

Minnesota Geospatial Advisory Council Meeting Minutes

June 1, 2016

Blazing Star Room, Ground Floor, Centennial Office Building

658 Cedar St., St. Paul, MN 55155

11:00 a.m. – 2:00 p.m.

Attendees

Members: Brad Anderson, City of Moorhead; Ryan Anderson, Leech Lake Band of Ojibwe; Andra Bontrager, Minnesota Center for Environmental Advocacy; David Brandt, Washington County; Scott Freburg, MN.IT @ Dept. of Education; Kari Geurts, MN.IT @ Dept. of Natural Resources; Blaine Hackett, RESPEC; Andrew King-Scribbins, Hennepin County; Len Kne, University of Minnesota; Mark Kotz, Metropolitan Council; Philipp Nagel, City of Waseca; Victoria Reinhardt, Ramsey County; Ben Richason, St. Cloud State University; Cory Richter, City of St. Paul; Dan Ross, MnGeo; Gerry Sjerven, Minnesota Power; Alison Slaats, MN.IT @ Agriculture and Board of Animal Health; Annette Theroux, Pro-West & Associates; Michelle Trager, Rice County; Danielle Walchuk, Region Nine Development Commission.

Members not attending: Robert Bigelow, Bolton & Menk, Inc.; Jeff Bloomquist, Farm Service Agency, U.S Department of Agriculture; John Mackiewicz, WSB & Associates.

Non-Members: David Bendickson, MN National Guard; Mike Dolbow, MnGeo; Brad Henry, University of Minnesota; Kitty Hurley, MN.IT Services; Adam Iten, MnGeo; Mike Koutnik, Esri; Geoff Maas, MetroGIS; Nancy Rader, MnGeo; Steve Swazee, SharedGeo; Matt Taraldsen, Esri; Sally Wakefield, MnGeo; Ron Wencl, U.S. Geological Survey; Jay Wyant, MN.IT Services.

[Meeting Slides Link](#)

Call to order

Introductions. New Member Ryan Anderson introduced himself to the group.

Kotz called for changes to the Agenda. No changes were submitted.

Kotz called for approval of last meeting's minutes. Motion passed unanimously.

Review and accept committee and workgroup summaries

Kotz explained that the EPC Chair provided a hard copy report today. Brandt moved to accept the summaries, Reinhardt seconded. Motion passed unanimously.

Hydro and Elevation Committees Update

Kotz explained that these two committees have had some retirements recently and remaining members are low on staff time. Brandt reached out to them and explained that if we don't have new champions, we need to figure out what to do. Kotz said that we should talk as a group on how to deal with a void of leadership.

Ross explained that the reason the two committees might come together is because of the notion that we can derive some hydrography from elevation. Geurts explained that [Hydrographic Position Index data](#) is now being made available via public services.

Ross noted that he spoke to DNR's Sean Vaughn last week and that there is still interest there, and we might gain some traction on a 3D Elevation Program (3DEP) proposal. Wencil noted that [3DEP is replacing the national 3D elevation program](#). The process right now is looking for state and local partners to match the developing federal requirements. There will be a broad agency announcement for funding in July, for funds starting October 1.

Kotz offered that we could wait for these committees to surface some leadership, or we could sunset them. Rader noted that the Governor's buffer initiative has been a focus of the staff that might have spearheaded a new group. Brandt noted that it's not a lack of interest, but a lack of resources.

Wencil noted that elevation is a nationwide program that they have leadership for, as with hydrography. He could "run the show", but he'd rather see state leadership take the reins. Time is of the essence for the latest rounds of funding. Rader noted that LiDAR is one of the most downloaded datasets we have. It is large data and it is of a different format, so we get a lot of questions, and there is a lot of interest in it.

