

Minnesota Geospatial Advisory Council Meeting Minutes

May 27, 2020

Online via Webex

11:00 a.m. – 2:00 p.m.

Members Present: Jeff Bloomquist, USDA Risk Management Agency; 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: Timothy Baker, University of Minnesota, Crookston

Non-Members Present: Brad Anderson, City of Moorhead; Curt Carlson, MnGeo; Will Craig, retired; Mike Dolbow, MNIT Education; David Holm, Fugro; Brian Huberty, retired; Rich Hunt, unknown; Hannah Hutchins, Olmsted County?; Niall Johnson, Bay West LLC; Mike Koutnik; retired; Karen Majewicz, University of Minnesota; Andra Mathews, Minnesota Department of Transportation; Matt McGuire, Metropolitan Council; Alex Metzler, City of Minneapolis; Nick Meyers, Esri; Akiko Nakamura, Minnesota Department of Public Safety; Patina Park, Governor's Office; Nancy Rader, MnGeo; Jamie Schulz, MNIT Natural Resources; Alison Slaats, MnGeo; Stacey Stark; University of Minnesota Duluth; Miles Strain, Quantum Spatial; Steve Swazee, SharedGeo; Sean Vaughn, MNIT Natural Resources; Sally Wakefield, Minnesota Department of Revenue; Hal Watson, MNIT Natural Resources; Andy Williquett; MNIT Natural Resources

References

This meeting included references to the following resources:

- [Slides](#)
- [Agenda Packet](#)

Call to Order

Kotz welcomed everyone to the meeting. Due to the COVID-19 pandemic, the meeting was held completely online for the first time. He then welcomed [Ryan Bonney](#), the council's new tribal government representative member. Members introduced themselves. The agenda was approved. The [March 11, 2020 meeting minutes](#) were approved.

Review and Accept Committee Summaries

Committee summaries included in the meeting packet were accepted. Several summaries were delayed and were added to the packet after the meeting.

Standards Update

Kotz reported that the GAC Standards Committee has been working in three areas:

- **Address point and road centerline standards:** NENA (National Emergency Number Association) versions of these standards were finalized after the GAC versions were approved. The committee is comparing the two versions to see if any changes should be made to the GAC standards. Some elements in NENA standards will be left out of the GAC standards because they are optional in NENA. This comparison work should be completed by the next GAC meeting.
- **Proposed damage assessment data standard** is out for a 90-day public review.
Action Item: Provide comments by the deadline of August 19, 2020.
- **Proposed draft standard for bikeways and trails** has been received and will be reviewed. The proposed standard was submitted by Michael Petesch, MnDOT's Pedestrian and Bicyclist Data Coordinator, and Sandy Yassin, who produces the Minnesota State Bicycle Map.

GAC SharePoint Site

Slaats reminded the group that, upon GAC member request, MnGeo can provide a SharePoint subsite for any GAC committee or workgroup to use for collaboration. Slaats noted that the SharePoint site is for working files and that finalized GAC documents should be shared on the public GAC website.

Richter gave a demo of the SharePoint site, highlighting the "priorities document" library that includes the GAC priority list that she keeps updated.

Koutnik asked how non-GAC members could access a committee subsite? Slaats said to work through the committee/workgroup chair to request access.

Vaughn mentioned that the GAC has discussed having a calendar showing upcoming meetings and committee and workgroup reporting deadlines. Should it be on the GAC SharePoint site or the public GAC website? After some discussion, it was agreed that calendar information would be most useful on the public website.

Action Item: Richter will follow up with Rader about adding calendar information to the GAC website.

Geospatial Commons Advisory Group

Kotz introduced this topic by saying that the [Minnesota Geospatial Commons](#) is an extremely valuable resource for the Minnesota geospatial community. The idea of having a formal advisory group could be to provide feedback / advice / guidance about the Minnesota Geospatial Commons to MnGeo and the other partners who collaborate on the site; there are some parallels with the ideas behind formation of the [Image Service Sustainability Committee](#) that provides guidance to MnGeo on operation of the Geospatial Image Service. A Commons advisory group would represent the Minnesota geospatial community, particularly publishers that are not part of state government, as well as users of the Commons. Kotz asked for input.

- Richter said would be good to hear from the broader community about where "pain points" are, for example is publishing data to the Commons a pain point? This information could help identify where we need to put more resources towards the Commons for maintenance and development.

