 - Participate and document boundary alignment in the Arrowhead region in order to transition it to other areas of the state. Add more data to the PLSS Status Map.

- Remonumentation of Section Corners – Veraguth
 - Most recent success:
 - Working on a business case
 - Working on legislation
 - Working on letters of support (MSPS, MACS, GAC, MN GIS/LIS, County Recorders, County Engineers, AMC, MnDOT, DNR, Fish & Wildlife, Forest Service, Mn Farm Union, Corps of Engineers, MN Association of Townships, Realtors, Bar Association, Legislature)
 - Created a [Hub site for PLSS questions and answers](#) (post link on several websites)
 - If you are experiencing a barrier: Funding and support!
 - Next task:
 - Finish business case
 - Finish legislation
 - Submit legislation for this session (find as many avenues as we can to submit legislation)
 - Find funding sources

- New Lidar Acquisition – Sjerven
 - See presentation earlier in this meeting for the update

- Accurate hydro-DEMs – Vaughn
 - New lidar is coming and so there will be a renewed need to remove digital dams. We always have to modify DEMs to model water moving across the landscape.

- Culvert Data Standard – Moore
 - This standard will be worked on later this year

- Road Centerline Data – Ross
 - Most recent success:
 - Internal statewide aggregation of road centerlines with address ranges to the NG911 data model
 - If you are experiencing a barrier: Challenges but not barriers
 - Next task: Snapping across county boundaries

- Address Points Data – Ross
 - Most recent success:
 - Statewide aggregation of address points to the NG911 data model
 - If you are experiencing a barrier: Challenges but not barriers – not currently able to provide to the public
 - Next task: Statewide aggregation of updated data from authoritative sources to the GAC standard

- Underground Utilities Data – Swazee
 - Swazee noted his presentation earlier in the meeting

- Critical Infrastructure Data – Stark
 - Most recent success:
 - We have the fire stations ready to publish - should be up any day as a feature layer view [see [published resource](#)]
 - Created a draft 'resource page' on the MnGeo website to summarize sources of critical infrastructure GIS data
 - If you are experiencing a barrier: none
 - Next task:
 - Communication plan for fire station layer
 - Consider attributes for police feature layer

- U.S. National Grid Materials – Knippel
 - Most recent success:
 - Developing a mechanism to allow anyone to register a map series and index polygons with map links for display in the SharedGeo map book application
 - If you are experiencing a barrier: Time availability against other priorities is the biggest barrier
 - Next task:
 - Finishing up the one described in #1

- Imagery update – Slaats
 - Most recent success:
 - Started work on image viewer recommended by Image Service Sustainability Committee
 - If you are experiencing a barrier: Time constraints to work on committee recommendations
 - Next task:
 - Adding county imagery from Rice, Steele, and Carlton counties to WMS
 - Follow up on Image Service Sustainability Committee recommendations to add and retire some image layers

- Trails Data Standard – Kotz

- See agenda item 4
- The implementation of an archive for Minnesota geospatial data
 - Outreach
 - Gathering stories for publication to MnGeo’s website
 - Presenting at GIS/LIS Conference 2021
 - Lightning Talk: Archiving Geospatial Data in Minnesota: Recommendations and Future Directions
 - Poster: The Future of Historical Data in Minnesota
 - Panel Discussion: What is geospatial data archiving and why is it important for Minnesota?
 - Pilot
 - Developing metadata crosswalk (MGMG to Dublin Core)
 - Experimenting with a test instance of a repository at the University of Minnesota
 - Determining how to organize and provide hierarchies for organizations, collections, and layers

14. Announcements or Other Business

- Albrecht – Climate conference (virtual) is upcoming and encourages GAC members to attend.
- Bonney – None
- Brandt – The MetroGIS Coordinating Committee met on 9/22. The committee voted to approve lidar acquisition funding. [MLCCS](#) (Minnesota Land Cover Classification System) work will be funded next year. The committee be working on MetroGIS priorities at upcoming meetings and aligning those priorities with GAC priorities.
- Geurts – None
- Knott – Upcoming GIS/LIS 2021 annual conference is going virtual and will be held October 25-29. The cost for the conference will be \$125.
- Maddox – None
- Mavis – with the GIS/LIS conference going virtual, “Meet me at the Corner” will be a stand-alone event next spring or summer.
- McGuire – is now GIS manager at the Metropolitan Council. The Met Council is looking at applying licenses to GIS metadata so that it is more explicit that people can use the data. The goal is to make the data more accessible and usable.
- Reinhardt – There has been a platform change at NACo to include mapping.
- Scharenbroich – None
- Sjerven – None
- Stark – GIS/LIS Educator Day is going to stay on 10/13 as planned, despite the switch to the virtual GIS/LIS conference. Please share information with K-12 teachers. The keynote at 11:30 is open as a free event. It will feature a high school senior who will explain how winning this year’s Minnesota on the

Map contest has influenced her career goals; the [Mapping Prejudice project](#); and acceptance of this year's [Distinguished Educator award](#). See: <https://mnk12-umn.hub.arcgis.com/> for more info.

- Steele – None
- Strong – None
- Timerson – MnDOT completed an update to their GIS strategic plan. Timerson wanted to recognize Andra Mathews' good work on this plan.
- Tuerk – Looking forward to connecting with everyone virtually at GIS/LIS.
- Veraguth – The Parcel and Land Records Committee's Remonumentation Subcommittee is looking for new members, especially recorders, engineers and GIS folks. Please let Veraguth know about any potential new members.
- Swazee – The Great Lakes Alliance for Remote Sensing project is focused on creating, collaborating and sharing geospatial data across the Great Lakes Basin. Find more information at: <https://glars.org/>
- Craig – NSGIC is updating their State Geospatial Maturity Assessment. Minnesota is doing well, but he noted that Minnesota's parcel data rating is being dropped from an A to a B because parcel data is not public statewide.

15. Adjourn

Richter thanked everyone for attending the meeting.

- **Motion:** To adjourn meeting (Veraguth/Richter) – Motion passed.