Kotz said that Ross would be willing to pull together a meeting, and Ross agreed. **Action Step: Ross to convene a meeting with Kotz, Hackett, and remaining leaders from the former committees between now and the next GAC meeting.**

Sjerven noted that there were a lot of folks from academia on the former [LiDAR Research and Education Subcommittee](#). As we move toward a merged group, how do we keep the training included? Richason noted that it is a struggle to keep courses updated with developing technologies such as LiDAR. The LAS data type can pose challenges when using in ArcGIS. He doesn't have the capability to develop an entire course around the technology. They are using it in their research projects, for example with drone mapping.

Kotz noted that there's a lot of value in both data themes, and we just need some time.

Sector Reports (Cities & Nonprofits)

After last meeting, Kotz had reached out to sector representatives, asking them to report on their sector, communicate the benefits of the GAC to the sector, and plan for how the sector can communicate to the GAC.

Brad Anderson replied that he was candid with Kotz in previous conversations. He represents the non-metro cities. This is a loose-knit group, compared to the organization of the counties. There is an e-mail list for the GIS association of counties. A lot of non-metro cities either contract or rely on their county to do work. In the Fargo-Moorhead area, the cities communicate almost daily to share information. There is also the Pine-to-Prairie GIS user group. The big theme right now is NG911, which has a high focus right now. He has been very busy internally lately, but the GAC Outreach Committee met recently, and he thought that Committee could really help with his sector communication. He looked at the League of MN Cities, and noted there is no "GIS Sector" within that organization. He thinks that kind of focus could be useful. He'd like to take on more communications and welcomes any

suggestions or help. He stated that Pro-West provided him with a list of contacts at other MN cities, which he attempted to use, but did not receive any replies.

Kotz asked the Council who struggled to communicate with their sector and several hands were raised. This is a common problem.

Anderson noted that first identifying cities that have their own GIS is in itself a challenge. Ross noted that we could maintain a list of city contacts on the MnGeo website, similar to how we maintain a list of county contacts. It would be longer and more difficult to maintain, but it could be done. Rader noted that we could start with a handful of cities, and could leverage the county and tribal contacts to try and build a critical mass to support. The list doesn't need to be "complete" to be useful. Anderson noted that he could help, and Rader noted that she has a standard email to county contacts relaying what the expectations are (and aren't) by being listed.

Brandt noted that at Washington County they keep track of city contacts for those relationships.

Kotz asked how the GAC's mission is relevant to Anderson's sector. Anderson said that it's not every topic we discuss, but he decides what is relevant to cities in order to pass it on. Topics like data sharing, aerial photos, and NG911 have been really important to pass on. Simply bringing what we talk about to those contacts is useful.

Ross said that we'll also need to touch base with all the address authorities in each county as part of NG911, which will likely be a good start for the city contact list.

Kotz asked Bontrager for a report. Bontrager replied that her focus is NGO nonprofit, but wants to say that there are also government sector nonprofits. Bontrager presented slides on her thoughts. Her challenge is finding contacts from other nonprofit organizations. Ross noted that the MN Council of Nonprofits might be a good resource. Bontrager said she did check with that group, and how it identifies about 100 nonprofits in the state, but it did not identify those with GIS programs. Wakefield and Koutnik noted that Esri might be of assistance. Sjerven said that there is no specific Consortium user group. Bontrager suggested that something in the E-Announcement might be useful in spreading the word about her role with the sector.

Sjerven noted that he would look at the last salary survey as a potential mine for data, and that he would make a note to investigate. Koutnik said that he works with nonprofits in both MN and WI. There is a whole group of quasi-governmental organizations like soil and watershed districts, which function as governmental units but operate as nonprofits. Then there are a lot of organizations like land trusts that are only one person, and will never have the capacity to do focused GIS work. If we thought about all those groups, we might be able to better serve the community. Bontrager noted that she's only been in the nonprofit sector in MN for a few months, but her experience in Montana leads her to think that a listserv would be useful in peer-to-peer information sharing. Koutnik noted that it's not just conservation groups, but also health impact groups. Bontrager concluded that there is a lot of work that could be done in the sector.

