Minnesota Geospatial Advisory Council Meeting Minutes

March 30, 2022

Online via Webex

10:00 a.m. – 12:00 noon

Members Present: Heather Albrecht, Hennepin County; Mitch Bergeson, USGS; Ryan Bonney, Shakopee Mdewakanton Sioux Community; David Brandt, Washington County; Kari Geurts, MNIT Department of Natural Resources; Len Kne, University of Minnesota; Leanne Knott, City of Red Wing; Matt McGuire, Metropolitan Council; Victoria Reinhardt, Ramsey County; Cory Richter, City of Blaine; 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; Dale Watt, The Nature Conservancy

Members Absent: Jeff Bloomquist, USDA Risk Management Agency; Britta Maddox, Anoka County; Chris Mavis, Hennepin County; Patrick Veraguth, Douglas County

Non-Members Present: Jose Aguilar, Department of Transportation; Vic Barnett, Ramsey County; Andrea Bergman, MNIT Department of Natural Resources; Tim Bonn, SURDEX Corporation; Curt Carlson, MnGeo; Will Craig, retired; Preston Dowell, St. Louis County; Brad Henry, University of Minnesota; Patrick Landisch, Department of Revenue; Karen Majewicz, University of Minnesota; Andra Mathews, Department of Transportation; Ryan Mattke, University of Minnesota; Rick Moore, MNIT Department of Natural Resources; Akiko Nakamura, Department of Public Safety; Pamela Jo Peters [no org known]; Nancy Rader, MnGeo; Mike Robinson, Department of Transportation; Kiah Sagami, Houston Engineering; Jamie Schulz, MNIT Department of Natural Resources; Alison Slaats, MnGeo; Lucas Spaete, Department of Natural Resources; Ryan Stovern, St. Louis County; Molly Swanson, City of Eden Prairie; Kevin Trappe, Beltrami County; Sean Vaughn, MNIT Department of Natural Resources; Sally Wakefield, Minnesota Department of Revenue; Clayton Watercott, MetroTransit; Sandra Yassin, Department of Transportation

1. Call to Order

[Meeting presentation slides](#)

Richter welcomed GAC members and guests, and members introduced themselves. The GAC is pleased to welcome two new members: [Mitch Bergeson](#), U.S. Geological Survey, federal sector representative, and [Dale Watt](#), The Nature Conservancy, nonprofit sector representative.

- **Motion**: Approve today's agenda (Reinhardt/Brandt) – Motion passed.
- **Motion**: Approve meeting minutes from 1/19/2022 (Reinhardt/Watt) – Motion passed.

2. Review and Accept Committee Summaries (All)

Richter thanked the committees for sharing their accomplishments through their summaries. Some committees also included their 2022 work plans, so those are included in the agenda packet, along with the GAC's final 2021 accomplishments and 2022 work plan.

Richter highlighted several items in the agenda packet:

- The CJIS (Criminal Justice Information Services) Best Practices and Data Standards Guide for GIS Workgroup has submitted their charter for approval (p. 2)
- The 3DGeo Committee has received two awards: NSGIC 2021 Geospatial Excellence Award and the Outstanding Team Achievement in Lidar award through Geo Week (p. 7)
- The Emergency Preparedness Committee has created the U.S. National Grid Implementation Workgroup (p. 17)

Motion: Accept the committee summaries, committee and GAC work plans, and the CJIS Workgroup charter (Reinhardt/Brandt) – Motion passed.

Action Item: Richter asked for several volunteers to evaluate the report templates to make sure they meet the current needs of the GAC for information as well as accessibility standards. Sjerven and Rader volunteered; other volunteers should contact Richter.

3. Award Committee Update (Kne)

The Awards Committee's mission is to promote awareness of the Governor's Geospatial Commendation Award, review nominations, and submit recommendations to MnGeo. The standards for the awards are high, and no awards have been given during the past two years. The committee feels there are many potentially deserving projects that either are not being nominated or need help with creating a strong nomination.

The committee is trying a new approach this year:
- **Draft nominations are due June 1** (earlier is OK!)
- The committee will review the draft submissions and provide feedback for strengthening them
- **Final nominations are June 30, 2022**
- See the committee's webpage for guidance on nominating a project

Action Item: All members: Consider projects to nominate and encourage others to submit nominations.

