Minnesota Geospatial Advisory Council Meeting Minutes

December 9, 2020

Online via Webex

11:00 a.m. – 1:10 p.m.

Members Present: Ryan Bonney, Shakopee Mdewakanton Sioux Community; David Brandt, Washington County; Kari Geurts, MNIT Natural Resources; Renee Huset, City of St. Paul; Len Kne, University of Minnesota; Leanne Knott, City of Red Wing; Mark Kotz, Metropolitan Council; Chris Mavis, Hennepin County; Victoria Reinhardt, Ramsey County; Cory Richter, City of Blaine; Dan Ross, MnGeo; Soren Rundquist, Environmental Working Group; Gerry Sjerven, Minnesota Power; Alex Steele, Minnehaha Watershed District; Ryan Stovern, St. Louis County; Harvey Thorleifson, University of Minnesota; Kory Thurnau, USDA Forest Service; Benjamin Timerson, Minnesota Department of Transportation; Brandon Tourtelotte, Pro-West and Associates; Patrick Veraguth, Douglas County.

Members Absent: Jeff Bloomquist, USDA Risk Management Agency

Non-Members Present: Andrea Bergman, DNR; Curt Carlson, MnGeo; Will Craig, retired; Tim Dayhuff, Aerial Services, Inc.; Mike Dolbow, MNIT Education; Preston Dowell, St. Louis County; Erica Insley, Axis Geospatial; Randy Knippel, Dakota County; Tim Krohn, Fond du Lac tribal government; Jonathan Lord, MNIT DNR; Karen Majewicz, University of Minnesota; Andra Mathews, DOT; Ryan Mattke, University of Minnesota; Matt McGuire, Metropolitan Council; Rick Moore, MNIT DNR; Akiko Nakamura, Minnesota Department of Public Safety; Nancy Rader, MnGeo; Daniel Raleigh, DNR; Jesse Reinhardt, Hennepin County; Jeff Reinhart, DNR; Justin Roberts, DOT; Mike Robinson, DOT; Katie Rossman, MNIT DNR; Catherine Rowley, City of Minneapolis; Jamie Schulz, MNIT DNR; Alison Slaats, MnGeo; Stacey Stark, UMN Duluth; Sean Vaughn, MNIT DNR; Sally Wakefield, Minnesota Department of Revenue; Clayton Watercott, Metropolitan Council; Hal Watson, MNIT DNR; Peter Wiringa, UMN

References

This meeting included references to the following resources:

- Slides
- Agenda Packet

Call to Order

Kotz welcomed everyone to the meeting, and asked GAC members to introduce themselves when they spoke or during the announcements section of the meeting. The agenda was approved. The September 9, 2020 meeting minutes were approved.

Review and Accept Committee Summaries

Committee summaries included in the meeting packet were accepted. Kotz thanked the groups for their summaries and said that they showed the amount and value of the work being done at the GAC.

Archiving Implementation Workgroup Update

Mattke and Majewicz provided an update on the [Archiving Implementation Workgroup](#) which is finishing its work. Key points included:

- The workgroup's mission: "Define and facilitate the implementation of an archive for Minnesota geospatial data by building on the work of the Archiving Workgroup"
- Mattke noted the wide range of members and thanked them for their work.
- Accomplishments in 2020
  - Program – Developed a draft program for archiving geospatial data, including governance, staffing, coordination, workflows, discovery interface, maintenance options, and a glossary
  - Technology – Developed recommendations around data formats, data management, and data storage
  - Outreach and Education – Sent out informational and educational messages (more coming), and continue to collect testimonials on reasons for archiving geospatial data
  - Pilot Project – Devising a plan to experiment with MN Geospatial Commons data and MnGeo imagery
  - Funding – Devising a plan to pursue funding
- The group's final report will be presented at the March GAC meeting.
- Next phase: Mattke asked whether the workgroup should be continued or disbanded:
  - Continue sending out communications? Ideas for topics? Continue as part of GAC Outreach Committee?
  - Pilot project (spring/summer?)? Do we need a formal workgroup for this or not?
  - Hold off on (another) formal workgroup until we have a more solid plan for implementation?
- Reinhardt suggested that there should be a continuing workgroup for reporting purposes, and the communication comes from this group. Kotz and Richter agreed.
- Majewicz emphasized all the work that the subgroups have done and said there will be a full report of work and recommendations at the March GAC meeting and a recommendation to proceed with a pilot.
- Veraguth asked whether the workgroup will be gathering more data for archiving, e.g., from counties. Mattke said yes, but the initial pilot work will be with the Commons since the data are together in one place. But long term, the goal would be to collect data from many other sources. For example, MnDOT has disks of data from the 90s that is not online.