- Kotz provided an example of how an ad hoc advisory group helped decide which metadata elements to require for publishing data to the Commons; the result was this [guidance document](#). That was a one-time group; the idea now is to have an on-going group.
- Vaughn: Would this group review and approve data before publishing? Kotz said that has not been discussed, but it could be helpful for such a group to define guidelines for data publishing.
- Reinhardt: It would be very helpful to have a group like this which could increase the transparency of the Commons.
- Dolbow: He has been involved in the Commons over the long term in different roles and is now on the Commons operations team which includes all the major Commons publishers. This team generally welcomes an advisory group as long as it does not try to provide overly technical guidance. The team is very comfortable with taking on the operational technical questions and would appreciate having an advisory group to go to with governance and policy questions.
- Rader: Agreed with Dolbow, and added that although the team focuses on operations, it has also recently added two guidance documents for data publishers [*will add links when documents are online*].
- Ross: Supports this idea since the Commons is for all. Noted that while an advisory group could be helpful, there are probably limitations of technical input because it is managed on a State system. The Commons is now seven years old, and so we should be thinking about what the next geospatial commons will look like. Sites have a lifecycle and a group like this could help shape the next version of the Commons.
- Mathews: Loves this idea! Suggested putting out a broader invitation to GAC committee members that might not be at the meeting, such as those on the Archiving Implementation Workgroup, in order to involve a wider group of interested people.
- Kotz said he will do this and asked people to contact him if they are interested in being part of this advisory group. He will work with interested people to create an initial draft of a charter.

Action Items:

- Contact Kotz if interested in being part of this advisory group (anyone interested)
- Send wider invitation to GAC committees, workgroups, and others (Kotz)
- Create an initial draft charter (Kotz and initial workgroup members)
- Create a draft charter and workplan for the Commons Operations Team (Operations Team)

GIS/LIS Salary Survey

Stovern reported that there were 313 responses to the recent Minnesota GIS/LIS Salary Survey which was originally open from March 16 to April 3, but the deadline was extended a couple more weeks. This is the highest response yet (the group's previous salary survey had 242 responses). The survey had more demographic questions than in previous years. Results will be shared on the GIS/LIS website. Richter or Stovern will let the GAC know when the results are available.

GIS-T Conference

Timerson shared slides that showed the Minnesota Department of Transportation's analysis of travel impacts of COVID-19. The analysis used StreetLight data that comes from anonymized cell phone location data. StreetLight data provides information such as travel time and origins/destinations; data usually takes 2-4 weeks to be processed before MnDOT receives it. Other data used included locations of hospitals and of nursing and boarding

care homes. Timerson talked through the slides and noted that the plan is to update the travel impact reports on a monthly basis. See the slides and slide notes for details.

Sector Report: Private Sector

Tourtelotte reviewed his slides about vendors in the Minnesota geospatial community. He first provided examples of private companies categorized by how they are involved with GIS: content providers of sensors; content providers of data products; equipment providers; software vendors; implementation consultants; and GIS-based business systems. There could be other useful ways to categorize the companies. He then described ways that he helps to connect these vendors with the GAC and finished by suggesting ways that GAC members could support this communication (see slides for details).

Sector Report: Nonprofit Sector

Rundquist reviewed his slides, first emphasizing the importance of the GAC's #1 priority to the nonprofit sector, that all public geospatial data in Minnesota should be free and open to everyone. He next noted the Environmental Working Group's role in helping other nonprofits with geospatial work, and then described EWG's recent work with the Groundwater Protection Rule which aims to minimize potential sources of nitrate pollution to the state's groundwater and protect its drinking water. See slides for maps and statistics about nitrate concentrations in Minnesota's private wells and public drinking water, as well as a newly released report on the impact of manure applications to agricultural fields. Click on the map graphics to link to interactive maps on EWG's website.

Updates on MN GAC Priority Projects and Initiatives

Richter asked for updates on the GAC's 2020 priorities, including ones not currently marked as "Active" (names in parentheses are the person who gave the update, not the priority owner).

- **Free and Open Data** (Geurts): The Outreach Committee met recently and plans to meet again in June; they are working towards their goals.
- **Updated and Aligned Boundary Data** (Veraguth): LCCMR funds are being used to support corner work with a pilot project in Lawrence Township, Grant County. The Minnesota Association of County Surveyors (MACS) is working on a remonumentation manual. Mavis is leading a joint planning project between MACS, MSPS and MN GIS/LIS; Mavis added that he had initiated formation of an executive board, but efforts have been delayed due to COVID-19. Veraguth asked Ross to comment on the MnGeo land surveyor position. Ross reported that the position is in the budget for 2022 and is still moving forward, although it's possible that the pandemic's impact on state finances will impact this proposal.
- **Geodata Archiving Implementation** (Brandt): The Archiving Implementation Workgroup and its subgroups have been actively meeting.
- **Parcel Data** (Slaats): No report.
- **Image Service Improvements** (Slaats): MnGeo has ordered the 2019 NAIP uncompressed GeoTIFFs from FSA. The order is being processed by FSA and 'should be shipped soon'. Once they arrive, MnGeo will load the files into the [Geospatial Image Service](#); the Image Service Sustainability Committee will evaluate the results and likely will decide to add the imagery into the composite image service. There will be an announcement when that service is available.
- **Hydro-DEMs** (Vaughn): This priority is very active. Recently the 3DGeo Committee's Data Acquisition Workgroup wrote an LCCMR proposal that includes an activity for creation of hydro-modified DEMs. This