- Brandt: Noted that the Governor's commendations are different from the Minnesota GIS/LIS awards (Lifetime Achievement, Polaris Leadership, Distinguished Educator, Emerging Professional) that are due May 31 this year.
- Richter: Encourages applicants from previous years whose projects had potential to be selected to resubmit.

4. Archiving Pilot Workgroup final report (Mattke, Majewicz)

Mattke reported that the Archiving Pilot Workgroup has submitted their final report. The group's mission was to evaluate and test a range of potential archive technologies, create a proof of concept with sample sets of data, and continue to perform community outreach to build on the work of the Archiving Implementation Workgroup and the Archiving Workgroup.

Majewicz reviewed the work of the pilot subgroup which tested four software applications that could serve as discovery platforms for items in a geospatial archive: CKAN, Dspace, GeoBlacklight and Preservica. See the slides for comparisons of main functions and features of these applications and some pros and cons of each. The group then tested a sampling of data pulled from the Minnesota Geospatial Commons. Deciding which product to use will depend on where the future archive is located and who takes responsibility for creating and maintaining it.

Mattke noted that the outreach subgroup published several example stories collected from their ongoing survey about uses of historic geospatial data.

Next steps:
- Convene another short-term workgroup to pilot the archiving of imagery since aerial imagery is one of the highest priority types of data requested for the archive
- Determine any major differences in archiving imagery data such as space considerations due to the size of the files
- Continue to compile stories and use cases for the archive

Action Item: Mattke will submit a charter for an imagery archiving workgroup for approval at the GAC's May 25 meeting.

5. Open Parcel Data Subcommittee Update (Stovern)

The Open Parcel Data Subcommittee of the Parcels and Land Records Committee continues to focus on relationship-building and communication with counties. Twenty-nine counties responding to the committee's Dec. 3 survey opted-in to the first release of a publicly available open data parcels dataset on the Minnesota Geospatial Commons!

The committee sent a new survey out last week. Eleven more counties responded, several of whom opted-in to the next quarterly release of the open parcels dataset.

The committee proposed revising the communication method adopted at the December GAC meeting so that they can let MnGeo know directly when additional counties opt-in, rather than waiting until the next quarterly GAC meeting.

Discussion:
- McGuire: Doesn't the committee already have the authority to contact MnGeo with updates? Stovern: No, the procedure adopted in December required the committee to have the GAC approve additions at a quarterly meeting, then the GAC chair would notify MnGeo that the county could be added. Now that the policy has been put in practice, the committee sees no good reason for this delay.

Motion: The GAC will authorize the Open Data Parcel Subcommittee of the Parcels and Land Records Committee (PLRC) to provide updates to MnGeo, as needed, to add additional counties to the opt-in Statewide Compiled Public Parcel Dataset. The subcommittee will provide updates to the GAC at quarterly GAC meetings of the new counties participating in the opt-in Statewide Compiled Public Parcel Dataset. (McGuire/Steele) – Motion passed.

Other discussion in the chat:

- Watt: This is a great initiative; parcel data is very important for our work at TNC.
- **Action item:** Stark: A subcommittee of this group is collecting "use cases" for open parcel data - if you have one, please share!

6. PLSS Legislation (Dowell)

Dowell reported that draft legislation to remonument Minnesota section corners has been introduced in the Minnesota Senate by Sen. Johnson Stewart as SF 4037 (Sen. Bakk is a co-author) and in the House by Rep. Paul Anderson as HF 4456. Both have been referred to State Government Finance and Policy and Elections Committees.

Provisions in this initial legislation:
- Grant program managed by MNIT and the GAC
- Requires remonumentation of the PLSS according to statute 381.12
- Grant criteria must favor counties that demonstrate financial need
- $10 million per year for 34 years in dedicated funding to the remonumentation grant program
- $1 million per year for 34 years is dedicated for hiring of technical staff to help implement the program

The legislation is unlikely to pass this year due to late introduction, but it is still possible that it could be brought into an omnibus bill. If it does not pass this year, we plan to re-introduce it next year.

If the bill becomes law, the GAC will need to establish a standing committee as specified in the bill (the existing Parcels and Land Records Remonumentation Subcommittee can be transitioned into this role):

"The chief geospatial information officer, through the Geospatial Advisory Council established under section 16E.30, subdivision 8, shall work with the stakeholders licensed as land surveyors under section 326.02, to develop a process for accepting applications from counties for funding for the perpetuation of monuments established by the United States in the public lands survey to mark public land survey corners, as provided in section 381.12, subdivision 2, clause (1)."