Approval of Changes to Address and Road standards

As the Standards Committee chair, Kotz explained that the committee has been updating the GAC's [address point data standard](#) and [road centerline data standard](#) to align them with NENA (NG9-1-1) standards. The NENA standard is specific to NG9-1-1 whereas the GAC standards were intended to be for broader uses, including NG9-1-1.

The Standards Committee wanted to make sure that the GAC standard data could be used for NG9-1-1 needs. Together the committee and MnGeo staff compared the standards element-by-element. Most differences were simple to resolve. For the most part, the committee agreed to keep the GAC standards as-is, with a few exceptions resulting in the addition of four new elements.

The standard underwent a 60-day public review. Thirty comments were received. The committee agreed to responses to these comments and clarified some language.

Summary of changes:

- Made minor wording edits for clarity
- Removed "If Available" inclusion category
- Added an optional Road Cartographic Class element in the road standard for cartographic symbology purposes
- Removed XML formatting template from address standard

The Standards Committee requests GAC approval of these two revised standards:

- Draft version 1.3 of the Address Point Data Standard
- Draft version 1.1 of the Road Centerline Data Standard

Motion: Approve the proposed revisions to the address point data standard and to the road centerline data standard (Stovern/Richter). Passed unanimously.

3D Geomatics Committee update

Vaughn, co-chair of the 3D Geomatics Committee (3DGeo), provided an overview of the committee and how the committee's work aligns with the GAC priorities

- Three of the GAC priorities are relevant to 3DGeo: Lidar data (#8); Hydro-modified DEMs (#6) and Culvert standard (#19). Each priority is supported by the work of subgroups that are part of 3DGeo.
- Lidar DEMs must be processed to deal with digital dams. This is not a flaw in DEMs, and it is not unique to Minnesota. DEMs don't capture water flow under bridges and through culverts. This must be dealt with by removing digital dams.
  - Lidar --> point cloud --> DEM --> hydro-modified DEM
- If we don't correctly remove digital dams, water can flow into the wrong watershed which will result in faulty analysis.

Rick Moore, watershed data steward at the DNR, spoke specifically to the work of the DEM Hydro-modification Subgroup

- This group is working to pull together all the breachline datasets with the goal of providing the foundation for an authoritative dataset for Minnesota
- Hydro-modified DEMs (hDEMs) are needed for tools which help identify areas for conservation practices, such as PTMApp, ACPF, and One Watershed, One Plan
- Moore shared accomplishments of the subgroup:
  - Finalized standardized attributes
  - Reviewed manuscript on impacts of hDEMs on conservation practice placement by Rallipalli, Drewitz, and Magner
  - Discussed standard terminology on referencing legacy hDEM breachline datasets

- Arranged for presentations by Kevin Stark of SMUMN and Brian Gelder of Iowa State University on automated hydro-modified DEMs

Take-away Messages

- Lidar **does its job,** DEMs are not a flaw of lidar
- hDEMs are **foundational data** (Point Cloud, DEMs)
- Proper **replication of landscape hydrology** in DEMs is required
- **Tools & Models** have **dependencies** on hDEM
- **Culvert Database** supports culvert data sharing for DEM hydro-modification

See their slides for more information and illustrations.

Discussion

- Moore asked about GAC standards, "What does a standard mean?" Kotz and Richter clarified that a standard is used for the transfer of data and does not dictate how the data are stored.
- Richter said the standard should be independent of software. The standard should be able to be used if data were collected on paper. Creating the dataset or application would be a separate initiative to the standard.
- Moore clarified that the subgroup's work would be: Standard first, Culvert inventory second
- Kotz says that the standard could be used to create a larger aggregated dataset
- Kotz recommended that the 3DGeo subgroup reach out to the Standards Committee on this topic
- Kotz thanked the 3D Geo Committee members who are leading the way on three GAC priorities. This is a very valuable effort.