work is \$1.4 million of the overall request and would build hDEMs for the NE lidar collection in 2021. The 3DGeo Breachline Data Subgroup has broadened their focus to include hDEMs and therefore changed their name to the DEM Hydro-modification Subgroup. See their [revised webpage](#).

- **Road Centerline Data** (Ross): There are 670,101 road segments in Minnesota, most of which have address ranges. MnGeo staff are working with the community and plan to have validated data on the Commons this fall. Currently, data is in the NG911 standard, but would be shared in the GAC standard.
- **Lidar Data** (Sjerven): The Rainy Lake Block and part of the Lake Superior Block will be collected in 2021 (see map on Slide 48). The LCCMR proposal also included derived products that would be used in forestry models, an education program, and funds for data storage and distribution. The proposal came out of the acquisition workgroup and reflected active collaboration between 3DGeo workgroups. Sjerven thanked everyone for their help. Sjerven plans to finalize the workplan for the data acquisition workgroup in June.
- **Emergency Management Damage Assessment Data Standard** (Richter): Public review of the [proposed standard](#) is open until August 19, 2020. The goal is to bring a finalized standard to the GAC for approval before the end of 2020.
- **Address Point Data** (Ross): Data is still being collected from the counties. The NG911 team will convert the data to the GAC standard and will make it available in the future.
- **US National Grid Materials** (Active): No report.
- **Parks and Trails Data Standard** (Active): Richter reported that MnDOT's work on a trails standard includes bikeways but not parks. Do we need to change the name of this priority to reflect that? Kotz suggested that we not change the name of the priority, but let it resolve when the standard is out for review. Brandt noted that parks and trails are related but independent standards.
- **NG911 Geospatial Forum** (Not Active): No report.
- **Underground Utilities Mapping** (Richter) Steve Swazee has been speaking with Gopher OneCall staff about forming an Emergency Preparedness Committee Tiger Team on this topic.
Action Item: If you're interested in this topic, please contact Richter or Swazee.
- **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** (Stark): An Emergency Preparedness Committee subcommittee is forming on this topic. Currently, statewide critical infrastructure data available to emergency management offices and coordinating GIS departments are obtained from federal sources such as The National Map and HIFLD. Those databases don't always have the most up-to-date features in Minnesota (location and/or attributes), particularly in non-metro counties. The group will identify a sustainable workflow to push verified updates to the national databases and possibly to publish the resulting data on the Commons for four features: police, fire, schools and care facilities. Stark works with many county emergency management departments through hazard mitigation planning work and is getting feedback from those county offices. U-Spatial will steward the updated data and work with county emergency managers to identify where there are inaccurate locations and attributes.
- **Culvert Data Standard** (Vaughn): Although there hasn't been any work on this since the last GAC meeting, there is cross-over with the digital dam topic, and Rick Moore has been working on both. A main goal is to update this 2011 document: [Interim Guidance on Acquisition of Culvert Geospatial Data](#).

Legislative Updates

Ross reported on two topics:

- LCCMR proposal was submitted for \$3.2 million for lidar derivatives, education program and data storage and distribution.
- Ligado Networks applied to the FCC for use of a spectrum band for commercial wireless services which is very close to the spectrum used by GPS receivers. More than 70 organizations in the GPS, navigation, geospatial and survey realm have raised concerns.