Richter noted that there are a lot of nonprofits that are just one or two people, and other organizations that aren't technically nonprofits, but are informal community volunteer groups. How can the nonprofit sector help those small groups? Bontrager noted that in her position, she is the sole person in the GIS department, so she can't help other organizations, but it's important in the sector to identify potential providers and make such services available.

Reinhardt said that when we first posed the question on which nonprofits use GIS, her initial thought is that each and every one of them do. It's not just about the environment, it is social services, homelessness, etc. Every single data point that nonprofits care about would likely be something that can be used in a GIS. She recommended going

back to the Council of Nonprofits and letting them know that their member organizations can benefit from the use of GIS. The value of this technology for informing decisions is key.

Wakefield concurred, but then noted that a lot of nonprofits don't have the resources to exploit the technology. She has had the conversation with the executive director of the Council of Nonprofits, who expressed appreciation for any coordination available.

Sjerven noted that the Consortium can help with certain items, such as establishing a group for nonprofits. He suggested that after Bontrager talked with Wakefield and Maas, to bring questions back to the Consortium in order to help get the word out.

GIS/LIS Consortium Conference Update

Sjerven said the Conference will be in Duluth, October 26-28, 2016. He noted that the abstract submission deadline has been extended again. Ryan Stovern is the current conference chair. If anyone submitted an abstract that did not get through the system, please contact the Consortium to make sure everything has come through. If you didn't get a response screen, let them know.

There will be a few differences this year. We'll have the exhibit hall, GeoLounge, posters, and the keynote all upstairs. There will be a Tuesday night event, an educational side for K-12 on Wednesday, a full slate of workshops (12-15), and a get-together Wednesday night. Carrie Sowden will be doing the keynote on Lake Erie shipwreck research Thursday, and on Friday the keynote will be Dana Starkell. There will be another Esri hands-on-lab for three days. Please submit abstracts if you have a talk to give. The Sessions subcommittee is getting better at lining up sessions with the attendee in mind.

Bontrager asked about the submission format for web applications, and Sjerven noted that a large format TV is available, and that the team will contact the author for details. The new deadline is Monday, June 6th.

Kotz noted that the conference is very important for the cohesion of the community and thanked Sjerven and the conference group for their hard work. Sjerven said they would like to have more technical sessions like last year, where folks can actually take home some technical skills. Is there anything that can be given on submitting data to the Geospatial Commons? Is there anything else on metadata that can be presented?

Break/ Networking

Accessibility for Geospatial Content

Wyant and Hurley introduced themselves to the group. The two presented slides. Wyant noted that Kim Wee with MN.IT Services @ Education is another contact to work with. He noted that he loves maps and understood that the group likely enjoys working with maps for lots of reasons. When it comes down to providing the information that the map provides, that information should be accessible to everybody. Maps are a way to display and present information – how do you make that work for everyone? He charged the group to figure out how that passion can be shared by anyone.

Hurley added that this presentation is not “the answer”, but the starting point of the conversation.

Wyant reviewed state guidelines for accessibility. For example, section 508 is a broad and wide-ranging standard for accessibility.

Regarding map accessibility, Wyant noted that there is often more than one way to convey information in applications. An example is driving directions in Google Maps. There is the map with a driving route visualized as a line on the map, and there is a list of turn-by-turn directions. This allows users to get the information they need in multiple ways.

Hurley noted that there are multiple people working on these efforts. If you have an accessibility coordinator, or someone who has an accessibility concern, those individuals are great resources to help professionals in our field make better products.

Hurley demonstrated how a map can look different to individuals with color blindness, such as Deuteranopia. Bontrager asked about tools for dealing with color blindness. Hurley noted that she uses Color Oracle, and Wyant noted that they maintain a list of tools on their website.