Statewide Parcel Map Discussion

Veraguth shared slides to speak about a statewide parcel dataset and map in Minnesota. Key points included:

- Statewide publicly available parcel data is GAC priority #4 and all public geospatial data in MN to be free and open is GAC priority #1
- Douglas County has an open GIS data policy. Veraguth talked about data work in Douglas County and the amount of time and cost for remonumentation in the pilot project.
- Veraguth shared a map showing the current counties with free and open data in Minnesota (41 of 87). See: https://gisdata.mn.gov/dataset/bdry-mn-county-open-data-status
- The state (MnGeo) currently requests parcel data quarterly from all Minnesota counties, and aggregates it in the GAC parcel standard for use by other state agencies.
- How much time and what would be the cost for counties to put their data into this format?
- What about derivative parcel products?
- How can we get permission for all parcel data to be shared publicly?
  - Create a statewide parcel map from open data only
  - Reach out to two counties per month
  - We need County people to reach out to other counties
  - GAC Outreach Committee

- o Association of Minnesota Counties (AMC) District meetings
- o AMC's Minnesota Counties quarterly publication
- o County Recorder meetings
- He shared examples of how other states support this work: Wisconsin, Michigan, Oregon
- Presentation ended with a call to be involved in the joint effort (between the GAC's Parcels and Land Records Committee and the Outreach Committee) to promote more counties sharing their data publicly.

Follow up discussion

- Outreach to counties from other counties would be beneficial
- Stovern: AMC recently reached out to the Minnesota GIS/LIS Consortium about working together
  - o Reinhardt can bring ideas forward to AMC and is willing to do that outreach. As an elected official, she may have better connection.
- Some counties rely on data income to help pay the bills
- Wisconsin has a very good program. Base budget for each county (numbers are from 2016)
- Michigan has spent millions of dollars on remonumentation.
- Craig: Only half the Michigan counties participate in sharing parcel data
- Oregon charges $10 per document which is similar to Minnesota.
- Minnesota maybe missed an opportunity when recorders were increasing fees. We need to do something to help spread some money to other counties.
- Ross: It feels like we should continue to work with recorders. Six years ago, we explored the idea of using the state portion of the fee for doing parcel work. He had proposed using 50% of that general fund money for GIS work. There was opposition from the recorders.
  - o Dowell: What was main opposition point?
  - o Ross: The worry was that all recorders fees would be re-evaluated and assessors were worried that how they were using funds would be scrutinized.
  - o Reinhardt: This worry about funds being scrutinized is a pattern. For example, the waste management fund partly goes to the General Fund, rather than all going to waste management efforts. The county perspective is that General Fund holes will be filled from other county funds. Of the $46; $10.50 goes to the State. Maybe this approach won't work.
  - o Ross says this is covered back in the 2012 study and Kotz points to a metro study.
  - o Reinhardt said the concern was more about liability, and Ross followed up that there are three places in statute that release counties from liability.
- Veraguth asked which committee should be looking into this topic and Kotz replied that the Parcels and Land Records Committee seems appropriate.
- Kotz looks forward to the creation of compiled parcel data for the open data counties.

From the chat window:

- Craig: Wondering whether we have any real data on how much money was being made on selling the data.
- Jeff Reinhart: Thanks for the background on funding. Clears up a lot of questions I have had. Too bad the answer is the muddy spot.

- Dolbow: Comment with regards to sales of the parcel data: a lot of the counties have offloaded the administration of that to the Schneider Geospatial company, so it's a bit more opaque than just "cost vs revenue", because Schneider provides a lot of other services as part of it. Tourtelotte agreed.
- Kne: The County Free and Open Data survey from 2016 offers much insight to reasons why counties are reluctant to provide free and open data.

Updates on GAC Priority Projects and Initiatives

Richter asked for updates on the GAC's 2020 priorities (names in parentheses are the person who gave the update, not the priority owner).