Announcements or Other Business

Updates from GAC members

- Ross (see map on Slide 48 for lidar collect area and block boundaries):
 - Lidar was collected in Goodhue County this spring at Quality Level (QL) 0 with funding from the U.S. Geological Survey, MnGeo and MnDOT.
 - A lidar collect is planned in the NE area and part of the Lake Superior block at QL1 in Spring 2021 with funding from USGS and the Natural Resources Conservation Service.
 - In Fall 2020, Minnesota will apply for funding from the USGS's 3DEP program to collect lidar in the SE area and the rest of the Lake Superior block (s).
 - Sandi Stroud is no longer with MnGeo or the State of Minnesota. Ross is now MnGeo's Director.
- Bonney: The Shakopee Mdewakanton Sioux Community has funding to put towards lidar acquisition within their tribal area and would like to partner with others to extend the area covered.
- Brandt:
 - Several counties in the metro have moved ahead with Pictometry imagery collection this spring.
 - Many metro staff are working on dashboards for local communities to support COVID-19 pandemic response. Washington County has been working on dashboards, masks, and logistics planning.
- Huset: Has been providing COVID-19 support for the City of St. Paul.
- Knott: Goodhue County has been working with Ayres Associates on lidar and aerial photography collection at 6-inch resolution which was completed in April. Data is anticipated to be available in June 2020 and will provide information for the rest of the state to use and evaluate QLO lidar data.
- Kotz:
 - The Metropolitan Council contracted for collection of 1-foot resolution aerial imagery for the entire metro area this spring. Ramsey County contributed buy-up funding so that county was collected at 6-inch resolution.
 - The Met Council GIS team has been supporting COVID testing work on short notice, involving much data cleanup.
- Mavis:
 - Since the Minnesota GIS/LIS conference has been cancelled, the "Meet Me at the Corner" event that gathers people together to talk about land surveying will be planned instead for a different venue.
 - Platting in Hennepin County is down this year in comparison to previous years, so the pandemic is having an impact.

- Reinhardt: The use of geospatial technology for planning and for understanding issues of homelessness, food insecurity, travel, isolation, and others reminds us that the geospatial community provides an incredible resource in this time. Thank you to the geospatial community.
- Richter: Announcements from the Emergency Preparedness Committee:
 - [Updated 10K US National Grid maps](#) are available for viewing and download.
 - [Community resilience survey](#) is available to identify people willing to volunteer their GIS skills to support another Minnesotan or organization during Minnesota disasters. This idea came about when Richter was reassigned for COVID response and needed to backfill her GIS work.
Action Item: Fill out the survey if you would be available to help when needed.
 - Chris Pouliot and Richter both mentored students at Centennial Middle School, helping them with map contest submissions. Several students were finalists in Minnesota and have gone on to the national stage.
- Stovern: The in-person MN GIS/LIS conference has been cancelled. Polaris and lifetime achievement awards and the annual Board meeting will go on. Other parts of the event may be held virtually. Stay tuned for announcements.
- Thorleifson:
 - The county geologic atlas project is in high-gear, working closely with LCCMR, USGS and others.
 - Work is increasing on seamless compilation of geologic mapping and soil mapping in coordination with USGS.
- Thurnau: Next week he will meet with Eastern States Bureau of Land Management staff to work on Public Land Survey data and aligning it with parcel boundaries. This has been spurred on by the work of the Arrowhead collaborative.
- Timerson:
 - The AASHTO conference was cancelled and rescheduled for April 2021.
 - MnDOT stood up a dashboard for vehicle, pedestrian and bicycle traffic counters. Thanks to the State GIS Collaborative for their support and for newly updated data on locations of hospitals and nursing and boarding care homes available on the Commons.
- Tourtelotte: [Esri's user conference](#) is virtual this year and it is a good opportunity for more people to be able to attend the sessions. Esri is working hard to make this a good event. There will even be an exhibit hall, and attendees will be able to visit with vendors.
- Veraguth: The Minnesota Society of Professional Surveyors is considering cancelling its December winter seminar and February annual meeting events.

Updates from other attendees

- Hal Watson, MNIT DNR:
 - The DNR GIS team has been supporting staff working from home, including increased use of ArcGIS Enterprise Portal. This situation has exposed the need for cloud-based GIS, which is now a strategic goal for the next 6-12 months. The GIS application development group is moving toward using Angular and other web-based tools to build custom web apps.
 - A number of staff from the DNR GIS team are helping support the MN GIS/LIS Consortium, GAC, and the State Agency GIS Collaborative. One team member has been working at the State Emergency Operations Center to support COVID response.

- Sean Vaughn: Observed that as the 3DGeo Committee wrote the LCCMR proposal, having hydroDEMs documented as a GAC priority was very helpful. Decision makers and managers can look at the published GAC resources and see there is support from the geospatial community. Thank you to the GAC for this support.
- Stacey Stark: Related to the GIS/LIS conference cancellation, Stark said the K12 educator day will still be held, but will use a different, virtual, format. It also may be held over two half-day sessions rather than on one day. The use of GIS in K12 institutions is increasing.