Action items:
- Contact your local senators and representatives since legislators respond more favorably to local constituents
- See the Preserving the PLSS Hub site for more information, including a template letter of support
- Register and promote the Meet Me at The Corner Event, May 4th in Spicer, MN

Discussion:
- Reinhardt: She met Senator Johnson yesterday during a capital improvements bonding tour and thanked the senator for sponsoring the legislation. She emphasized why PLSS is important for accuracy,

especially with environmental issues. It is good to focus on the general principles rather than the specifics of the legislation, since the legislation will morph as it goes along. She appreciates that PLSS experts have given her enough information so she is well-informed when she speaks with legislators. Afterward, she followed up by sending the senator a letter that Geoff Maas drafted; she wrote as a GAC member and used her letterhead. She was ready to testify if the hearing had happened.
She encouraged the GAC to keep building support for this effort since "we're in a good spot." Legislation can take years, so do not get discouraged if it doesn't happen this year.

- Henry: This is a commendable effort. Later today, he will be on a national conference call about federal legislation that would provide funding for a related effort that will take a different approach.
  Action item: Henry send more details to Dowell after the call.
- Richter: Sent a letter of support as a city GIS manager, emphasizing the programs it serves for constituents, including property rights and infrastructure. She can share the letters she wrote to anyone who is interested.

7. Break

8. Lidar Update (Vaughn)

Vaughn reviewed the organization of the 3DGeo Committee, then focused on the activities of the Data Acquisition Workgroup which promotes procurement of foundational 3D data for Minnesota. The workgroup has established coordinators for each of the lidar acquisition blocks (LABs), who are listed on Slide 34. They have also designated Alison Slaats to be the LAB financial coordinator, responsible for coordinating funding applications, establishing needed agreements, and coordinating with MNIT Procurement, MNIT Finance, funding partners contacts and their respective financial departments.

He then reviewed the 3D Elevation Program (3DEP), which systematically guides the collection of 3D elevation data in the form of lidar data for the U.S. and its territories, and the Broad Agency Announcement (BAA), 3DEP's grant coordinating mechanism. The BAA guides partnerships between the USGS and other Federal agencies with other public and private entities seeking high-quality 3D lidar elevation data acquisition. The 2022 BAA submission deadline is October 1.

Status of lidar collects and plans:
- Rainy Lake and Lake Superior data expected late spring 2022. Data will be made available as soon as possible – please do not request data until its availability is announced
- Spring 2022 Acquisition includes 6 Projects: Lower Mississippi (SE); Missouri/Big Sioux (SW); Upper Mississippi; Central Mississippi; Becker/Otter Tail counties; Douglas County
- Pilot data received for two areas in Southern BAA – Missouri Big Sioux and SE Driftless Blocks
- Outreach in progress to Central Mississippi River (Metro) Block and to Upper Mississippi River (Central Lakes) Block

See the slides for maps and additional details about timing and funding. The significant contributions of local partnership funding from a wide variety of partners have made it possible to receive substantial federal funding. Everyone can be a stakeholder and a voice of support even if they don't have money or aren't a decision maker. Visit the Minnesota Lidar Hub for updates.

Geo Week Award: The 3DGeo Committee received a Geo Week "Outstanding Team Achievement in Lidar" award, given to teams who have demonstrated a unique achievement in the area of service, project management, product development or other specialty. This prestigious award is given by a partnership between LIDAR Magazine, Lidar News, and ASPRS.

Conditions reporting tool: The 3DGeo group has created a [crowdsourcing tool](#) that uses ArcGIS Survey123 to track conditions of ice, vegetation, and the ground to support timing and coordinating lidar data procurement throughout 3DGeo LABs. Information collected is shared in a [dashboard](#) that allows cooperators to monitor changing conditions.

9. Tribal Sector Report (Bonney)

Bonney presented the results of a poll he sent to the other tribal GIS contacts:
- If and how your tribe is currently utilizing GIS?
    - 4 were using for basic infrastructure mapping
    - 3 were using it for AGOL, ArcPro, and forestry/natural resources
    - 1 was using it for web app development and one was mostly outsourcing GIS
- What are your biggest GIS concerns?
    - Staffing was the biggest concern (5), followed by training (3) and decision maker support (1)
    - Trying to keep up with technology, lacking IT expertise or support to set up new technology, and knowing what would be most useful
- What are your biggest GIS needs?
    - 4 reported budget/staffing, and 2 each reported understanding new software and access to better remote sensing data
    - NW/NC MN needs new high-resolution imagery, and new peak fall high resolution imagery on the Commons
- Are you familiar with any of the GIS offerings (such as open data, or web applications) from MnGeo?
    - 4 were very familiar; 2 somewhat familiar; and 1 reported they preferred to use the MN Natural Resources Atlas because "you can visualize the data on a map first to see if it's what you need before downloading. It's also nice to be able to do some quick analyses on it." The Commons was used frequently to download data and use the WMS for imagery.