- **Free and Open Data**: We still need an owner of this priority.
- **Updated and Aligned Boundary Data** (Dowell): Small successes. It's a lot of work and it has been slow going due to COVID. The Arrowhead group meets every month.
- **Geodata Archiving Implementation** (Mattke): The Archiving Implementation Workgroup and its subgroups reported successfully completing the work we set out to do in the time we allocated. The main challenge moving forward is funding; the next step is to create a report.
- **Parcel Data** (Slaats): MnGeo will coordinate with the Parcels and Land Records Committee on sharing a free and open county version of the parcels in 2021.
- **Image Service Improvements** (Slaats): The 2019 NAIP imagery was received by MnGeo in November and was processed and added to the Geospatial Image Service. Additionally, the Met Council-funded Spring 2020 orthophotos have been added to the image service. MnGeo staff noted the lack of traffic and empty parking lots in the April imagery. The Image Service Sustainability Committee will evaluate whether to add the imagery into the composite image service at its meeting in January 2021.
- **Hydro-DEMs** (Vaughn): Important challenges lie ahead. The main challenge for creation of Hydro-DEMs is funding. We need funding for this and other derivative products. We look to the GAC to be champions for funding for derivatives and other products moving forward.
- **Road Centerline Data** (Ross): MnGeo has created a statewide road centerline dataset for use by NG911. The goal for 2021 is to convert it to the GAC standard. Local partners are doing a wonderful job, and the data is getting updated. He clarified that the statewide NG911 centerline data, while aggregated, has not been fully validated to meet the 911 data model and or snap points between counties. That is in process now.
- **Lidar Data** (Sjerven): Sjerven shared acquisition maps (see meeting slide). Rainy Lake is planned for 2021. Lake Superior block was proposed for 2021 as well. In the Southern area, two areas were submitted for USGS BAA grant requests. These areas were decided based on the good work done in and shared by Goodhue County and in collaboration with other counties in the region. Where is the effort headed next? Metro Central Lakes area for 2022 collect, and submission of grant in the fall of 2021.
- **Emergency Management Damage Assessment Data Standard** (Richter): The standard has been completed and accepted by the GAC.
- **Address Point Data** (Ross): The data is coming in but a fair amount of validation remains to be done. No date on when or if that would be shared since that is up to Department of Public Safety.
- **US National Grid Materials** (Active): Emergency Preparedness Committee (EPC) work on USNG includes leading the national working group that meets quarterly. DNR requested the 1:24,000 USNG data be provided for use in maps; Dakota County stood up and has been hosting an application and services.
- **Parks and Trails Data Standard** (Richter): A trails and bikeways standard is currently out for public review. There is nothing going on with a park standard at the GAC.

- **NG911 Geospatial Forum** (Not Active): No report.
- **Underground Utilities Mapping** (Richter): The "Underground Utilities Forum" is now a formal Project Team of the EPC, per the EPC report to the GAC. Updates:
    - The project team champion is Barb Cederberg, COO of Gopher One State
    - 34 individuals are participating from across the public-private enterprise
    - Holding monthly large group meetings and have four smaller operating groups
    - Engagement is occurring with entities from across the U.S. and globe, most recently with the National Underground Asset Registry (NUAR) initiative project of the Geospatial Commission, Cabinet Office of the UK Government
    - Continuing to execute on our work plan without any significant issues
- **Basemap Services** (Not Active): No report.
- **Unmanned Systems Metadata Guide** (Not Active): No report.
- **Inventory of Minnesota Geodata Assets** (Not Active): No report.
- **Critical Infrastructure Data Custodian** (Richter):
    - This activity is going on through Stacey Stark's staff at UMN Duluth, in collaboration with other organizations. Critical infrastructure includes fire, police, hospitals and schools, but currently they are specifically focused on fire and police. Schools are available from the Minnesota Department of Education. The goal is to get fire and police data publicly available on the Commons, with some limited attribution, updated annually.
    - They are partnering with the Department of Public Safety, Homeland Security and Emergency Management; HSEM will help validate the data. The start of this dataset is the national "HIFLD" dataset that is maintained by private entities and research institutions. It includes many inaccuracies in Greater Minnesota.
- **Culvert Data Standard** (Moore): Next steps – pulling together membership for this work and planning a kick-off meeting. To be included, or if you have ideas for membership for the Culvert Data Standard work, please email rick.moore@state.mn.us

Timing of Future Online GAC Meetings (Kotz)

- Kotz compared the format of in-person GAC meetings and virtual "pandemic" meetings. In-person meetings were 3 hours with a 30-minute break for networking and lunch. Virtual meetings are 2 hours, 10 minutes with a 10-minute break. Kotz asked for feedback about meeting length and format.
- Reinhardt says shorter meeting is good.
- Richter says online meetings have the added benefit that information can be shared in the chat while the meeting continues.
- Ross noted that online meetings have good attendance.
- Vaughn said that if virtual meetings continue beyond the pandemic, it would be good to consider having one in-person meeting per year.
- Veraguth prefers virtual meetings because parking is difficult in the Capitol Complex; he recommends starting earlier so it doesn't go over the noon hour.