Hurley demonstrated how interactive maps can be coded to enable a focus that helps both visual and blind users. Users can “tab” through the application in order to gain access to the information they need. She also demonstrated how tabbing through a series of “static” maps can also deliver functionality that is of use to both blind and sighted users.

Wyant noted that “accessible maps” are almost a Holy Grail of accessibility right now. We need to ask ourselves why we are making a map, and how users can access the information contained within the map. They are starting a “Community of Interest” within state agencies to provide some basic resources for folks to share and consume. We also have to be able to communicate our requirements to vendors, which will have a large impact. We have to be able to talk to a wide variety of communities. He asked for input and support on the topic.

Koutnik noted that he represents a vendor and has seen this issue for a long time. When he sees large data elements going into analyses, it gets more important to be able to interpret those analytical results to the impaired community, because there’s no practical way to translate it. He also asked where the research is on the subject, particularly when the value proposition is to be able to see the relationships between multiple layers. Wyant agreed that was a tough challenge. He said that accessibility shouldn’t be a roadblock to the point where researchers don’t even begin, but to think about accessibility from the start in order to try and reach a potential solution. He sees increasing usage of technology in the workplace, and since those systems aren’t often accessible, we’re cutting short our access to valuable members of the workplace. Maybe folks with disabilities should be engaged to help make products better – maybe they won’t be able to see or understand everything that is being conveyed, but at least you’ve involved their perspective.

Hurley noted that she will be presenting more in-depth at the GIS/LIS Consortium Conference this fall. Wyant said that perhaps a sampling of “big data” can be represented to help solve the problem. Geurts asked if those resources were available publicly, and Hurley said yes. Two suggested resource links are the [Office of Accessibility website](#) and the MapTime [Map Accessibility Guidelines](#).

US National Grid

Kotz invited Swazee to present on the US National Grid (USNG). Swazee presented slides, noting:

- 35% percent of emergency response calls go to a location that does not have a street address
- Latitude/Longitude has too many options for formatting
- History of federal and state organization pursuit of USNG for standard approaches
- FEMA recently issued directive 092-5 which has high potential funding impacts for Minnesota Government

- This includes a policy statement on FEMA using the USNG for many purposes, including grant programs
- The policy applies to all FEMA efforts
- Many computer-aided-dispatch (CAD) vendors are unaware that USNG is a requirement for next-generation 911 systems.
- There are many concurrent efforts to describe location via various systems.
- More information is available at usngcenter.org

Richter noted that St. Paul has implemented USNG trail location markers in their parks to help folks in emergency situations. It is easy to implement with 911, and she has seen success in implementing it across departments in the city.

Reinhardt asked how mobile phones are used for 911. Iten relayed that wireless calls are routed to a dispatch center based on which antenna is hit by the device. The signal conveys the lat/long coordinate of the device, and that coordinate specification hasn't changed since it was originally set up over a decade ago. Swazee added that the level of accuracy conveyed by the mobile phone coordinates can often be very poor. Geurts noted that the further away from cellular towers a user is, the worse the accuracy of the coordinates.

Ross noted that in NENA's proposed NG911 standard, USNG could be included.

Legislative Updates

Ross presented slides with status updates. There are two projects on Parks & Trails: 1) a website to allow users to discover resources by activity, amenity, or map, and 2) a survey of use, development of a data standard, and tracking legacy fund spending.

Geurts described a handout on the Vegetation Buffer initiative. She noted the web address in the [handout](#) for additional information: dnr.state.mn.us/buffers. Frequently asked questions are included at the website. Reinhardt thanked Geurts for the information, noting that there is a lot of concern over this law that she is hearing about at the Association of Minnesota Counties. Geurts noted that there are phone numbers and e-mail addresses on the website for folks that can answer questions.

Ross noted that this is the time for this Council to start considering legislation, since MnGeo would need to put that together by September. We will have one clarification for next year on language for LCCMR projects.