He then described the state of GIS at Shakopee Mdewakanton Sioux Community. He is a department of one, with several other staff using ArcPro casually and many people using ArcGIS Online. The main uses are for:
- Cartography/GIS analysis: mapping real estate, natural resources, cultural features and infrastructure
- Remote sensing: An extensive UAV program including lidar, multispectral, optical and thermal
- Web mapping: 12 active web mapping apps available to community members

Bonney communicates information learned from the GAC out to his tribal contacts and will continue to bring questions and issues back.

10. Legislative update (Slaats)

Slaats reported that conversations are continuing about the topics of policy and funding of geospatial program needs; proposals for additional funding for lidar and for a surveyor position did not make it to legislation this year. The PLSS bill that Dowell described above ([HF4456](#), Anderson) is scheduled for a hearing on Friday.

11. Updates on MN GAC priority projects and initiatives

Brandt 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?

He showed an updated map of the 48 Minnesota counties that consider themselves to have free and open data, either with or without a policy.

- New Lidar Acquisition - Vaughn
  - Most recent successes:
    - Created LAB Coordinators
    - Statement of Work and Task Orders approved for Upper and Central Mississippi LAB, awaiting vendor selection
    - Spring flights planned for SE and SW MN
    - Awaiting data for NE MN this spring or early summer
  - Barrier: Coordinating delivery of data and storage
  - Next tasks:
    - Outreach for Minnesota River East and West LABs for potential 2023 collect
    - Coordinate communication with LAB partners
  - Also see presentation earlier in this meeting (Item 8)

- Updated and Aligned Boundary Data – Dowell
  - Most recent success:
    - Committee discussed difficult parcel mapping issues along county boundaries. Hopefully this will turn into a process for proper handling and mapping of boundaries.
    - Transferred the PLSS Status Map to MnGeo
    - Supporting Remonumentation Subcommittee
    - Supporting/documenting Arrowhead Alignment Project
  - If you are experiencing a barrier: Volunteer time
  - Next tasks:
    - Update the PLSS Status Map
    - Review PLSS data standard
    - Continue supporting/documenting the Arrowhead Alignment Project

- Parcel Data – Slaats
  - Most recent successes:
    - Published a public GAC-standard compiled dataset including 29 opt-in counties in January 2022
    - Streamlined process with GAC for including additional counties in opt-in dataset

- o If you are experiencing a barrier: None
- o Next tasks:
  - ▪ PLRC's open data sub-committee's outreach team will continue reaching out from county to county to talk about benefits of sharing data and learning more about barriers and follow up on survey results.
  - ▪ Send GovDelivery newsletter to community to share success

- Road Centerline Data – Slaats
  - o Most recent success: Data submission and validation routines moved to a new portal
  - o Barrier: Work on validation process is still taking precedence over sharing data
  - o Next tasks:
    - ▪ Build and automate the ETL process for aggregating data to the GAC standard
    - ▪ Publish to the Geospatial Commons

- Imagery update – Slaats
  - o Most recent successes:
    - ▪ Worked on image viewer recommended by Image Service Sustainability Committee
    - ▪ Added county imagery from Rice, Steele, and Carlton County to WMS
    - ▪ Added NAIP 2021 color imagery
  - o Barriers:
    - ▪ Time constraints to work on committee recommendations; did not accomplish removal of suggested retirement image layers
    - ▪ Issue with Koochiching imagery borders
  - o Next tasks:
    - ▪ Adding county imagery from Koochiching and Dakota
    - ▪ In discussion: Le Sueur, Lyon, Lincoln and Aitkin counties

- Critical Infrastructure Data – Stark
  - o Most recent success:
    - ▪ Published the [fire station resource](#) to the Commons with an app for verification
  - o Barriers:
    - ▪ Hoping to pique the interest of the Fire Marshal and/or other authorities of these data!
    - ▪ Finding avenues to publicize beyond GIS community
  - o Next tasks:
    - ▪ Publish "C.I. resource site" on MnGeo website
    - ▪ Publish law enforcement dataset, similar to fire station dataset