From the chat window:

- Bonney: I think that a shorter meeting works well.

- Stark: I agree with Sean, in-person is really important for those of us not in the Metro
- Kne: Shorter meeting while online, 10-minute break ok; hoping to get back to in-person meetings for the side conversations
- Watercott: I'll second starting at 10 am.
- Mathews: Very happy to be able to participate online. Thank you.
- Stark: In-person once or twice a year is very beneficial for those of us who don't see Metro folks often
- Wakefield: Happy to be able to participate online and hope the option continues. Also recognize the value of in-person, informal networking when circumstances allow.

Kotz noted that the next GAC meeting is on January 6, 11 am - noon to discuss setting 2021 GAC priorities.

Announcements or Other Business

- Brandt: Has attended Metro Conservation Network meetings about Twin Cities metro region conservation and that group has noted a need for better land cover data. The group is also looking forward to new lidar data acquisition. Bart Richardson is also part of this group.
- Kne: UMN has more than 14,400 ArcGIS Online users that are "thinking spatially."
- Mavis: A GIS/LIS, Minnesota Association of County Surveyors, Minnesota Society of Professional Surveyors collaboration meeting was held in October and focused on work that the organizations could be doing together. The next meeting will be held in February.
- Reinhardt: She is part of the EPA local advisory committee and chairs the team focused on revitalizing local communities. She is able to provide information to EPA Director Wheeler with direct communication, so if there is anything the GAC needs to share with the EPA, Reinhardt can do this.
- Richter: Encouraged everyone to fill out the GAC Priority survey and share it with others, especially their sectors. Also mentioned the GIS/LIS surveys that are currently active, specifically highlighting the "GIS and Work during COVID" survey. Results of this survey can guide us to how we can help others in our field during this time.
- Stovern: Reminded GAC members that the GIS/LIS elections are currently open. Also, the GIS/LIS Education fund has reached the long-time goal of $100,000. The results from a current GIS/LIS survey will help GIS/LIS plan for how the Education funds are used in the future. The election and surveys will be closing soon. Fill them out!
- Thorleifson: Continues to focus on soil mapping and mapping of underground structures. Why do we need 3D versions of geological maps? They can help with many topics including drinking water protection. Thorleifson is currently focused on county geologic atlas production. This work is supported by Clean Water funds and LCCMR support. U.S. Representative Betty McCollum's support has been critical for the work towards a seamless national soil mapping database. In the past, there were separate efforts on paper map publications but now the new "manifesto" is that international organizations should work together for a global seamless geologic database and this is starting to happen.
- Timerson: The AASHTO GIS conference will be held virtually April 19-22, 2021.
- Veraguth: Remonumentation in Grant county is getting close to being done. MSPS hosted a virtual seminar and had the highest attendance ever. Their annual meeting will also be held virtually, spread out over the months of January – March.
- Ross shared items from the national scene:

- o The Digital Coast Act was passed by Congress and is on the President's desk. Since Minnesota is a coastal state, this act is important because it brings money to the state. [Note, the Digital Coast Act (S.1069), was transmitted to the White House on 12/8 and signed by the president on Friday 12/18].
- o The National States Geographic Information Council has been working on the National Address dataset standard. NSGIC will recommend using the NENA standard.
- Will Craig – Reminded the GAC that NSGIC did a survey of the states in 2019 focused on how well states meet the need for foundational datasets. Minnesota got top marks. One of the places we didn't do so well on was leaf-on photography; we will be in good shape for the next survey because of recent photography. Minnesota also scored an A on cadastre, but Craig said we will never get an A again if we don't get the parcel data public. Craig directed the GAC to "keep working on this."