Updates on Major Initiatives

Ross asked Iten to discuss NG911. Iten presented slides updating the progress of the NG911 project. Stakeholders are encouraged to follow the project at [the ECN website](#) and the project newsletters available there.

MnGeo Priority Projects

Ross noted that we as a community are at a turning point when it comes to our major projects and data development and sharing efforts. He presented slides with basic updates on priority projects such as drainage modernization, the Geospatial Commons, master contract for aerial imagery (which is open to everyone), and parcel data collection.

Ross noted that we are five years into a five-year business plan for parcel data collection, and nowhere near the end destination. The standard is moving forward, with a minor update available. MnGeo continues to collect data from counties (67 so far). Many counties have asked MnGeo not to share the data beyond state government agencies. With that approach, we are likely to never be able to achieve a statewide parcel layer that we can share outside state agency offices. Instead we're being asked to turn folks back to the authoritative sources – one of the main reasons provided is that the local sources have more current data.

The MRCC project is still going on, parallel to DOT Roads & Highways work. Address points data collection continues particularly for NG911.

Ross presented a slide on collecting, standardizing, and aggregating data from various authoritative sources. We have to be flexible in how we obtain data, since it comes in various formats. Sources have asked MnGeo to 1) confirm the receipt, and 2) see that the load was successful (or report why not). This can be a problem when it comes to standards, especially when we see dozens of attributes in a standard that not all local sources will have. Another problem is that, given restrictions that locals are asking us to respect, we are looking only at sharing within state agencies, not at the Commons. And, even if we do share via the Commons, how do we share large aggregated data sets?

Ross asked the group how we can get to our visions of statewide layers with the mix of inputs from sources. Reinhardt said that if we hadn't successfully pursued legislation to mandate data sharing between government agencies, we probably wouldn't even have what we have now. The Association of MN Counties was unaware of that legislation the first time around, and they had to react very quickly to it.

Geurts noted that the Outreach Committee was tasked with a recommendation on open data. One of the Committee's recommendations would be to take on a task of a survey for counties about opening their data. A workgroup would be needed to take those results and come up with a work plan. That could then be presented at the Conference, which would be a high pressure timeline.

Announcements or other business

Geurts noted that the Outreach Committee also identified a need for "geospatial stories", and where that information can be relayed, such as success stories over open data that can be shared with the wider community. Presenting this information to the AMC conference in December could be an additional proving ground amongst an important community.

Kotz noted that changes in making data available happen very slowly, but we're moving in the right direction.

Ross added that a data aggregation portal has been piloted by MnGeo for metro counties to utilize.

Brandt spoke last week to the MN Association of Assessors about GIS. One of their biggest needs is updated aerial photography.

Geurts noted that the Hydrographic Position Index data is now available via a public service. Soon a "camping and fishing site" data set will be published on the Commons. The DNR has 3 GIS positions being posted soon.

Freburg noted that the first MN school map competition wrapped up last week. He has 15-20 superintendents who regularly respond to him when he asks. Theroux asked to be added to the Outreach Committee.

Ryan Anderson reported that there was a user group meeting recently in northern Minnesota.

Trager noted that the Southeast GIS user group has a lot of contacts to utilize for communications, and her county appears very close to implementing an open data policy.

King-Scribbins noted that last week's [UMGEOCON conference](#) appeared successful. Slaats congratulated Swazee for a good conference, and noted that it was a good complement to GIS/LIS given the multi-state contacts that were acquired.

Richason noted a need for a survey on digital image processing and remote sensing, both within academia and public/private sector. What tools and skills can be conveyed to students on image processing? Geurts noted that Dennis Kepler at DNR's Resource Assessment Unit would be a good resource for him. Koutnik echoed the issue, noting that Esri is also having a hard time finding trained folks in this area.

Rader noted that there were no nominations for a Governor's Commendation Award.

Wencl noted that USGS topo maps are being updated with better elevation data, USNG coordinates, and other data sources.

Adjourn

The meeting adjourned at 2:10 pm.