- Address Points Data – Slaats
  - o Most recent success: Data submission and validation routines moved to a new portal
  - o Barrier: Work on validation process is still taking precedence over sharing data
  - o Next tasks:

- Build and automate the ETL process for aggregating data to the GAC standard
- Publish to the Geospatial Commons

- Underground Utilities Data
  - Most recent successes: Multiple – see quarterly report
    - Major – Support resolution passed by the Minnesota Clean Water Council
  - Barrier: Working through a highly technical geospatial implementation for the first time on the planet - but making progress
  - Next tasks: Currently 5 different work groups simultaneously working over 50 spreadsheet-defined tasks spanning data, legal, security, prototype build, standards, and policy

- U.S. National Grid Materials – Knippel
  - Most recent success: Developed interface to allow map publishers to contribute to an application that provides access to USNG maps series and map books published anywhere on the Internet
  - Barrier: Time
  - Next tasks:
    - Complete the above interface
    - Migrate existing documentation from ArcMap to ArcGIS Pro

- The implementation of an archive for Minnesota geospatial data
  - See Archiving Pilot Workgroup final report in Item 4 above

- Accurate Hydro-DEMs – Vaughn
  - Most recent successes:
    - None related to progress
    - 3DGeo starting to receive more questions about this topic. Previous state investments in DEM hydro-modification and resulting datasets will support new DEM Hydro-modification.
  - Barrier: Funding
  - Next tasks:
    - Continue to build awareness that new lidar will require DEM hydro-modification and funding
    - Identification of culverts in new lidar will facilitate DEM hydro-modification

- Culvert Data Standard – Moore
  - Most recent successes:
    - Identifying resources and interested parties to become partners/members in the committee.
    - Researching culvert data practices of other states to identify best practices

- Barrier: Identifying time to coordinate meetings for the standard. The culvert data standard will become high priority in 2022 in tandem with the DEM Hydro-modification Subgroup
- Next task: Meeting to bring together interested parties for the culvert data standard. Meeting with MnDOT representatives is forthcoming.

- Remonumentation of Section Corners
  - See PLSS legislation report in Item 6 above

- CJIS Data Best Practices
  - Most recent success: Creating a charter
  - Barrier: Actively recruiting team members!
  - Next tasks:
    - Schedule a meeting with subject matter experts to begin work
    - Summary crime data: pending the completion of CJIS Data GIS Best Practices as that will be key to what we share for this.

12. Announcements or Other Business

- Richter – Provided links to more information on the federal Infrastructure Investment and Jobs Act that could be an opportunity to fund GIS priorities:
  - Notice of funding opportunity
  - Building a Better America
  - Bipartisan infrastructure law
- Timerson – The State Agency Collaborative arranges lunch hour presentations called "GIS Bytes" every few weeks that share information about GIS data and projects; the sessions are open to state agency staff.
  Action Item: Let Timerson or Geurts know if you are interested in presenting information on GAC-related topics – it could be a way to recruit more people for GAC committee work! A session could be just one topic or several short topics.
- Knott:
  - The GIS/LIS Consortium's spring workshops will take place Thursday May 12 at the University of Minnesota. Registration will open April 11.
  - The Salary Survey closes April 1.
  - Annual conference: The Consortium is planning an onsite conference in Bemidji, October 12-14; see the Call for Presentation Abstracts and Workshop Instructors. Deadline for abstracts is May 27. Visit the GIS/LIS Consortium website for more information.
- Kne – He is one of the co-authors of a new book, "Building the Spatial University: Spatial thinking, learning, and service throughout the system".
  - More about the concept of The Spatial University at the University of Minnesota
  - Book information from the publisher

- Stark – The Critical Infrastructure team, part of the Emergency Preparedness Committee, is creating a webpage of information about sources for data about critical infrastructure. Their next meeting will be April 8.
- Vaughn – Referred back to the slides in Item 8 that illustrate the details of vegetation and infrastructure that can be captured with new lidar.

13. Next Quarterly GAC Meeting

- May 25
  - 11:00 – 2:00 (if there's an in-person option)
  - 10:00 – noon (if all-virtual meeting)

14. Adjourn

Richter thanked everyone for attending the meeting.

- **Motion**: To adjourn meeting (Brandt/Reinhardt) – Motion passed.